

INŠTITUT ZA MATEMATIKO, FIZIKO IN MEHANIKO



LETNO  
POROČILO  
2019

Ljubljana 2020

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**INŠTITUT ZA MATEMATIKO, FIZIKO IN MEHANIKO**

**Letno poročilo 2019**

Interna publikacija IMFM

Zbral in uredil Janez Krušič

Natisnila *ABO grafika d.o.o.* v nakladi 80 izvodov

Spletna objava: [http://porocila.imfm.si/2019/IMFM\\_2019.pdf](http://porocila.imfm.si/2019/IMFM_2019.pdf)

Ljubljana 2019

**ISSN 1318–539X**

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## Legenda za bibliografije raziskovalcev v poročilu:

- A. objavljene znanstvene monografije,
- B. raziskovalni članki sprejeti v objavo v znanstvenih revijah in v zbornikih konferenc,
- C. raziskovalni članki objavljeni v znanstvenih revijah in v zbornikih konferenc,
- D. uredništvo v znanstvenih revijah in zbornikih znanstvenih konferenc,
- E. organizacija mednarodnih in domačih znanstvenih srečanj,
- F. vabljeni predavanja na tujih institucijah in mednarodnih konferencah,
- G. aktivne udeležbe na mednarodnih in domačih konferencah,
- H. strokovni članki,
- I. drugi sumarni podatki (število zadetkov v COBISS-u, MATHREV, mentorstva diplomantom, magistrantom, doktorantom). Ti podatki se dodajo v poročilo samo na posebno zahtevo raziskovalca (samo število, brez imen in datumov).

# UVOD

Začnimo kar s številkami, ki zgovorno osvetlijo kadrovsko moč Inštituta za matematiko, fiziko in mehaniko. Konec preteklega leta je bilo pri nas zaposlenih 145 sodelavcev. Po izobrazbi je med njimi 128 doktorjev znanosti, en magister znanosti, 13 magistrrov ter trije z univerzitetno izobrazbo. Redno zaposlenih sodelavcev je bilo 28, dopolnilno pa 117. Njihovo število se glede na preteklo leto ni opazno spremenilo.

O številnih objavah naših sodelavcev v uglednih revijah in nasploh o kakovostnem ter odmevnem raziskovalnem delu govorijo strani poročila, kjer so navedeni prispevki po posameznih oddelkih. Tudi v preteklem letu se lahko pohvalimo s kar nekaj nagradami za dolgoletno odmevno raziskovalno delo. Posebej velja spomniti na naslednje. Akademik prof. dr. Josip Globevnik je prejel Zoisovo nagrado za življenjsko delo. Prof. dr. Boštjan Brešar je prejel Zoisovo priznanje za pomembne dosežke na področju teorije grafov. Ameriško matematično združenje (American Mathematical Society - AMS) je prof. dr. Bojana Moharja uvrstilo med Fellows of the AMS (2020 Class). Prof. dr. Dušan Repovš je prejel "Zlato plaketo" Univerze v Ljubljani in bil v okviru projekta promocije znanosti, ki ga izvaja ARRS, izbran med "Odlične v znanosti 2018".

In zdaj k podrobnostim o raziskovalni organiziranosti IMFM. Na inštitutu imamo osem programskih skupin – šest s področja matematike, eno s področja teoretičnega računalništva in eno s področja fizike. Vodje programskih skupin na Oddelku za matematiko so: prof. dr. Matej Brešar, prof. dr. Franc Forstnerič, prof. dr. Sandi Klavžar, prof. dr. Dragan Marušič, prof. dr. Primož Moravec in prof. dr. Dušan Repovš. Programsko skupino na Oddelku za teoretično računalništvo vodi prof. dr. Primož Potočnik, na Oddelku za fiziko pa prof. dr. Zvonko Jagličić. Na Oddelku za fiziko deluje tudi infrastrukturna skupina, ki jo vodi doc. dr. Vojko Jazbinšek.

V preteklem letu se je zaključilo 5-letno obdobje izvajanja programske skupine na Oddelku za teoretično računalništvo. Programsko skupino z naslovom "Računsko intenzivne metode v teoretičnem računalništvu, diskretni matematiki, kombinatorični optimizaciji ter numerični analizi in algebri z uporabo v naravoslovju in družboslovju" je vodil prof. dr. Primož Potočnik.

Zaključil se je tudi en projekt, ki ga je sofinancirala ARRS, in sicer na Oddelku za matematiko. Projekt z naslovom "Visoko zmogljiv reševalec za binarne kvadratične probleme" je vodil prof. dr. Janez Povh.

Lani so začeli teči štiri projekti, ki jih sofinancira ARRS, od tega trije na Oddelku za matematiko in en na Oddelku za teoretično računalništvo. Novi projekti na Oddelku za matematiko so: projekt z naslovom “Sodobni in novi metrični koncepti v teoriji grafov”, vodja projekta je prof. dr. Sandi Klavžar, projekt z naslovom “Turanova števila in ekstremalni problemi za poti”, vodja projekta je prav tako prof. dr. Sandi Klavžar; pri slednjem projektu IMFM nastopa kot sodelujoča organizacija, projekt pa poteka na Fakulteti za matematiko in fiziko Univerze v Ljubljani. Teči je pričel tudi projekt z naslovom “ $p$ -eliptičnost v harmonični analizi in parcialnih diferencialnih enačbah”, vodja projekta je doc. dr. Oliver Dragičević; tudi pri tem projektu IMFM nastopa kot sodelujoča organizacija; projekt pa prav tako poteka na Fakulteti za matematiko in fiziko Univerze v Ljubljani.

Na Oddelku za teoretično računalništvo je nov projekt z naslovom “Weissova domneva in posplošitve”, vodja projekta je prof. dr. Primož Potočnik; tudi pri tem projektu IMFM nastopa kot sodelujoča organizacija, projekt pa poteka na Fakulteti za matematiko in fiziko Univerze v Ljubljani.

V skladu z Javnim pozivom za dodelitev mentorskih mest raziskovalnim programom v letu 2020 sta nova mentorja mladima raziskovalcema postala: doc. dr. Klemen Šivic (P1-0222), in sicer na podlagi sklepa ARRS o prenosu mentorskega mesta s programske skupine P1-0291 s Fakultete za matematiko in fiziko Univerze v Ljubljani na programsko skupino P1-0222 na Inštitut za matematiko, fiziko in mehaniko, ter doc. dr. Matija Pretnar (P1-0294).

S 1. oktobrom 2019 sta na našem inštitutu pričela z usposabljanjem dva nova mlada raziskovalca. Na Oddelku za matematiko Nikola Kovačević (mentor doc. dr. Klemen Šivic); usposablja se na področju “Matematika”, ter na Oddelku za teoretično računalništvo Filip Koprivec (mentor doc. dr. Matija Pretnar); usposablja se na področju “Računsko intenzivne metode in aplikacije”.

Konec leta 2019 se je na IMFM usposabljal devet mladih raziskovalcev – šest na Oddelku za matematiko, eden na Oddelku za fiziko in dva na Oddelku za teoretično računalništvo. Njihovo usposabljanje v pretežni meri financira ARRS.

Preteklo leto so doktorirali trije mladi raziskovalci, in sicer: dr. Riccardo Ugolini (maja) na Fakulteti za matematiko in fiziko Univerze v Ljubljani, Tim Kos (septembra) na Fakulteti za naravoslovje in matematiko Univerze v Mariboru ter Barbara Ikica (decembra) na Fakulteti za matematiko in fiziko Univerze v Ljubljani.

Uspešni smo tudi na področju mednarodnega znanstvenega sodelovanja. V

preteklem letu je bilo mednarodno sodelovanje razširjeno z osmimi novimi dvostranskimi projekti, tako da jih je skupaj teklo kar 25. Geografsko je dvostransko sodelovanje IMFM povezano s skupinami raziskovalcev iz Avstrije, Črne Gore, Kitajske, Nemčije, Rusije, Srbije, Turčije in Združenih držav Amerike.

Tudi v letu 2019 so se pod vodstvom prof. dr. Primoža Moravca vrstili Matematični kolokviji, ki jih skupaj organizirajo DMFA, Oddelek za matematiko FMF UL in IMFM.

IMFM je finančno podprl naslednje znanstvene dogodke: kot soorganizator konferenco “Maps  $\cap$  Configurations  $\cap$  Polytopes  $\cap$  Molecules  $\subseteq$  Graphs”, ki je potekala od 23. 5. 2019 do 25. 5. 2019 na Fakulteti za matematiko in fiziko Univerze v Ljubljani, kot soorganizator delavnico “The 22<sup>nd</sup> Hereditarnia Workshop on Graph Properties”, ki je potekala od 21. 6. 2019 do 22. 6. 2019 na Fakulteti za elektrotehniko, računalništvo in informatiko Univerze v Mariboru, kot glavni organizator konferenco “9<sup>th</sup> Slovenian International Conference on Graph Theory (Bled’19)”, ki je potekala od 23. 6. 2019 do 29. 6. 2019 na Bledu, konferenco “Formal Power Series and Algebraic Combinatorics (FPSAC 2019)”, ki je potekala od 01. 07. 2019 do 05. 07. 2019 v Ljubljani ter konferenco “Women of mathematics on the Mediterranean shores”, ki je potekala od 27. 9. 2019. do 28. 9. 2019 na Bledu. IMFM je bil tudi soorganizator konference “International Conference on Quasicrystals (ICO14)”, ki je potekala med 26. in 31. 5. 2019 v Kranjski Gori.

Kaj lahko za zaključek dodam na upravnem področju? Nič kaj uspešnega ne morem naštetiti o urejanju statusa osrednjega slovenskega matematičnega inštituta ali trajni pravni ureditvi statusa naših prostorov. Je pa v preteklem letu na MIZŠ intenzivno tekla priprava osnutka novega zakona o znanstvenoraziskovalni in inovacijski dejavnosti. Za osnutek v celoti lahko ocenim, da je postal dober. Velja pa spomniti na aprilsko različico, ki bi bila za nas pogubna, saj je ukinjala dolgoročno stabilno financiranje raziskovalne dejavnosti za institucije, ki imajo podoben status kot mi. In spet smo pri jedru težav: osrednji slovenski matematični inštitut je javni zavod, a statusa JRZ nima.

Jernej Kozak,  
*direktor IMFM*





# ODDELEK ZA MATEMATIKO

## PROJEKTI

V letu 2019 smo člani oddelka delovali v okviru programskih skupin

**Matej Brešar**, *Algebre in kolobarji*, (P1-0288),

**Franc Forstnerič**, *Analiza in geometrija*, (P1-0291),

**Dragan Marušič**, *Algebra, diskretna matematika, verjetnostni račun in teorija iger*, (P1-0285),

**Sandi Klavžar**, *Teorija grafov*, (P1-0297),

**Primož Moravec**, *Algebra v teoriji operatorjev in finančna matematika*, (P1-0222),

**Dušan Repovš**, *Topologija, geometrija in nelinearna analiza*, (P1-0292),

in nadaljevali z delom pri naslednjih projektih:

**J1-9109**, *Boštjan Brešar*, Sodobne invariante grafov,

**J1-9104**, *Franc Forstnerič*, Analiza, geometrija in parcialne diferencialne enačbe,

**J1-8132**, *Igor Klep*, Pozitivne preslikave in realna algebrična geometrija,

**J1-8130**, *Bojan Mohar*, Prekrižna števila in njihova uporaba,

**N1-0057**, *Janez Povh*, Visoko zmogljiv reševalec za binarne kvadratične probleme (projekt zaključen v letu 2019),

**J1-8155**, *Nataša Pržulj*, Zlivanje biomedicinskih podatkov z uporabo ne-negativne matrične tri-faktorizacije,

**N1-0064**, *Vicentiu Radulescu*, Analiza zveznih in diskretnih matematičnih modelov v biologiji, kemiji in genetiki,

**J1-8131**, *Dušan Repovš*, Zvezni in diskretni sistemi v nelinearni analizi,

**J1-8133**, *Peter Šemrl*, Preslikave na matrikah in operatorjih.

Začeli smo z novimi projekti:

**J1-1690**, *Oliver Dragičević*,  $p$ -eliptičnost v harmonični analizi in parcialnih diferencialnih enačbah,

**J1-1693**, *Sandi Klavžar*, Sodobni in novi metrični koncepti v teoriji grafov,

**N1-0095**, *Sandi Klavžar*, Turanova števila in ekstremalni problemi za poti.

Sodelovali smo v naslednjih mednarodnih projektih:

**Boštjan Brešar**, *Parametri dominantnega tipa v grafi in njihovih produktih* (slovensko–ameriški projekt),

**Matja Cencelj**, *Grobe geometrijske lastnosti in teorije mere* (slovensko–ameriški projekt),

**Karin Cvetko Vah**, *Nekomutativna analiza podatkov* (slovensko–srbski projekt),

**David Dolžan**, *Algebraične in kombinatorične metode in njihove aplikacije* (slovensko–avstrijski projekt),

**Franc Forstnerič**, *Kompleksna analiza in geometrija* (slovensko–nemški projekt),

**Boštjan Gabrovšek**, *Homologija Hovanova in premenjalni moduli* (slovensko–ameriški projekt),

**Sandi Klavžar**, *Igra dominacije na grafih in digrafih* (slovensko–kitajski projekt),

**Sandi Klavžar**, *Aktualne dominacijske invariante* (slovensko–ameriški projekt),

**Igor Klep**, *Nekomutativna realna algeraična geometrija in njena uporaba* (slovensko–ameriški projekt),

**Uroš Kuzman**, *Skoraj kompleksna geometrija* (slovensko–ameriški projekt),

**Janko Marovt**, *Kolobarji, ohranjevalci in aplikacije* (slovensko–turški projekt),

**Janko Marovt**, *Problemi ohranjevalcev z aplikacijami* (slovensko–ameriški projekt),

**Petar Pavešič**, *Posplošeni krovni prostori in geometrijska teorija grup* (slovensko–ameriški projekt),

**Aljoša Peperko**, *Numerični zaklad in spekter linearnih in nelinearnih operatorjev* (slovensko–ameriški projekt),

**Vicentiu Radulescu**, *Kombinatorični aspekti teorije polinomskih identitet* (slovensko–ruski projekt),

**Vicentiu Radulescu**, *Kompaktifikacija odprtih 3-mnogoterosti s Cantorjevo množico* (slovensko–ameriški projekt),

**Dušan Repovš**, *Topološka in geometrijska struktura višjedimenzionalnih geodetskih prostorov* (slovensko–ameriški projekt),

**Marko Slapar**, *Interakcije med kvazikonformno in kompleksno analizo* (slovensko–črnogorski projekt),

**Janoš Vidali**, *Uporaba računalniške algebre v algebraični kombinatoriki* (slovensko–ruski projekt),

**Žiga Virk**, *Analiza algebrajskih struktur z diskretno Morseovo teorijo za simplicialne komplekse* (slovensko–črnogorski projekt),

**Žiga Virk**, *Vztrajnostni okvir za  $C^*$  algebre* (slovensko–ameriški projekt),

**Emil Žagar**, *Modeliranje s krivuljami katerih hodograf je pitagorejski* (slovensko–ameriški projekt).

## ORGANIZACIJA MEDNARODNIH KONFERENC

Od 23. 6. do 29. 6. 2019 je na Bledu potekala mednarodna konferenca “9th Slovenian International Conference on Graph Theory (Bled’19)”. Od 21. 6. do 22. 6. 2019 je v Mariboru potekala mednarodna delavnica “The 22<sup>nd</sup> Hereditarnia Workshop on Graph Properties”. Od 23. 5. do 25. 5. 2019 je na Fakulteti za matematiko in fiziko UL potekala mednarodna konferenca “Maps  $\cap$  Configurations  $\cap$  Polytopes  $\cap$  Molecules  $\subseteq$  Graphs”. Inštitut za matematiko, fiziko in mehaniko (IMFM) je vse tri mednarodne dogodke finančno podprl.

## MLADI RAZISKOVALCI

V okviru oddelka so se v letu 2019 usposabljali mladi raziskovalci:

**Barbara Ikica**, mentor P. Šemrl,

**Vesna Iršič**, mentor S. Klavžar,

**Michael Kaplin**, mentor M. Kandič,

**Tim Kos**, mentor B. Brešar,

**Nikola Kovačević**, mentor K. Šivic,

**Boštjan Lemež**, mentor D. Repovš,

**Gregor Podlogar**, mentor M. Knez,

**Riccardo Ugolini**, mentor F. Forstnerič,

**Lara Vukšić**, mentor I. Klep,

z doktoratom pa so zaključili svoje usposabljanje

**Barbara Ikica**, mentor P. Šemrl,

**Tim Kos**, mentor B. Brešar,

**Riccardo Ugolini**, mentor F. Forstnerič.

**BIBLIOGRAFIJE RAZISKOVALCEV****Jernej Azarija:**

- C1. —, T. Marc, *There is no* (95, 40, 12, 20) *strongly regular graph*, J. Combin. Des. **28** (2019), 294-306.

**Iztok Banič:**

- B1. —, S. Greenwood, *A characterisation of the dimension of inverse limits of set-valued functions on intervals*, sprejeto v objavo v Fundam. Math.
- C1. —, M. Črepnjak, M. Merhar, U. Milutinović, T. Sovič, *The closed subset theorem for inverse limits with upper semicontinuous bonding functions*, Bull. Malays. Math. Sci. Soc. (2) **42** (2019), 835–846.
- C2. —, S. Goodwin, M. Lockyer, *Extending bonding functions in generalized inverse sequences*, Topology Appl. **254** (2019), 85–100.
- I1. Soavtor predmetnega izpitnega kataloga za splošno maturo – matematika.
- I2. Mentorstvo pri enem magistrskem delu in eni doktorski disertaciji (bolonjski študij).

**Dominik Benkovič:**

- C1. *Generalized Lie  $n$ -derivations of triangular algebras*, Commun. Algebra **47** (2019), 5294–5302.
- I1. 4 recenzije za MathSciNet.
- I2. Mentorstvo pri 2 magistrskih delih.

**Janez Bernik:**

- B1. *Quasi-filiform Lie algebras of maximum length revisited*, sprejeto v objavo v J. Algebra.
- I1. Mentor pri 3 magistrskih delih in enem delu diplomskega seminarja (bolonjski študij).

## Luka Boc Thaler:

- B1. — , U. Kuzman, *Reduced dynamical systems*, sprejeto v objavo v Ergodic Theory Dynam. Systems.
- I1. Soavtor enega univerzitetnega učbenika.

## Drago Bokal:

- B1. — , J. Jerebic, *Guarding a subgraph as a tool in pursuit-evasion games*, sprejeto v objavo v Discuss. Math. Graph Theory.
- C1. — , M. Steinbacher, *Phases of psychologically optimal learning experience: task-based time allocation model*, Cent. Eur. J. Oper. Res. **27** (2019), 863–885.
- C2. — , Z. Dvořák, P. Hliněný, J. Leanős, B. Mohar, T. Wiedera, *Bounded degree conjecture holds precisely for  $c$ -crossing-critical graphs with  $c \leq 12$* , 35<sup>th</sup> International Symposium on Computational Geometry, Portland, ZDA, junij 2019, SoCG 2019 – proceedings, 15 str.
- C3. — , P. Fic, *Bazične podlage spremljanja procesnih tveganj*, 38<sup>th</sup> International Conference on Organizational Science Development, Portorož, marec 2019, Ekosistem organizacij v dobi digitalizacije: konferenčni zbornik, 101–112.
- C4. M. Krajncič, A. Žnidaršič, — , *Nenadzorovane tehnike odkrivanja golju-fij = Unsupervised fraud detection techniques*, 38<sup>th</sup> International Conference on Organizational Science Development, Portorož, marec 2019, Ekosistem organizacij v dobi digitalizacije: konferenčni zbornik, 489–501.
- C5. P. Fic, — , *Primerjava uspešnosti percepcijskih strategij v različnih okoljih*, 38<sup>th</sup> International Conference on Organizational Science Development, Portorož, marec 2019, Ekosistem organizacij v dobi digitalizacije: konferenčni zbornik, 259–272.
- C6. A. Žnidaršič, M. Krajncič, — , *Fraud detection in transactions using social network analysis*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 135–140.
- C7. A. Vegi Kalamar, — , J. Povh, *Parallelization of BiqMac Solver*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 161–166.
- C8. — , R. Repnik, Š. Tertinek, A. Vegi Kalamar, T. Žerak, *Optimality of flipped learning experience : a case study of using 2-crossing-critical graphs for early research exposure*, 15<sup>th</sup> International Symposium on

- Operational Research, Bled, september 2019, SOR '19 proceedings, 175–180.
- C9. — , Š. Tertinek, *Bounded time availability is what narrative incohesion, behavioral sink, behavioral addiction, and online social bubbles have in common*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 181–186.
- C10. P. Fic, — , *Innovative veristic perceptions do have a chance : an instance of artificial technological Valley of Death*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 187–192.
- G1. *Bazične podlage spremljanja procesnih tveganj*, 38<sup>th</sup> International Conference on Organizational Science Development, Portorož, marec 2019.
- G2. *Antropomorfen model spremljanja procesnih tveganj I : tekmovalje verističnih in utilitarističnih zaznav stanja sistema*, 14. konferenca slovenskih elektroenergetikov, Laško, maj 2019.
- G3. *Bounded maximum degree conjecture holds precisely for  $c$ -crossing-critical graphs with  $c \leq 12$* , 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G4. *Bounded degree conjecture holds precisely for  $c$ -crossing-critical graphs with  $c \leq 12$* , 35<sup>th</sup> International Symposium on Computational Geometry, Portland, ZDA, junij 2019.
- G5. *Parallelization of BiqMac Solver*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019.
- G6. *Transparency in AI's decision making : some ethical and legal reflections*, 10. mednarodna konferenca o pravni teoriji in pravni argumentaciji LegArg, Nova Gorica, november 2019.
- H1. T. Žerak, — , *Playful introduction to 2-crossing-critical graphs = Razigran uvod v 2-prekrižno-kritične grafe*, *Dianoia* **3** (2019), 99–106.
- H2. — , P. Fic, T. Jagrič, J. Pihler, *Antropomorfen model spremljanja procesnih tveganj I: tekmovalje verističnih in utilitarističnih zaznav stanja sistema*, 14. konferenca slovenskih elektroenergetikov, Laško, maj 2019, Referati in predstavitve, 9 str.
- H3. P. Fic, A. Goričan, A. Bratuša, M. Miklavčič, A. Veber-Horvat, — , *Antropomorfen model spremljanja procesnih tveganj na primeru napovedovanja fotovoltaične proizvodnje*, 14. konferenca slovenskih elektroenergetikov, Laško, maj 2019, Referati in predstavitve, 7 str.
- I1. Mentorstvo pri 4 magistrskih delih (bolonjski študij) in 2 elaboratih.
- I2. Glavni urednik fakultetne revije *Dianoia*.

- I3. Pisec recenzij za revije: “Dianoia”, “Discussiones Mathematicae. Graph Theory”, “Electronic Journal of Combinatorics”, “Algorithmica”, “Discrete Applied Mathematics”, “Studia Scientiarum Mathematicarum Hungarica”.

### Dragana Božović:

- B1. —, I. Peterin, *Graphs with unique maximum packing of closed neighborhoods*, sprejeto v objavo v Discuss. Math. Graph Theory.
- E1. Članica organizacijskega odbora konference *22<sup>nd</sup> Workshop on Hereditary Graph Properties*, Maribor, junij 2019.
- G1. *On the packing chromatic number of lexicographic products*, 18<sup>th</sup> Workshop on Graph Theory: Colourings, Independence and Domination, Piechowice, Poljska, september 2019.
- I1. Soavtorica ene zbirke nalog (univerzitetno učno gradivo).
- I2. Sourednica enega konferenčnega zbornika (Book of abstracts).

### Boštjan Brešar:

- C1. —, C. Bujtás, T. Gologranc, S. Klavžar, G. Košmrlj, T. Marc, B. Patkós, Z. Tuza, M. M. Vizer, *The variety of domination games*, Aequationes Math. **93** (2019), 1085–1109.
- C2. —, T. Kos, R. Krivoš-Belluš, G. Semanišin, *Hitting subgraphs in  $P_4$ -tidy graphs*, Appl. Math. Comput. **352** (2019), 211–219.
- C3. —, T. Kos, P. Torres, *Grundy domination and zero forcing in Kneser graphs*, Ars Math. Contemp. **17** (2019), 419–430.
- C4. —, M. Valencia-Pabon, *Independence number of products of Kneser graphs*, Discrete Math. **342** (2019), 1017–1027.
- C5. —, N. Gastineau, S. Klavžar, O. Togni, Olivier, *Exact distance graphs of product graphs*, Graphs Comb. **35** (2019), 1555–1569.
- D1. Področni urednik revije *Discrete Mathematics and Theoretical Computer Science*.
- D2. Član uredniškega odbora revije *Discussiones Mathematicae Graph Theory*.
- E1. Član organizacijskega odbora konference *9<sup>th</sup> Slovenian International Conference on Graph Theory*, Bled, junij 2019.

- F1. *Vizing's conjecture - some old and new approaches*, vabljeno predavanje, 18<sup>th</sup> Workshop on Graph Theory: Colourings, Independence and Domination, Piechowice, Poljska, september 2019.
- G1. *Graphs that are critical for the packing chromatic number*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *Graphs with a unique maximum open packing*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G3. *Graphs that are critical for the packing chromatic number*, 22<sup>nd</sup> Workshop on Hereditary Graph Properties, Maribor, junij 2019.
- I1. 8 recenzij za MathScieNet.
- I2. Mentorstvo pri eni doktorski disertaciji in enem magistrskem delu (bolonjski študij).

## Matej Brešar:

- B1. *Functional identities and zero Lie product determined Banach algebras*, sprejeto v objavo v Q. J. Math.
- B2. J. Alaminos, —, J. Extremera, A. R. Vilela, *Zero Jordan product determined Banach algebras*, sprejeto v objavo v J. Aust. Math. Soc.
- C1. —, X. Guo, G. Liu, R. Lü, K. Zhao, *Zero product determined Lie algebras*, Eur. J. Math. **5** (2019), 424–453.
- C2. —, I. Gogić, *Centrally stable algebras*, J. Algebra **537** (2019), 79–97.
- C3. J. Alaminos, —, J. Extremera, A. R. Vilela, *Zero Lie product determined Banach algebras, II*, J. Math. Anal. Appl. **474** (2019), 1498–1511.
- C4. —, P. Šemrl, *Continuous commuting functions on matrix algebras*, Linear Algebra Appl. **568** (2019), 29–38.
- D1. Član uredniškega odbora revije *Communications in Algebra*.
- D2. Član uredniškega odbora revije *Czechoslovak Mathematical Journal*.
- D3. Član uredniškega odbora revije *Linear Algebra and its Applications*.
- I1. Univerzitetni učbenik, *Undergraduate algebra: a unified approach*, Springer, Cham, Švica, 2019.

## Sergio Cabello Justo:

- C1. M. de Berg, —, O. Cheong, D. Eppstein, C. Knauer, *Covering many points with a small-area box*, J. Comput. Geom. **10** (2019), 207–222.



- C2. B. Burton, — , S. Kratsch, W. Pettersson, *The parameterized complexity of finding a 2-sphere in a simplicial complex*, SIAM J. Discrete Math. **33** (2019), 2092-2110.
- C3. — , T. M. Chan, *Computing Shapley values in the plane*, 35<sup>th</sup> International Symposium on Computational Geometry, Portland, ZDA, junij 2019, SoCG 2019 - proceedings, 19 str.
- C4. A. Biniiaz, — , P. Carmi, J. l. de Carufel, A. Maheshwari, S. Mehrabi, M. Smid, *On the minimum consistent subset problem*, 6<sup>th</sup> International Symposium, WADS 2019, Edmonton, Kanada, avgust 2019, Algorithms and data structures: proceedings, 155–167.
- C5. J. Choi, — , H. K. Ahn, *Maximizing dominance in the plane and its applications*, 6<sup>th</sup> International Symposium, WADS 2019, Edmonton, Kanada, avgust 2019, Algorithms and data structures: proceedings, 325- 338.
- D1. Član uredniškega odbora revije *Journal of Computational Geometry*.
- D2. Urednik revije *SIAM Journal on Discrete Mathematics*.
- D3. Urednik zbornika *9<sup>th</sup> Slovenian International Conference on Graph Theory*, Bled, junij 2019.
- E1. Član organizacijskega odbora konference *9<sup>th</sup> Slovenian International Conference on Graph Theory*, Bled, junij 2019.
- E2. Član programskega odbora konference *XVIII Spanish Meeting on Computational Geometry*, Girona, Španija, julij 2019.
- E3. Član programskega odbora konference *15<sup>th</sup> International Symposium on Operations Research in Slovenia (SOR'19)*, Bled, september 2019.
- F1. *Barrier problems in the plane*, seminarsko predavanje, Freie Universität Berlin, Nemčija, februar 2019.
- F2. *Computational geometry, optimization and Shapley values*, vabljeni predavanje, Freie Universität Berlin, Institut für Informatik, Berlin, Nemčija, februar 2019.
- F3. *Graphs and computational geometry*, vabljeni predavanje, ICERM Workshop. Data Science in Low-dimensional Spaces, Providence, ZDA, maj 2019.
- F4. *Interactions between geometry, graphs and algorithms*, vabljeni predavanje, DIMEA Days 2019, Brno, Češka, junij 2019.
- G1. *Maximum matchings in geometric intersection graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *Maximum matching in disk graphs of bounded depth*, XVIII Spanish Meeting on Computational Geometry, Girona, Španija, julij 2019.

II. Mentorstvo pri 2 delih diplomskega seminarja (bolonjski študij).

### Kristijan Cafuta:

- C1. *Sums of Hermitian squares decomposition of non-commutative polynomials in non-symmetric variables using NCSOSTools*, CEJOR, Cent. Eur. J. Oper. Res. **27** (2019), 397–413.
- C2. R. Bos, M. Doorman, —, S. Praprotnik, S. Antoliš, M. Bašić, *Supporting the reinvention of the slope of a curve in a point: A smooth slope to slide is a smooth slide to slope*, 11<sup>th</sup> Congress of the European Society for Research in Mathematics Education, Utrecht, Nizozemska, februar 2019, CERME11 – Proceedings, 4170–4177.

### Matija Cencelj:

- C1. J. Sun, L. Li, —, B. Gabrovšek, *Infinitely many sign-changing solutions for Kirchhoff type problems in  $\mathbb{R}^3$* , Nonlinear Anal. **186** (2019), 33–54.
- D1. Član uredniškega odbora revije *Analele Universităţii din Craiova. Seria Matematică Informatică*.
- II. Mentorstvo pri enem magistrskem in enem diplomskem delu ter somentorstvo pri enem magistrskem delu (bolonjski študij).

### Gregor Cigler:

- C1. —, M. Jerman, P. J. Wojciechowski, *Full algebras of matrices*, Linear Multilinear Algebra **67** (2019), 1511–1521.

### Jakob Cimprič:

- C1. *A nullstellensatz for linear partial differential equations with polynomial coefficients*, Multidimens. Syst. Signal Process **30** (2019), 363–372.
- D1. Član uredniškega odbora revije *Journal of Algebra and Computational Applications*.
- G1. *Some non-commutative nullstellensätze*, Workshop “Geometry of Real Polynomials, Convexity and Optimization”, Banff, Kanada, maj 2019.

- G2. *Local linear dependence in enveloping algebras of some Lie algebras*, 30<sup>th</sup> International Workshop on Operator Theory and its Applications, Lisbona, Portugalska, julij 2019.

### Miran Černe:

- B1. *Some remarks on the nonlinear mixed Cherepanov boundary value problem*, sprejeto v objavo v *Complex Var. Elliptic Equ.*
- G1. *Nonlinear mixed Riemann-Hilbert boundary value problems*, Nonlinear mixed Riemann-Hilbert boundary value problems, Krakov, Poljska, april 2019.
- I1. Urednik zbirke *Matematika-fizika*, področje *Matematika*, DMFA-založništvo.
- I2. Urednik zbirke *Izbrana poglavja iz matematike in računalništva* pri DMFA-založništvo.
- I3. Mentorstvo pri 3 delih diplomskega seminarja.

### Gregor Dolinar:

- B1. — , B. Kuzma, J. Marovt, B. Ungor, *On some partial orders on a certain subset of the power set of rings*, sprejeto v objavo v *Glas. Mat. Ser. III*.
- B2. — , S. Halicioglu, A. Harmanci, B. Kuzma, J. Marovt, B. Ungor, *Pre-servers of the left-star and right-star partial orders*, sprejeto v objavo v *Linear Algebra Appl.*
- C1. M. Budrevich, — , A. È. Guterman, B. Kuzma, *Graph characterization of fully indecomposable nonconvertible  $(0, 1)$ -matrices with minimal number of ones*, *Ars Math. Contemp.* **17** (2019), 141–151.
- C2. — , B. Kuzma, J. Marovt, B. Ungor, *Properties of core-EP order in rings with involution*, *Front. Math. China* **14** (2019), 715–736.
- C3. — , A. È. Guterman, B. Kuzma, O. Markova, *Double centralizing theorem with respect to  $q$ -commutativity relation*, *J. Algebra Appl.* **18** (2019), art. 1950003 [12 str.].
- C4. — , B. Kuzma, N. Stopar, *Orthomaps on formally real simple Jordan algebras*, *Oper. Matrices* **13** (2019), 447–460.
- D1. Član uredniškega odbora revije *Mathematica Slovaca*.

F1. *Preservers of left-star and right-star partial orders*, vabljeno predavanje, Ankara University, Department of Mathematics, Turčija, junij 2019.

I1. Somentor pri eni doktorski disertaciji (bolonjski študij).

### David Dolžan:

C1. *The sums of exceptional units in a finite ring*, Arch. Math. (Basel) **112** (2019), 581–586.

C2. *The commuting graphs of finite rings*, Publ. Math. Debrecen **95** (2019), 123–131.

### Oliver Dragičević:

B1. A. Carbonaro, —, *Convexity of power functions and bilinear embedding for divergence-form operators with complex coefficients*, sprejeto v objavo v J. Eur. Math. Soc. (JEMS).

C1. A. Carbonaro, —, *Bounded holomorphic functional calculus for non-symmetric Ornstein-Uhlenbeck operators*, Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) **19** (2019), 1497–1533.

F1. *Generalized convexity of power functions and applications*, vabljeno predavanje na sekciji iz harmonične analize, Congreso Bienal de la Real Sociedad Matemática Española, Santander, Španija, februar 2019.

F2. *Generalized convexity of power functions*, vabljeno predavanje, International Centre for Theoretical Physics (ICTP), Trst, Italija, december 2019.

I1. Mentorstvo pri 3 delih diplomskega seminarja (bolonjski študij).

### Barbara Drinovec Drnovšek:

B1. —, M. Slapar, *Proper holomorphic curves attached to domains*, sprejeto v objavo v Complex Var. Elliptic Equ.

C1. A. Alarcón, B. Drinovec-Drnovšek, F. Forstnerič, F. J. López, *Minimal surfaces in minimally convex domains*, Trans. Amer. Math. Soc. **371** (2019), 1735–1770.

- F1. *On proper holomorphic discs*, vabljeno predavanje, Stockholms universitet (SU), Kungliga Tekniska högskolan (KTH), Stockholm, Švedska, januar 2019.
- F2. *On proper holomorphic discs*, vabljeno predavanje, Conference on “Complex Analysis and Geometry - XXIV”, Levico Terme, Italija, junij 2019.
- F3. *On proper holomorphic maps*, vabljeno predavanje, 4<sup>th</sup> Central European Complex Analysis Meeting, Brno, Češka, november 2019.

## Roman Drnovšek:

- B1. *Operator norm and numerical radius analogues of Cohen’s inequality*, sprejeto v objavo v *Math. Inequal. Appl.*
- C1. *Sequences of bounds for the spectral radius of a positive operator*, *Linear Algebra Appl.* **574** (2019), 40–45.
- C2. —, M. Kandić, *Positive operators as commutators of positive operators*, *Studia Math.* **245** (2019), 185–200.
- C3. —, M. Kandić, *Triangularizability of families of polynomially compact operators*, *Oper. Matrices* **13** (2019), 375–385.
- D1. Član uredniškega odbora revije *Advances in Operator Theory*.
- D2. Član uredniškega odbora revije *Journal of Mathematical Analysis*.
- G1. *Positive commutators of positive operators*, Positivity X, Pretoria, Južna Afrika, 2019.
- I1. 3 recenzije za MathSciNet.
- I2. Mentorstvo pri enem magistrskem delu in dveh delih diplomskega seminarja (bolonjski študij).

## Jasmina Ferme:

- A1. A. Lipovec, —, *Uporaba GeoGebre pri pouku matematike na razredni stopnji*, poglavje v *Izzivi in dileme osmišljene uporabe IKT pri pouku*, str. 101–110, Univerzitetna založba Univerze, Maribor, 2019.
- G1. *Graphs that are critical for the packing chromatic number*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *Graphs that are critical for the packing chromatic number*, 22<sup>nd</sup> Workshop on Hereditary Graph Properties, Maribor, junij 2019.

- I1. Opravljene 3 ure predavanj tujim študentom v okviru programa mednarodne izmenjave študentov Erasmus+ na PEF UM v študijskem letu 2018/2019 (letni semester).
- I2. Opravljenih 10 ur predavanj tujim študentom v okviru programa mednarodne izmenjave študentov Erasmus+ na PEF UM v študijskem letu 2019/2020 (zimski semester).

### Gašper Fijavž:

- G1. *Forbidding prism immersions*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

### Franc Forstnerič:

- C1. — , F. Lárusson, *The parametric h-principle for minimal surfaces in  $\mathbb{R}^n$  and null curves in  $\mathbb{C}^n$* , Comm. Anal. Geom. **27** (2019), 1–45.
- C2. A. Alarcón, — , *Darboux charts around holomorphic Legendrian curves and applications*, Int. Math. Res. Not. IMRN **2019** (2019), 893–922.
- C3. *Proper holomorphic immersions into Stein manifolds with the density property*, J. Anal. Math. **139** (2019), 585–596.
- C4. A. Alarcón, — , F. J. López, *Every meromorphic function is the Gauss map of a conformal minimal surface*, J. Geom. Anal. **29** (2019), 3011–3038.
- C5. *A properly embedded holomorphic disc in the ball with finite area and dense boundary*, Math. Ann. **373** (2019), 719–742.
- C6. *Mergelyan's and Arakelian's theorems for manifold-valued maps*, Mosc. Math. J. **19** (2019), 465–484.
- C7. A. Alarcón, B. Drinovec-Drnovšek, — , F. J. López, *Minimal surfaces in minimally convex domains*, Trans. Amer. Math. Soc. **371** (2019), 1735–1770.
- C8. A. Alarcón, — , *New complex analytic methods in the theory of minimal surfaces: a survey*, J. Aust. Math. Soc. **106** (2019), 287–341.
- D1. Član uredniškega odbora revije *International Journal of Mathematics*.
- F1. *H-principle for complex contact structures on Stein manifolds*, seminarско predavanje, University of California, Berkeley, ZDA, februar 2019.
- F2. *Minimal surfaces by way of complex analysis*, vabljeno predavanje, Stanford University, ZDA, februar 2019.

- F3. *Minimal surfaces by way of complex analysis*, seminarsko predavanje, Washington University, ZDA, februar 2019.
- F4. *Minimal surfaces by way of complex analysis*, seminarsko predavanje, University of California, San Diego, ZDA, april 2019.
- F5. *Minimal surfaces by way of complex analysis*, seminarsko predavanje, University of Wisconsin, Madison, ZDA, april 2019.
- F6. *The Calabi-Yau problem for Riemann surfaces with finite genus and countably many ends*, seminarsko predavanje, Universidad de Granada, Departamento de Geometría y Topología, Granada, Španija, maj 2019.
- F7. *Minimal surfaces by way of complex analysis*, seminarsko predavanje, Universidad de La Laguna, San Cristóbal de La Laguna, Španija, maj 2019.
- F8. *Mergelyan's and Arakelian's theorems for manifold-valued maps*, vabljeno predavanje, 27<sup>th</sup> International Conference on Finite or Infinite Dimensional Complex Analysis and Applications (ICFIDCAA), Krasnojarsk, Rusija, avgust 2019.
- G1. *Mergelyan's and Arakelian's theorems for manifold-valued maps*, 1147<sup>th</sup> AMS Meeting, Honolulu, ZDA, marec 2019.
- II. Mentorstvo pri eni doktorski disertaciji (bolonjski študij).

## Boštjan Gabrovšek:

- C1. E. Horvat, —, *The Alexander polynomial of links in lens spaces*, J. Knot Theory Ramifications **28** (2019), 1–28.
- C2. J. Sun, L. Li, M. Cencelj, —, *Infinitely many sign-changing solutions for Kirchhoff type problems in  $\mathbb{R}^3$* , Nonlinear Anal. **186** (2019), 33–54.
- C3. —, E. Horvat, *Knot invariants in lens spaces*, International Conference on Knots, Low-Dimensional Topology and Applications, Olympia, Grčija, julij 2016, Knots, Low-Dimensional Topology and Applications (Springer Proceedings in Mathematics & Statistics, 284), Cham, Švica, 2019, 347–361.
- C4. —, T. Novak, J. Povh, D. Rupnik Poklukar, J. Žerovnik, *Five heuristics for the  $k$ -matching problem*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 101–106.
- C5. —, A. Peperko, J. Žerovnik, *On the independent rainbow domination numbers of generalized Petersen graphs  $P(n, 2)$  and  $P(n, 3)$* , 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 107–112.

- F1. *Skein modules of lens spaces and stratified Khovanov homology*, vabljeno predavanje, Hidden Algebraic Structures in Topology, Pasadena, ZDA, marec 2019.
- F2. *Bonded knots*, vabljeno predavanje, Knots in Gdańsk III, Gdansk, Poljska, junij 2019.
- G1. *Five heuristics for the  $k$ -matching problem*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019.
- G2. *On the independent rainbow domination numbers of generalized Petersen graphs  $P(n, 2)$  and  $P(n, 3)$* , 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019.
- I1. Mentorstvo in somentorstvo pri enem magistrskem delu (bolonjski studij).

### David Gajser:

- B1. *Verifying whether one-tape Turing machines run in linear time*, sprejeto v objavo v J. Comput. System Sci.
- G1. *Matematični tabor za tekmovalce in netekmovalce*, Sedemdeset let DMFA Slovenije / 1. mednarodna konferenca o poučevanju matematike, fizike in astronomije, Bled, september 2019.
- H1. *MaRS 2019*, Obzornik Mat. Fiz. **66** (2019), št. 2, 64-66.

### Josip Globevnik:

- C1. A. Alarcón, — , F. J. López, *A construction of complete complex hypersurfaces in the ball with control on the topology*, J. Reine Angew. Math. **2019** (2019), 289–308.
- F1. *Bounded complete complex manifolds in  $\mathbb{C}^N$* , vabljeno predavanje, 4<sup>th</sup> Central European Complex Analysis Meeting, Brno, Češka, november 2019.

### Tanja Gologranc:

- B1. B. Brešar, C. Bujtás, — , S. Klavžar, G. Košmrlj, T. Marc, B. Patkós, Z. Tuza, M. Vizer, *On Grundy total domination number in product graphs*, sprejeto v objavo v Discuss. Math. Graph Theory.



- B2. B. Brešar, — , M. Henning, T. Kos, *On the L-Grundy domination number of a graph*, sprejeto v objavo v Filomat.
- C1. B. Brešar, C. Bujtás, — , S. Klavžar, G. Košmrlj, T. Marc, B. Patkós, Z. Tuza, M. Vizer, *The variety of domination games*, Aequationes Math. **93** (2019), 1085–1109.
- C2. — , P. Repolusk, *Toll number of the strong product of graphs*, Discrete Math. **342** (2019), 807–814.
- F1. *Grundy (total) domination number of a graph*, vabljeno predavanje, 22<sup>nd</sup> Workshop on Hereditary Graph Properties, Maribor, junij 2019.
- G1. *On graphs with equal total domination and Grundy total domination number*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

### Mateja Grašič:

- C1. Y. H. Xia, M. Grašič, W. Huang, V. Romanovski, *Limit cycles in a model of olfactory sensory neurons*, Internat. J. Bifur. Chaos Appl. Sci. Engrg. **29** (2019), 1950038-1–1950038-9.
- II. Članica uredniškega odbora fakultetne revije *FNM novice: z novicami do boljšega informiranja*.

### Barbara Ikica:

- A1. *Evolutionary dynamics on evolving graphs*, doktorska disertacija, Univerza v Ljubljani, Fakulteta za matematiko in fiziko, Oddelek za matematiko, Matematika - 3. stopnja, Ljubljana, 2019.
- B1. — , *Clustering via the modified Petford–Welsh algorithm*, sprejeto v objavo v Ars Math. Contemp.
- C1. Q. Sun, — , R. Škrekovski, V. Vukašinović, *Graphs with a given diameter that maximise the Wiener index*, Appl. Math. Comput. **356** (2019), 438–448.
- C2. D. Dimitrov, — , R. Škrekovski, *Maximum external Wiener index of graphs*, Discrete Appl. Math. **257** (2019), 331–337.
- E1. Članica organizacijskega odbora konference *31<sup>st</sup> International Conference on “Formal Power Series and Algebraic Combinatorics”*, Ljubljana, julij 2019.

**Vesna Iršič:**

- C1. V. Gledel, —, S. Klavžar, *Strong geodetic cores and Cartesian product graphs*, Appl. Math. Comput. **363** (2019), art. 124609 [10 str.].
- C2. —, M. Konvalinka, *Strong geodetic problem on complete multipartite graphs*, Ars Math. Contemp. **17** (2019), 481–491.
- C3. V. Gledel, —, S. Klavžar, *Maker-Breaker domination number*, Bull. Malays. Math. Sci. Soc. (2) **42** (2019), 1773–1789.
- C4. *Effect of predomination and vertex removal on the game total domination number of a graph*, Discrete Appl. Math. **257** (2019), 216–225.
- C5. C. Bujtás, P. Dokyeesun, —, S. Klavžar, *Connected domination game played on Cartesian products*, Open Math. **17** (2019), 1269–1280.
- E1. Članica organizacijskega odbora konference 31<sup>st</sup> International Conference on “Formal Power Series and Algebraic Combinatorics”, Ljubljana, julij 2019.
- G1. *Effect of predomination and vertex removal on the game total domination number of a graph*, DIMEA Days 2019, Brno, Češka, junij 2019.
- G2. *Some results on the connected domination game*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G3. *Domination games*, Women of mathematics on the Mediterranean shores, Bled, september 2019.

**Marko Jakovac:**

- C1. C. Bujtás, —, *Relating the total domination number and the annihilation number of cactus graphs and block graphs*, Ars Math. Contemp. **16** (2019), 183–202.
- C2. *Relating the annihilation number and the 2-domination number of block graphs*, Discrete Appl. Math. **260** (2019), 178–187.
- F1. *The security number of graphs*, seminarsko predavanje, Kumamoto University, Faculty of Advanced Science and Technology, Kumamoto, Japonska, februar 2019.
- F2. *On the security number of different graph products*, seminarsko predavanje, Faculty of Applied Sciences, University of West Bohemia, Plzen, Češka, avgust 2019.
- G1. *Relating the annihilation number and two domination invariants*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

- I1. Soavtor enega univerzitetnega učnega gradiva.
- I2. Somentorstvo pri enem in mentorstvo pri 3 magistrskih delih (bolonjski študij).
- I3. 6 recenzij za MathSciNet.

### **Blaž Jelenc:**

- C1. K. Klinar, U. Tomc, — , S. Nosan, A. Kitanovski, *New frontiers in magnetic refrigeration with high oscillation energy-efficient electromagnets*, Appl. Energy **236** (2019), 1062–1077.
- C2. M. Jelenc, — , *Impact of mechanical circulatory support and heart transplantation on survival of the population of transplant eligible advanced heart failure patients: a computer simulation study*, Transpl. Regen. Med. **3** (2019), str. 49-54.

### **Aleksandar Jurišić:**

- C1. — , J. Vidali, *No strongly regular graph is locally Heawood*, Chebyshevskii Sb. **20** (2019), 198–206.
- C2. — , J. Vidali, *The Sylvester graph and Moore graphs*, European J. Combin. **80** (2019), 184–193.
- D1. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.
- F1. *Antipodal covers*, plenarno predavanje, XVI International Conference “Algebra, Number Theory and Discrete Geometry: modern problems, applications and problems of history” dedicated to the 80<sup>th</sup> anniversary of the birth of Professor Michel Deza, Tula, Rusija, maj 2019.
- G1. *Aplikacija eQuiz za interaktivno učenje*, Sedemdeset let DMFA Slovenije / 1. mednarodna konferenca o poučevanju matematike, fizike in astronomije, Bled, september 2019.
- II. Mentorstvo pri enem magistrskem in dveh diplomskih delih ter somentorstvo pri enem diplomskem delu (bolonjski študij).

### **Marko Kandić:**

- C1. R. Drnovšek, — , *Positive operators as commutators of positive operators*, Studia Math. **245** (2019), 185-200.

- C2. R. Drnovšek, — , *Triangularizability of families of polynomially compact operators*, Oper. Matrices **13** (2019), 375–385.
- C3. — , A. Vavpetič, *Topological aspects of order in  $C(X)$* , Positivity **23** (2019), 617–635.
- G1. *The countable sup property for vector lattices of continuous functions*, Positivity X, Pretoria, Južna Afrika, julij 2019.
- I1. Avtor enega univerzitetnega učbenika.
- I2. Mentorstvo pri enem magistrskem delu in enem delu diplomskega seminarja (bolonjski študij).

### Michael Kaplin :

- B1. — , M. Kramar Fijavž, *Generation of relatively uniformly continuous semigroups on vector lattices*, sprejeto v objavo v Anal. Math.
- G1. *Relatively uniformly continuous semigroups on vector lattices*, Positivity X, Pretoria, Južna afrika, julij 2019.

### Aleksander Kelenc:

- E1. Član organizacijskega odbora konference *22<sup>nd</sup> Workshop on Hereditary Graph Properties*, Maribor, junij 2019.
- G1. *Hausdorff Distance Between Trees in Polynomial Time*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *Incidence dimension and 2-packing number in graphs*, 22<sup>nd</sup> Workshop on o Hereditary Graph Properties, Maribor, junij 2019.
- I1. Sourednik enega konferenčnega zbornika (Book of abstracts).

### Sandi Klavžar:

- C1. B. Brešar, C. Bujtás, T. Gologranc, — , G. Košmrlj, T. Marc, B. Patkós, Z. Tuza, M. Vizer, *The variety of domination games*, Aequationes Math. **93** (2019), 1085–1109.
- C2. B. S. Anand, U. S. V. Chandran, M. Changat, — , E. J. Thomas, *Characterization of general position sets and its applications to cographs and bipartite graphs*, Appl. Math. Comput. **359** (2019), 84–89.

- C3. V. Gledel, V. Iršič, — , *Strong geodetic cores and Cartesian product graphs*, Appl. Math. Comput. **363** (2019), art. 124609 [10 str.].
- C4. T. James, — , A. Vijayakumar, *The domination game on split graphs*, Bull. Aust. Math. Soc. **99** (2019), 327–337.
- C5. V. Gledel, V. Iršič, — , *Maker-Breaker domination number*, Bull. Malays. Math. Sci. Soc. (2) **42** (2019), 1773–1789.
- C6. M. Tavakoli, — , *Distribution of global defensive  $k$ -alliances over some graph products*, CEJOR, Cent. Eur. J. Oper. Res. **27** (2019), 615–623.
- C7. Y. Alizadeh, E. Estaji, — , M. Petkovšek, *Metric properties of generalized Sierpiński graphs over stars*, Discrete Appl. Math. **266** (2019), 48–55.
- C8. — , D. F. Rall, *Packing chromatic vertex-critical graphs*, Discrete Math. Theor. Comput. Sci. **21** (2019), art. 8 [18 str.].
- C9. T. Bousch, A. M. Hinz, — , D. Parisse, C. Petr, P. K. Stockmeyer, *A note on the Frame-Stewart conjecture*, Discrete Math. Algorithms Appl. **11** (2019), art. 1950049 [6 str.].
- C10. — , D. F. Rall, *Domination game and minimal edge cuts*, Discrete Math. **342** (2019), 951–958.
- C11. P. Dorbec, M. A. Henning, — , G. Košmrlj, *Cutting lemma and union lemma for the domination game*, Discrete Math. **342** (2019), 1213–1222.
- C12. — , M. Mollard, *Daisy cubes and distance cube polynomial*, European J. Combin. **80** (2019), 214–223.
- C13. B. Brešar, N. Gastineau, — , O. Togni, *Exact distance graphs of product graphs*, Graphs Comb. **35** (2019), 1555–1569.
- C14. — , K. P. Narayankar, S. B. Lokesh, *Constructing uniform central graphs and embedding into them*, Indian J. Pure Appl. Math. **50** (2019), 451–460.
- C15. E. Deutsch, — ,  *$M$ -polynomial revisited: Bethe cacti and an extension of Gutman's approach*, J. Appl. Math. Comput. **60** (2019), 253–264.
- C16. M. Arockiaraj, — , S. Mushtaq, K. Balasubramanian, *Distance-based topological indices of nanosheets, nanotubes, and nanotori of  $\text{SiO}_2$* , J. Math. Chem. **57** (2019), 343–369.
- C17. M. Arockiaraj, — , S. Mushtaq, K. Balasubramanian, *Topological indices of the subdivision of a family of partial cubes and computation of  $\text{SiO}_2$  related structures*, J. Math. Chem. **57** (2019), 1868–1883.
- C18. M. Arockiaraj, — , J. Clement, S. Mushtaq, K. Balasubramanian, *Edge distance-based topological indices of strength-weighted graphs and their application to coronoid systems, carbon nanocones and  $\text{SiO}_2$  nanostructures*, Mol. Inform. **38** (2019), art. 1900039 [16 str.].

- C19. — , I. G. Yero, *The general position problem and strong resolving graphs*, *Open Math.* **17** (2019), 1126–1135.
- C20. C. Bujtás, P. Dokyeesun, V. Iršič, — , *Connected domination game played on Cartesian products*, *Open Math.* **17** (2019), 1269–1280.
- D1. Urednik revije *Bulletin of the Malaysian Mathematical Sciences Society*.
- D2. Urednik revije *The Art of Discrete and Applied Mathematics*.
- D3. Član uredniškega odbora revije *Iranian Journal of Mathematical Chemistry*.
- D4. Urednik revije *Ars Mathematica Contemporanea*.
- D5. Urednik revije *Asian-European Journal of Mathematics*.
- D6. Član uredniškega odbora revije *Iranian Journal of Mathematical Sciences and Informatics*.
- D7. Član uredniškega odbora revije *Kragujevac Journal of Mathematics*.
- D8. Področni urednik revije *Discussiones Mathematicae Graph Theory*.
- D9. Član uredniškega odbora revije *Graphs and Combinatorics*.
- D10. Član uredniškega odbora revije *European Journal of Combinatorics*.
- D11. Urednik revije *Discrete Applied Mathematics*.
- D12. Član uredniškega odbora revije *MATCH Communications in Mathematical and in Computer Chemistry*.
- G1. *The Maker-Breaker domination game*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *Maker-Breaker domination game*, 18<sup>th</sup> Workshop on Graph Theory: Colourings, Independence and Domination, Piechowice, Poljska, september 2019.
- G3. *Connected domination game played on Cartesian Products*, 7<sup>th</sup> Gdańsk Workshop on Graph Theory, Gdansk, Poljska, julij 2019.
- G4. *The general position problem on graphs*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019.
- I1. Dve recenziji za MathSciNet.
- I2. Mentorstvo pri 3 magistrskih in 2 delih diplomskega seminarja (bolonjski študij).

## Igor Klep:

- A1. J. W. Helton, — , S. Mccullough, M. Schweighofer, *Dilations, linear matrix inequalities, the matrix cube problem, and beta distributions*, American Mathematical Society, Providence, ZDA, 2019.

- A2. M. Augat, J. W. Helton, —, S. McCullough, *Free bianalytic maps between spectrahedra and spectraballs in a generic setting*, poglavje v *Interpolation and realization theory with applications to control theory: in honor of Joe Ball*, str. 43–60, Birkhäuser, Cham, Švica, 2019.
- B1. —, V. Vinnikov, J. Volčič, *Local theory of free noncommutative functions: germs, meromorphic functions and Hermite interpolation*, sprejeto v objavo v *Trans. Amer. Math. Soc.*
- B2. —, J. Nie, *A Matrix Positivstellensatz with lifting polynomials*, sprejeto v objavo v *SIAM J. Optim.*
- B3. J.W. Helton, —, S. McCullough, J. Volčič, *Bianalytic free maps between spectrahedra and spectraballs*, sprejeto v objavo v *J. Func. Anal.*
- C1. —, S. McCullough, K. Šivic, A. Zalar, *There are many more positive maps than completely positive maps*, *Int. Math. Res. Not. IMRN* **2019** (2019), 3313–3375.
- D1. Član uredniškega odbora revije revije *Communications in Algebra*.
- D2. Član uredniškega odbora revije revije *Operators and Matrices*.
- D3. Član uredniškega odbora revije revije *Complex Analysis and Operator Theory*.
- E1. Podpredsednik organizacijskega odbora konference *International Workshop on Operator Theory and its Applications*, IWOTA, ZDA, 2019.
- E2. Organizator sekcije “Analysis and Algebraic Geometry for Operator Variables” konference *International Workshop on Operator Theory and its Applications (IWOTA)*, Lizbona, Portugalska, julij 2019.
- E3. Soorganizator programa *Noncommutative Real Algebraic Geometry and Analysis*, Center of Mathematical Sciences and Applications, Harvard University, Cambridge (MA), ZDA, september/november 2019.
- F1. *Noncommutative polynomials defining convex sets*, vabljeno predavanje, Joint Mathematical Meeting JMM (AMS Special session “Recent Progress in Multivariable Operator Theory”), Baltimore, ZDA, januar 2019.
- F2. *Noncommutative polynomials describing convex sets*, vabljeno predavanje, *Geometry of Real Polynomials, Convexity and Optimization*, BIRS, Banff, Kanada, maj 2019.
- F3. *Minicourse on the Theory of Free Noncommutative Functions*, 4 urni mini-tečaj, Fields Institute, Toronto, Kanada, junij 2019.
- F4. *A Nullstellensatz for noncommutative polynomials and factorization in free algebras*, vabljeno predavanje, Fields Institute Workshop on De-

- velopments and Technical Aspects of Free Noncommutative Functions, Toronto, Kanada, junij 2019.
- F5. *Convex Algebraic Geometry of Completely Positive Maps*, plenarno predavanje, 22<sup>nd</sup> Conference of the International Linear Algebra Society (ILAS), Rio de Janeiro, Brazilija, julij 2019.
- F6. *Bianalytic maps between matrix convex sets*, plenarno predavanje, 30<sup>th</sup> International Workshop on Operator Theory and its Applications, Lisbona, Portugalska, julij 2019.
- F7. *Free noncommutative real algebraic geometry. A survey*, plenarno predavanje, Noncommutative Analysis, Computational Complexity, and Quantum Information, Center of Mathematical Sciences and Applications, Harvard University, Cambridge, MA, ZDA, november 2019.
- F8. *Bergman's centralizer theorem and quantization*, seminarsko predavanje, University of Florida, Gainesville, ZDA, januar 2019.
- I1. Član panela "Mathematics, Information science and Statistics (MIS)" za podeljevanje projektov, Royal Society of New Zealand.
- I2. Nagrada "Odlični v znanosti", ARRS.
- I3. Recenzent za Austrian Science Fund (AWF).
- I4. Recenzent za Israel Science Fund (ISF).
- I5. Ena recenzija za MathSciNet.

## Marjetka Knez:

- B1. J. Grošelj, — , *On stable representations of Bell elements*, sprejeto v objavo v *Comput. Math. Appl.*
- C1. J. Grošelj, — , *Interpolation with  $C^2$  quartic macro-elements based on 10-splits*, *J. Comput. Appl. Math.* **362** (2019), 143–160.
- D1. Gostujoča urednica posebne številke revije *Computer Aided Geometric Design*: "From Theoretical to Applied Geometry – Recent Developments" (Proceedings of Conference on Geometry: Theory and Applications, 3–7 June 2019, University of Innsbruck, Austria).
- E1. Organizacija minisimpozija "Interpolation and Approximation" konference *Conference on Geometry: Theory and Applications*, Innsbruck, Avstrija, junij 2019.
- E2. Organizacija predavanj Workshop Ljubljana-Linz: *predavanja v sklopu bilateralnega projekta*, Fakulteta za matematiko in fiziko, Ljubljana, september 2019.



- F1. *On constructions of splines over triangulations*, vabljeno predavanje v sklopu raziskovalnega obiska, Università degli Studi di Siena, Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche, Siena, Italija, maj 2019.
- F2. *Predavanja pri predmetu Numerical Analysis*, izvedba 14 ur predavanj za magistrske študente uporabne matematike, Università degli Studi di Siena, Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche, Siena, Italija, maj-junij 2019.
- F3. *Rigid body motion interpolation using Pythagorean-hodograph curves*, vabljeno predavanje, Università degli Studi di Firenze, Scuola di Scienze Matematiche, Fisiche e Naturali, Dipartimento di Matematica e Informatica, Firenze, Italija, junij 2019.
- F4. *Splines on triangulations with a 10-split*, vabljeno predavanje v sklopu bilateralnega projekta, Johannes Kepler Universität, Linz, Avstrija, december 2019.
- G1. *Splines on triangulations with a 10-split*, Conference on Geometry: Theory and Applications, Innsbruck, Avstrija, junij 2019.
- G2. *Motion interpolation using Pythagorean-hodograph curves with prescribed length*, SIAM Conference on Computational Geometric Design, Vancouver, Kanada, junij 2019.
- I1. Mentorstvo pri 3 magistrskih in 6 delih diplomskega seminarja (bolonjski študij).

## Damjana Kokol-Bukovšek:

- B1. —, T. Košir, B. Mojskerc, M. Omladič, *Asymmetric linkages: maxmin vs. reflected maxmin copulas*, sprejeto v objavo v Fuzzy Sets and Systems.
- C1. —, T. Košir, B. Mojskerc, M. Omladič, *Non-exchangeability of copulas arising from shock models*, J. Comput. Appl. Math. **358** (2019), 61–83.
- G1. *Commuting graph of the algebra of matrices*, International linear algebra & matrix theory workshop at UCD on the occasion of Thomas J. Laffey's 75th birthday, Dublin, Irska, maj 2019.
- I1. Soavtorica enega in recenzentka enega univerzitetnega učbenika.
- I2. Mentorstvo pri enem delu diplomskega seminarja (bolonjski študij).

**Tim Kos:**

- A1. *Contributions to the study of contemporary domination invariants of graphs*, doktorska disertacija, Univerza v Mariboru, Fakulteta za naravoslovje in matematiko, Oddelek za matematiko in računalništvo, Maribor, 2019.
- B1. B. Brešar, —, M. Henning, T. Kos, *On the L-Grundy domination number of a graph*, sprejeto v objavo v Filomat.
- C1. B. Brešar, —, R. Krivoš-Belluš, G. Semanišin, *Hitting subgraphs in  $P_4$ -tidy graphs*, Appl. Math. Comput. **352** (2019), 211-219.
- C2. B. Brešar, —, P. Torres, *Grundy domination and zero forcing in Kneser graphs*, Ars Math. Contemp. **17** (2019), 419-430.
- C3. E. Stojmenova Duh, A. Duh, U. Droftina, —, U. Duh, T. Simonič, D. Korošak, *Publish-and-flourish: Using blockchain platform to enable cooperative scholarly communication*, Publications **7** (2019), 15 str.
- G1. *On the Grundy dominating sequences*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- I1. Mentorstvo pri 2 študentskih elaboratih.

**Tomaz Košir:**

- B1. D. Kokol-Bukovšek, —, B. Mojškerc, M. Omladič, *Asymmetric linkages: maxmin vs. reflected maxmin copulas*, sprejeto v objavo v Fuzzy Sets and Systems.
- B2. —, M. Omladič, *Reflected maxmin copulas and modeling quadrant subindependence*, sprejeto v objavo v Fuzzy Sets and Systems.
- C1. D. Kokol-Bukovšek, —, B. Mojškerc, M. Omladič, *Non-exchangeability of copulas arising from shock models*, J. Comput. Appl. Math. **358** (2019), 61-83.

**Gašper Košmrlj:**

- B1. B. Brešar, C. Bujtás, T. Gologranc, S. Klavžar, —, T. Marc, B. Patkós, Z. Tuza, M. Vizer, *On Grundy total domination number in product graphs*, sprejeto v objavo v Discuss. Math. Graph Theory.

- C1. B. Brešar, C. Bujtás, T. Gologranc, S. Klavžar, — , T. Marc, B. Patkós, Z. Tuza, M. Vizer, *The variety of domination games*, Aequationes Math. **93** (2019), 1085–1109.
- C2. P. Dorbec, M. A. Henning, S. Klavžar, — , *Cutting lemma and union lemma for the domination game*, Discrete Math. **342** (2019), 213–222.

### Marjeta Kramar Fijavž:

- B1. M. Kaplin, — , *Generation of relatively uniformly continuous semigroups on vector lattices*, sprejeto v objavo v Anal. Math.
- C1. K. Engel, — , *Waves and diffusion on metric graphs with general vertex conditions*, Evol. Equ. Control Theory **8** (2019), 633–661.
- C2. J. Zevnik, — , D. Kozelj, *Generalized normalized cut and spanning trees for water distribution network partitioning*, J. Water Resour. Plan. Manage. **145** (2019), 1–12.
- E1. Organizatorica konference *Women of mathematics on the Mediterranean shores*, Bled, Slovenija, september 2019.
- F1. *The mathematics behind Google Search Engine*, vabljeno predavanje, Università degli Studi di Brescia, Italija, april 2019.
- F2. *Operator semigroups for linear processes on metric graphs*, vabljeno predavanje, Sveučilište “J. J. Strossmayera” u Osijeku, Hrvaška, maj 2019.
- F3. *Linear hyperbolic equations on networks*, vabljeno predavanje, 6<sup>th</sup> Najman Conference on Spectral Theory and Differential Equations, Sveti Martin na Muri, Hrvaška, september 2019.
- G1. *Generation of relatively uniformly continuous semigroups*, Positivity X, Pretoria, Južna Afrika, julij 2019.
- G2. *Bi-continuous operator semigroups for flows in infinite networks*, Operator Theory and Krein Spaces, Dunaj, Avstrija, december 2019.

### Tadeja Kraner Šumenjak:

- C1. S. Brezovnik, — , *Complexity of  $k$ -rainbow independent domination and some results on the lexicographic product of graphs*, Appl. Math. Comput. **349** (2019), 214–220.

- C2. M. Ošljaj, —, M. Lakota, P. Vindiš, *Parametric and nonparametric approaches for detecting the most important factors in biogas production*, Pol. J. Environ. Stud. **28** (2019), 291–301.
- C3. A. Murg, M. Skalicky, V. Bukovac, —, *Alternativni načini prehranjevanja*, 3. konferenca SDMSBZT Pomurja, Moravske Toplice, november 2019, Stopnja prehranjenosti pomurskih pacientov s pogostimi kroničnimi obolenji, 27–40.
- F1. *On  $k$ -rainbow independent domination in graphs*, seminarsko predavanje, Sveučilište u Zagrebu, Zagreb, Hrvaška, maj 2019.
- G1. *On  $k$ -rainbow independent domination in graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *On  $k$ -rainbow independent domination in graphs*, 22<sup>nd</sup> Workshop on Hereditary Graph Properties, Maribor, junij 2019.
- G3. *Alternativni načini prehranjevanja*, 3. konferenca SDMSBZT Pomurja, Moravske Toplice, november 2019.
- H1. *Statistični testi za povezanost dveh nominalnih spremenljivk in najpogostejše statistične napake = Statistical tests for a relationship between two nominal variables and most common statistical errors*, Dianoia **3** (2019), 37–47.
- II. Somentorstvo pri 2 diplomskih delih (bolonjski študij).
- II. Piska 2 recenzij za MathSciNet.

## Ganna Kudryavtseva:

- C1. *Two-sided expansions of monoids*, Internat. J. Algebra Comput. **29** (2019), 1467–1498.
- F1. *Intermediate quotients of the Booleanization of an inverse semigroup*, vabljeno predavanje, International Conference on Semigroups and Applications, Cochin, Indija, december 2019.
- G1.  *$F$ -inverse monoid in enriched signature*, 97. Arbeitstagung Allgemeine Algebra (97<sup>th</sup> Workshop on General Algebra), Dunaj, Avstrija, marec 2019.
- G2. *Partial actions and proper extensions of two-sided restriction semigroups*, SandGAL 2019 Semigroups and Groups, Automata, Logic, Cremona, Italija, junij 2019.

- G3. *Stone dualities between étale categories and restriction semigroups*, TACL 2019 Topology, Algebra and Categories in Logic, Nica, Francija, junij 2019.
- I1. 3 recenzije za MathSciNet.
- I2. Soavtorica enega univerzitetnega učbenika.

## Bojan Kuzma:

- B1. G. Dolinar, —, J. Marovt, B. Ungor, *On some partial orders on a certain subset of the power set of rings*, sprejeto v objavo v Glas. Mat. Ser. III.
- B2. G. Dolinar, S. Halicioglu, A. Harmanci, —, J. Marovt, B. Ungor, *Preservers of the left-star and right-star partial orders*, sprejeto v objavo v Linear Algebra Appl.
- B3. D. Ilišević, —, C.-K. Li, E. Poon, *Complexifications of real Banach spaces and their isometries*, sprejeto v objavo v Linear Algebra Appl.
- C1. M. Budrevich, G. Dolinar, A. È. Guterman, —, *Graph characterization of fully indecomposable nonconvertible  $(0, 1)$ -matrices with minimal number of ones*, Ars Math. Contemp. **17** (2019), 141–151.
- C2. G. Dolinar, —, J. Marovt, B. Ungor, *Properties of core-EP order in rings with involution*, Front. Math. China **14** (2019), 715–736.
- C3. G. Dolinar, A. È. Guterman, —, O. Markova, *Double centralizing theorem with respect to  $q$ -commutativity relation*, J. Algebra Appl. **18** (2019), art. 1950003 [12 str.].
- C4. —, M. Mastnak, M. Omladič, H. Radjavi, *On approximate versions of reducibility results for matrix groups and semigroups*, Linear Algebra Appl. **577** (2019), 41–52.
- C5. D. Ilišević, —, *On square roots of isometries*, Linear Multilinear Algebra **67** (2019), 1898–1921.
- C6. G. Dolinar, —, N. Stopar, *Orthomaps on formally real simple Jordan algebras*, Oper. Matrices **13** (2019), 447–460.
- D1. Član uredniškega odbora revije *Linear and Multilinear Algebra*.
- D2. Področni urednik revije *Special Matrices*.
- G1. *Approximate reducibility of unitary subgroups*, 22<sup>nd</sup> ILAS Conference, Rio de Janeiro, Brazilija, julij 2019.
- I1. Recenzija enega univerzitetnega učbenika.

**Boštjan Kuzman:**

- E1. Član organizacijskega odbora konference *8. evropski kongres matematike 2020*, Portorož, Slovenija, julij 2020.
- H1. *Koliko stane zbiranje sličic?*, Presek **46** (2019), št. 4, 21–22.
- I1. Mentorstvo pri 2 magistrskih delih (bolonjski študij).

**Uroš Kuzman:**

- B1. L. Boc Thaler, — , *Reduced dynamical systems*, sprejeto v objavo v Ergodic Theory Dynam. Systems.
- I1. Mentorstvo pri enem magistrskem in enem delu diplomskega seminarja (bolonjski študij).
- I2. Sodelovanje v oddaji *Ugriznimo znanost* (RTVSLO).

**Boštjan Lemež:**

- C1. *An uncountable family of upper semicontinuous functions  $F$  such that the graph of  $F$  is homeomorphic to the inverse limit of closed unit intervals with  $F$  as the only bonding function*, Topology Appl. **253** (2019), 25–37.

**Bojan Magajna:**

- C1. *Operator systems and  $C^*$ -extreme points*, Studia Math. **247** (2019), 45–62.
- D1. Član uredniškega odbora revije *Operators and Matrices*.
- I1. Mentorstvo pri enem delu diplomskega seminarja (bolonjski študij).

**Aleksander Malnič:**

- B1. R. Grande, I. Kovács, K. Kutnar, — , L. Martínez, D. Marušič, *Equi-sizable partial sum families*, sprejeto v objavo v J. Algebraic Combin.

- C1. M. A. García, K. Kutnar, —, L. Martínez, D. Marušič, J. M. Montoya, *Construction of infinite families of vertex-transitive directed strongly regular graphs*, Acta Math. Univ. Comenian. (N.S.) **88** (2019), 319–327.
- C2. —, R. Požar, *On split liftings with sectional complements*, Math. Comp. **88** (2019), 983–1005.
- D1. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.
- E1. Član znanstvenega odbora konference *9<sup>th</sup> PhD Summer School in Discrete Mathematics*, Rogla, Slovenija, julij 2019.
- G1. *Covers of digraphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

## Tilen Marc:

- B1. K. Knauer, —, *Hypercellular graphs: Partial cubes without  $Q_3^-$  as partial cube minor*, sprejeto v objavo v Discrete Math.
- B2. K. Knauer, —, *On tope graphs of complexes of oriented matroids*, sprejeto v objavo v Discrete Comput. Geom.
- B3. B. Brešar, C. Bujtás, T. Gologranc, S. Klavžar, G. Košmrlj, —, B. Patkós, Z. Tuza, M. Vizer, *On Grundy total domination number in product graphs*, sprejeto v objavo v Discuss. Math. Graph Theory.
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- C2. J. Azarija, —, *There is no  $(95, 40, 12, 20)$  strongly regular graph*, J. Combin. Des. **28** (2019), 294–306.
- C3. —, M. Stopar, J. Hartman, M. Bizjak, J. Modic, *Privacy-enhanced machine learning with functional encryption*, European Symposium on Research in Computer Security, Luksemburg, september 2019, Computer Security – ESORICS 2019, 3–21.
- C4. M. Stopar, M. Bizjak, J. Modic, J. Hartman, A. Žitnik, —, *emmy-Trust-Enhancing Authentication Library*, 13<sup>th</sup> IFIP International Conference on Trust Management, København, Danska, julij 2019, Trust Management XIII: proceedings, 133–146.
- G1. *Oriented matroids as graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

- G2. *Privacy-enhanced machine learning with functional encryption*, European Symposium on Research in Computer Security, Luksemburg, september 2019.

### Janko Marovt:

- B1. G. Dolinar, B. Kuzma, — , B. Ungor, *On some partial orders on a certain subset of the power set of rings*, sprejeto v objavo v Glas. Mat. Ser. III.
- B2. B. Ungor, S. Halicioglu, A. Harmanci, — , *On properties of the minus partial order in regular modules*, sprejeto v objavo v Publ. Math. Debrecen.
- B3. G. Dolinar, S. Halicioglu, A. Harmanci, B. Kuzma, — , B. Ungor, *Preservers of the left-star and right-star partial orders*, sprejeto v objavo v Linear Algebra Appl.
- B4. I. Golubić, — , *Monotone transformations on the cone of all positive semidefinite real matrices*, sprejeto v objavo v Math. Slovaca.
- C1. G. Dolinar, B. Kuzma, — , B. Ungor, *Properties of core-EP order in rings with involution*, Front. Math. China **14** (2019), 715–736.
- I1. Mentorstvo pri enem delu diplomskega projekta.
- I2. 6 recenzij za MathSciNet.
- I3. 8 recenzij za Zentralblatt MATH.
- I4. Pisec recenzij za revije: “Annals of functional analysis”, “Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas. RACSAM”, “Kragujevac journal of mathematics”, “Linear and Multilinear Algebra”.

### Dragan Marušič:

- B1. Y. Q. Feng, K. Kutnar, — , D. W. Yang, *On cubic symmetric non-Cayley graphs with solvable automorphism groups*, sprejeto v objavo v Discrete Math.
- B2. R. Grande, I. Kovács, K. Kutnar, A. Malnič, L. Martínez, — , *Equi-sizable partial sum families*, sprejeto v objavo v J. Algebraic Combin.
- C1. M. A. García, K. Kutnar, A. Malnič, L. Martínez, — , J. M. Montoya, *Construction of infinite families of vertex-transitive directed strongly regular graphs*, Acta Math. Univ. Comenian. (N.S.) **88** (2019), 319–327.



- C2. Y. Q. Feng, A. Hujdurović, I. Kovács, K. Kutnar, — , *Quasi-semiregular automorphisms of cubic and tetravalent arc-transitive graphs*, Appl. Math. Comput. **353** (2019), 329–337.
- C3. S. F. Du, K. Kutnar, — , *Polynomials of degree 4 over finite fields representing quadratic residues*, Art Discrete Appl. Math. **2** (2019), 1–11.
- C4. Q. Koike, Sergio Hiroki, I. Kovács, — , M. Muzychuk, *Cyclic groups are CI-groups for balanced configurations*, Des. Codes Cryptogr. **87** (2019), 1227–1235.
- C5. K. Kutnar, — , Š. Miklavič, P. Šparl, *The classification of 2-extendable edge-regular graphs with diameter 2*, Electron. J. Combin. **26** (2019), P1.16 [14 str.].
- C6. K. Kutnar, — , *Odd extensions of transitive groups via symmetric graphs – The cubic case*, Combin. Theory Ser. B **136** (2019), 170–192.
- D1. Glavni in odgovorni urednik revije *Ars Mathematica Contemporanea*.
- D2. Ustanovni in glavni urednik revije *The Art of Discrete and Applied Mathematics*.
- D3. Član uredniškega odbora spletne enciklopedije *Encyclopedia of graphs*, <http://atlas.gregas.eu>
- F1. *Lovász Hamiltonicity Problem*, vabljeno predavanje, ArasuFest: Sequences, Codes and Designs, Kalamata, Grčija, avgust 2019.
- G1. *Hamiltonicity of cubic vertex-transitive graphs – a possible approach*, Finite Geometry Workshop, Szeged, Madžarska, januar/februar 2019.

## Matej Mencinger:

- C1. A. Ivanecz, I. Plahuta, T. Magdalenić, — , I. Peruš, S. Potrč, B. Krebs, *The external validation of a difficulty scoring system for predicting the risk of intraoperative complications during laparoscopic liver resection*, BMC Surg. **19** (2019), 1–9.
- C2. T. Letnik, I. Peruš, S. Božičnik, — , *On fundamental principles of the optimal number and location of loading bays in urban areas*, Transport **34** (2019), 722–740.
- F1. *Cubic persistent centers and their linearizability problem*, vabljeno predavanje, Zhe Jiang Normal University, Jinhua, Kitajska, september 2019.
- F2. *On some  $p$ - $q$  resonant center problems*, vabljeno predavanje, Shanghai Jiao Tong University (SJTU), Kitajska, september 2019.

- F3. *On the linearizability problem of cubic persistent center in planar systems of ODEs*, vabljeno predavanje, School of Science of Southwest Petroleum University, Chengdu, Kitajska, september 2019.
- G1. *Predicting intraoperative complications during laparoscopic liver resection : preliminary results*, 14<sup>th</sup> Slovenian Congress of Endoscopic Surgery, Portorož, maj 2019.
- G2. *Linearizability problem of planar cubic persistent centers*, 4<sup>th</sup> Workshop on Dynamical Systems and Applications, Maribor, julij 2019.
- G3. *Mencinger. Near-nilpotents/idempotents and local dynamics of homogeneous quadratic systems*, Workshop on Qualitative and Stability Theory of Differential Equations, Yichang, Kitajska, september 2019.
- I1. Somentorstvo pri eni doktorski diseraciji in enem diplomskem delu (boljski študij).
- I2. Pisec recenzij za reviji “American journal of computational and applied mathematics” in “American Journal of Mathematics and Statistics”.

## Štefko Miklavič:

- B1. C. Caliskan, — , S. Ozkan, P. Šparl, *Efficient domination in Cayley graphs of generalized dihedral groups*, sprejeto v objavo v Discuss. Math. Graph Theory.
- B2. — , S. Penjič, *On the Terwilliger algebra of a certain family of bipartite distance-regular graphs with  $\Delta_2 = 0$* , sprejeto v objavo v Art Discrete Appl. Math.
- C1. M. MacLean, — , *Bipartite distance-regular graphs and taut pairs of pseudo primitive idempotents*, Algebr. Comb. **4** (2019), 499–520.
- C2. C. Çalişkan, — , S. Özkan, *Domination and efficient domination in cubic and quartic Cayley graphs on abelian groups*, Discrete Appl. Math. **271** (2019), 15–24.
- C3. K. Kutnar, D. Marušič, — , P. Šparl, *The classification of 2-extendable edge-regular graphs with diameter 2*, Electron. J. Combin. **26** (2019), P1.16 [14 str.].
- C4. R. Jajcay, — , P. Šparl, G. Vasiljević, *On certain edge-transitive bicirculants*, Electron. J. Combin. **26** (2019), P2.6 [28 str.].
- C5. E. Dobson, — , P. Šparl, *On automorphism groups of deleted wreath products*, Mediterr. J. Math. **16** (2019), art. 149 [27 str.].
- D1. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.

- D2. Urednik revije *Journal of Algebraic Combinatorics*.
- E1. Član znanstvenega odbora konference 9<sup>th</sup> *PhD Summer School in Discrete Mathematics*, Rogla, Slovenija, julij 2019.
- F1. *On the Terwilliger algebra of pseudo distance-regular graphs*, Discrete Mathematics Seminar, Portland State University, Portland, Oregon, ZDA, maj 2019.
- G1. *Irreducible  $T$ -modules with endpoint 1 of almost 1-homogeneous distance-regular graph*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- I1. Mentorstvo pri eni doktorski disertaciji, eni magistrskem delu in eni zaključni nalogi (bolonjski študij).

### **Uroš Milutinović:**

- C1. I. Banič, M. Črepnjak, M. Merhar, — , T. Sovič, *The closed subset theorem for inverse limits with upper semicontinuous bonding functions*, Bull. Malays. Math. Sci. Soc. (2) **42** (2019), 835–846.
- I1. Somentorstvo pri eni doktorski disertaciji (bolonjski študij).

### **Bojan Mohar:**

- B1. F. Knox, — , *Maximum number of colourings: 4-chromatic graphs*, sprejeto v objavo v J. Combin. Theory Ser. B.
- B2. Y. Jing, — , *The genus of a random bipartite graph*, sprejeto v objavo v Canad. J. Math.
- B3. Y. Jing, — , *The genus of complete 3-uniform hypergraphs*, sprejeto v objavo v J. Combin. Theory Ser. B.
- B4. K. Kawarabayashi, P. Klavík, — , R. Nedela, P. Zeman, *Isomorphisms of maps on the sphere*, sprejeto v objavo v Contemp. Math.
- B5. S.A. Hosseini, F. Knox, — , *Cops and Robbers on graphs of bounded diameter*, sprejeto v objavo v SIAM J. Discrete Math.
- B6. — , N. Singer, *The last temptation of William T. Tutte*, sprejeto v objavo v European J. Combin.
- C1. S. G. Hermosillo De La Maza, — , *Guarding isometric subgraphs and Lazy Cops and Robbers*, Acta Math. Univ. Comenian. (N.S.) **88** (2019), 743–747.

- C2. F. Knox, — , D. R. Wood, *A golden ratio inequality for vertex degrees of graphs*, Amer. Math. Monthly **126** (2019), 742–747.
- C3. H. Chen, — , *The sandpile group of a polygon flower*, Discrete Appl. Math. **270** (2019), 68–82.
- C4. F. Knox, — , *Maximum number of colourings: 5-chromatic case*, Electron. J. Combin. **26** (2019), P3.40 [10 str.].
- C5. G. Greaves, — , S. O., *Interlacing families and the Hermitian spectral norm of digraphs*, Linear Algebra Appl. **564** (2019), 201–208.
- C6. H. H. Li, — , *On the first and second eigenvalue of finite and infinite uniform hypergraphs*, Proc. Amer. Math. Soc. **147** (2019), 933–946.
- C7. Z. Dvořák, — , R. Šámal, *Exponentially many nowhere-zero  $\mathbb{Z}_3$ -,  $\mathbb{Z}_4$ -, and  $\mathbb{Z}_6$ -flows*, Combinatorica **39** (2019), 1237–1253.
- C8. F. Knox, — , *Fractional decompositions and the smallest-eigenvalue separation*, Electron. J. Combin. **26** (2019), art. P4.41 [6 str.].
- C9. B. M. Ábrego, O. Aichholzer, S. Fernández-Merchant, D. McQuillan, — , P. Mutzel, P. Ramos, R. B. Richter, B. Vogtenhuber, *Bishellable drawings of  $K_n$* , SIAM J. Discrete Math. **32** (2019), 2482–2492.
- C10. D. Bokal, Z. Dvořák, P. Hliněný, J. Leanős, — , T. Wiedera, *Bounded degree conjecture holds precisely for  $c$ -crossing-critical graphs with  $c \leq 12$* , 35<sup>th</sup> International Symposium on Computational Geometry, Portland, ZDA, junij 2019, Leibniz International Proceedings in Informatics (LIPIcs) 129 (2019), str. 14:1–14:15.
- D1. Glavni urednik revije *Electronic Journal of Combinatorics*.
- D2. Glavni urednik revije *Journal of Combinatorial Theory. Series B*.
- D3. Član uredniškega odbora revije *Journal of Graph Theory*.
- D4. Član uredniškega odbora revije *MATCH. Communications in Mathematical and in Computer Chemistry*.
- D5. Področni urednik revije *Discrete Mathematics*.
- D6. Član uredniškega odbora revije *Discrete and Computational Geometry*.
- D7. Član uredniškega odbora revije *Tbilisi Mathematical Journal*.
- D8. Svetnik revije *Ars Mathematica Contemporanea*.
- D9. Sourednik zbornika 9<sup>th</sup> *Slovenian International Conference on Graph Theory*, Bled, junij 2019.
- E1. Član programskega odbora konference *ACM-SIAM Symposium on Discrete Algorithms (SODA'19)*, San Diego, CA, ZDA, januar 2019.
- E2. Član programskega odbora konference *The 5<sup>th</sup> Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2019)*, Kharagpur, Indija, februar 2019.
- E3. Član organizacijskega odbora konference *Structural graph theory and*

- graph colorings*, Tsinghua Sanya International Mathematics Forum, Kitajska, maj 2019.
- E4. Član organizacijskega odbora konference *7<sup>th</sup> biennial Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM 2019)*, Vancouver, Kanada, maj 2019.
- E5. Član organizacijskega odbora konference *25<sup>th</sup> Birthday Celebration of The Electronic Journal of Combinatorics*, Vancouver, Kanada, maj 2019.
- E6. Predsednik organizacijskega odbora konference *9<sup>th</sup> Slovenian International Conference on Graph Theory (Bled 2019)*, Bled, junij 2019.
- E7. Član programskega odbora konference *45<sup>th</sup> International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2019)*, Vall de Núria, Španija, junij 2019.
- E8. Član programskega odbora konference *Algorithms and Data Structures Symposium (WADS 2019)*, University of Alberta, Kanada, avgust 2019.
- E9. Član programskega odbora konference *European Conference on Combinatorics, Graph Theory and Applications (Eurocomb 2019)*, Bratislava, Slovaška, avgust 2019.
- F1. *Toward a theory of crossing-critical graphs*, Tutte Distinguished Speaker, University of Waterloo, Waterloo, Kanada, marec 2019.
- F2. *Structure and generation of crossing-critical graphs*, plenarno predavanje, International Conference on Graph Theory and Combinatorics, Beijing Jiaotong University, Kitajska, marec 2019.
- F3. *Crossing-critical graphs*, vabljeno predavanje, Maps  $\cup$  Configurations  $\cup$  Polytopes  $\cup$  Molecules  $\subseteq$  Graphs, Ljubljana, maj 2019.
- F4. *Crossing-critical graphs*, plenarno predavanje, Ghent Graph Theory Workshop On Structure and Algorithms (GGTW 2019), Ghent, Belgija, avgust 2019.
- G1. *Coloring complex and a question of Tutte*, Structural graph theory and graph colorings, Tsinghua Sanya International Mathematics Forum, Kitajska, maj 2019.
- G2. *Crossing critical graphs*, CanaDAM 2019, Vancouver, Kanada, maj 2019.
- G3. *About the smallest eigenvalue of non-bipartite graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G4. *Bounded maximum degree conjecture holds precisely for  $c$ -crossing-critical graphs with  $c \leq 12$* , 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G5. *Guarding isometric subgraphs and lazy cops and robbers*, Eurocomb

2019, Bratislava, Slovaška, avgust 2019.

- G6. *The last temptation of Tutte*, Waterloo Coloring Conference, Waterloo, Kanada, september 2019.
- G7. *Meyniel's conjecture on graphs of bounded degree*, CMS Winter Meeting, Toronto, Kanada, december 2019.

### Blaž Mojškerc:

- B1. D. Kokol-Bukovšek, T. Košir, — , M. Omladič, *Asymmetric linkages: maxmin vs. reflected maxmin copulas*, sprejeto v objavo v *Fuzzy Sets and Systems*.
- C1. D. Kokol-Bukovšek, T. Košir, — , M. Omladič, *Non-exchangeability of copulas arising from shock models*, *J. Comput. Appl. Math.* **358** (2019), 61–83.
- I1. Somentorstvo pri enem delu diplomskega seminarja (bolonjski študij).

### Giovanni Molica Bisci:

- C1. V. Ambrosio, G. M. Figueiredo, T. Isernia, — , *Sign-changing solutions for a class of zero mass nonlocal Schrödinger equations*, *Adv. Nonlinear Stud.* **19** (2019), 113–132.
- C2. V. Ambrosio, — , *Periodic solutions for a fractional asymptotically linear problem*, *Proc. Roy. Soc. Edinburgh Sect. A* **149** (2019), 593–615.
- C3. V. Ambrosio, — , D. Repovš, *Nonlinear equations involving the square root of the Laplacian*, *Discrete Contin. Dyn. Syst. Ser. S* **12** (2019), 151–170.
- C4. R. Bartolo, E. Colorado, — , *Perturbed problems involving the square root of the Laplacian*, *Minimax Theory Appl.* **4** (2019), 33–54.
- C5. *Kirchhoff-type problems on a geodesic ball of the hyperbolic space*, *Nonlinear Anal.* **186** (2019), 55–73.
- C6. — , P. Pucci, *Multiple sequences of entire solutions for critical polyharmonic equations*, *Riv. Math. Univ. Parma (N.S.)* **10** (2019), 117–144.
- D1. Član uredniškega odbora revije *Advances in Nonlinear Analysis*.
- D2. Član uredniškega odbora revije *Boundary Value Problems*.
- D3. Član uredniškega odbora revije *Complex Variables and Elliptic Equations*.

- D4. Član uredniškega odbora revije *Electronic Journal of Differential Equations*.
- D5. Član uredniškega odbora revije *Opuscula Mathematica*.
- F1. *On the action of topological groups on Sobolev spaces*, vabljeno predavanje, Two nonlinear days in Urbino, Italija, julij 2019.
- F2. *Some results for critical polyharmonic equations*, vabljeno predavanje, Elsevier Journal of Mathematical Analysis and Applications Conference on Nonlinear Analysis (on the occasion of the 65<sup>th</sup> birthday of Professor Dušan Repovš), Krakov, Poljska, oktober 2019.

### Primož Moravec:

- B1. C. Delizia, U. Jezernik, —, C. Nicotera, *Gaps in probabilities of satisfying some commutator-like identities*, sprejeto v objavo v Israel J. Math.
- C1. *On Tamura's identity  $yx = f(x, y)$  in groups*, Commun. Algebra **47** (2019), 2204–2208.
- C2. *On the exponent of Bogomolov multipliers*, J. Group Theory **22** (2019), 491–504.
- C3. *Idempotent-fixing automorphisms of completely regular semigroups*, Semigroup Forum **99** (2019), 517–521.
- C4. *On finite  $p$ -groups satisfying given laws*, Monatsh. Math. **190** (2019), 589–593.
- D1. Urednik revije *Ars Mathematica Contemporanea*.
- I1. Mentorstvo pri 3 delih diplomskega seminarja (bolonjski študij).

### Polona Oblak:

- C1. R. H. Levene, —, H. Šmigoc, *A Nordhaus-Gaddum conjecture for the minimum number of distinct eigenvalues of a graph*, Linear Algebra Appl. **564** (2019), 236–263.
- C2. A. Đurić, S. Jevđenić, —, N. Stopar, *The total zero-divisor graph of a commutative ring*, J. Algebra Appl. **18** (2019), art. 1950190 [16 str.].
- F1. *On the multiplicities of eigenvalues of symmetric matrices whose pattern is constrained by a graph*, vabljeno predavanje, University College Dublin, Irska, april 2019.

- II. Mentorstvo pri 2 diplomskih delih in enem delu diplomskega seminarja (bolonjski študij).

### Matjaž Omladič:

- B1. R. Okorn, — , *Lévy modeled GMWB : pricing with wavelets*, sprejeto v objavo v Comm. Statist. Simulation Comput.
- B2. — , N. Stopar, *Final solution to the problem of relating a true copula to an imprecise copula*, sprejeto v objavo v Fuzzy Sets and Systems.
- B3. T. Košir, — , *Reflected maxmin copulas and modeling quadrant subindependence*, sprejeto v objavo v Fuzzy Sets and Systems.
- B4. D. Kokol-Bukovšek, T. Košir, B. Mojskerc, — , *Asymmetric linkages: maxmin vs. reflected maxmin copulas*, sprejeto v objavo v Fuzzy Sets and Systems.
- C1. D. Kokol-Bukovšek, T. Košir, B. Mojskerc, — , *Non-exchangeability of copulas arising from shock models*, J. Comput. Appl. Math. **358** (2019), 61–83.
- C2. B. Kuzma, M. Mastnak, — , H. Radjavi, *On approximate versions of reducibility results for matrix groups and semigroups*, Linear Algebra Appl. **577** (2019), 41–52.
- D1. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.
- D2. Član uredniškega odbora revije *Operators and Matrices*.
- G1. *Imprecise copulas arising from shock models*, 16<sup>th</sup> International Conference Applied Statistics, Ribno, september 2019.
- II. Mentorstvo pri eni doktorski disertaciji in pri enem magistrskem delu (bolonjski študij).

### Marko Orel:

- C1. *Nonstandard rank-one nonincreasing maps on symmetric matrices*, Linear Multilinear Algebra **67** (2019), 391–432.
- G1. *On some connections between finite geometry, graph theory, and matrix theory*, Finite geometry workshop, Szeged, Madžarska, februar 2019.
- G2. *Rank-one nonincreasing maps on symmetric matrices over small fields*, Preserver Weekend in Szeged, Madžarska, april 2019.
- II. Ena recenzija za MathSciNet.



**Nikolaos Papageorgiou:**

- A1. —, V. Rădulescu, D. Repovš, *Nonlinear Analysis: Theory and Methods*, Springer (Springer Monographs in Mathematics), Cham, Švica, 2019.
- C1. S. Aizicovici, —, V. Staicu, *Nonlinear periodic system with unilateral constraints*, *Topol. Methods Nonlinear Anal.* **54** (2019), 871–885.
- C2. D. Averna, —, E. Tornatore, *Positive solutions for nonlinear Robin problems with convection*, *Math. Methods Appl. Sci.* **42** (2019), 1907–1920.
- C3. Y. Bai, L. Gasiński, —, *Nonlinear Dirichlet problems with the combined effects of singular and convection terms*, *Electron. J. Differential Equations* **57** (2019), 1–13.
- C4. P. Candito, L. Gasiński, —, *Nonlinear nonhomogeneous Robin problems with convection*, *Ann. Acad. Sci. Fenn. Math.* **44** (2019), 755–767.
- C5. M. E. Filippakis, —, *Nodal solutions for indefinite Robin problems*, *Bull. Malays. Math. Sci. Soc. (2)* **42** (2019), 171–184.
- C6. G. Fragnelli, D. Mugnai, —, *Robin problems for the  $p$ -Laplacian with gradient dependence*, *Discrete Contin. Dyn. Syst. Ser. S* **12** (2019), 287–295.
- C7. L. Gasiński, —, *Positive solutions for the Robin  $p$ -Laplacian problem with competing nonlinearities*, *Adv. Calc. Var.* **12** (2019), 31–56.
- C8. L. Gasiński, —, *Nonlinear Dirichlet problems with sign changing drift coefficient*, *Appl. Math. Lett.* **90** (2019), 209–214.
- C9. L. Gasiński, —, *Nonlinear multivalued periodic systems*, *J. Dyn. Control Syst.* **25** (2019), 219–243.
- C10. L. Gasiński, —, *Multivalued periodic Lienard systems*, *J. Math. Anal. Appl.* **477** (2019), 196–221.
- C11. L. Gasiński, —, *Nontrivial solutions for a class of resonant  $p$ -Laplacian Neumann problems*, *Nonlinear Anal.* **71** (2019), 6365–6372.
- C12. L. Gasiński, —, *On a nonlinear parametric Robin problem with a locally defined reaction*, *Nonlinear Anal.* **185** (2019), 374–387.
- C13. L. Gasiński, —, K. Winkowski, *Positive solutions for nonlinear Robin problems with concave terms*, *J. Convex Anal.* **26** (2019), 1143–1172.
- C14. U. Guarnotta, S. A. Marano, —, *Multiple nodal solutions to a Robin problem with sign-changing potential and locally defined reaction*, *Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl.* **30** (2019), 269–294.
- C15. S. A. Marano, G. Marino, —, *On a Dirichlet problem with  $(p, q)$ -Laplacian and parametric concave-convex nonlinearity*, *J. Math. Anal. Appl.* **475** (2019), 1093–1107.

- C16. N. Mimikos-Stamatopoulos, —, *On resonant Robin problems with general potential*, Bull. Malays. Math. Sci. Soc. (2) **42** (2019), 1485–1506.
- C17. —, A. Scapellato, *Nonlinear Robin problems with general potential and crossing reaction*, Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl. **30** (2019), 1–29.
- C18. —, C. Vetro, *Superlinear  $(p(z), q(z))$ -equations*, Complex Var. Elliptic Equ. **64** (2019), 8–25.
- C19. —, C. Vetro, F. Vetro, *Pairs of solutions for Robin problems with an indefinite and unbounded potential, resonant at zero and infinity*, Manuscripta Math. **158** (2019), 487–503.
- C20. —, C. Vetro, F. Vetro, *Solutions and positive solutions for superlinear Robin problems*, J. Math. Phys. **60** (2019), art. 101506 [26 str.].
- C21. —, C. Vetro, F. Vetro, *Multiple solutions for  $(p, 2)$ -equations at resonance*, Discrete Contin. Dyn. Syst. Ser. S **12** (2019), 347–374.
- C22. —, C. Vetro, F. Vetro, *Nonlinear vector Duffing inclusions with no growth restriction on the orientor field*, Topol. Methods Nonlinear Anal. **54** (2019), 257–274.
- C23. —, C. Vetro, F. Vetro, *Positive solutions for singular  $(p, 2)$ -equations*, Z. Angew. Math. Phys. **70** (2019), art. 72 [10 str.].
- C24. —, C. Vetro, F. Vetro, *Parametric nonlinear singular Dirichlet problems*, Nonlinear Anal. Real World Appl. **45** (2019), 239–254.
- C25. —, P. Winkert, *Singular  $p$ -Laplacian equations with superlinear perturbation*, J. Differential Equations **266** (2019), 1462–1487.
- C26. —, P. Winkert, *Nonlinear systems with Hartman-type perturbations*, Monatsh. Math. **190** (2019), 389–404.
- C27. —, C. Zhang, *Existence of positive solutions for nonlinear Robin problems with gradient dependence*, Ann. Acad. Sci. Fenn. Math. **44** (2019), 739–753.
- D1. Član uredniškega odbora revije *Discrete and Continuous Dynamical Systems*.
- D2. Član uredniškega odbora revije *International Journal of Dynamical Systems and Differential Equations*.
- D3. Član uredniškega odbora revije *Journal of Applied Mathematics and Stochastic Analysis*.
- D4. Član uredniškega odbora revije *Journal of Inequalities and Applications*.
- D5. Član uredniškega odbora revije *Minimax Theory and its Applications*.
- F1. *Nonlinear singular elliptic problems*, vabljeno predavanje, Elsevier Journal of Mathematical Analysis and Applications Conference on Nonlin-

ear Analysis (on the occasion of the 65<sup>th</sup> birthday of Professor Dušan Repovš), Krakov, Poljska, oktober 2019.

### Petar Pavešič:

- B1. D. Govc, W. Marzantowicz, — , *Estimates of covering type and the number of vertices of minimal triangulations*, sprejeto v objavo v *Discrete Comput. Geom.*
- B2. *Monotonicity of the Schwarz genus*, sprejeto v objavo v *Proc. Amer. Math. Soc.*
- C1. *Topological complexity of a map*, *Homology Homotopy Appl.* **21** (2019), 107–130.
- C2. *Triangulations with few vertices of manifolds with non-free fundamental group*, *Proc. Roy. Soc. Edinburgh Sect. A* **149** (2019), 1453–1463.
- D1. Član uredniškega odbora revije *Obzornik za matematiko in fiziko*.
- F1. *Homotopy theory of finite spaces*, vabljeno predavanje, Brigham Young University, Provo, ZDA, april 2019.
- F2. *A model of the Hawaiian Earring with countably many points*, vabljeno predavanje, Univerza v Mariboru, Slovenija, maj 2019.
- F3. *Topology and robotics*, vabljeni predavanja (minicourse, 8 hours), University of Milano, Italija, maj 2019.
- F4. *How many simplices are needed to triangulate a Grassmannian?*, vabljeno predavanje, *Geometric Topology - Celebrating the Year of Mathematics in Poland*, Varšava, Poljska, september 2019.
- G1. *A  $T_0$  model for the Hawaiian Earring*, *Arches Topology Conference*, West Hurricane, ZDA, april 2019.
- II. Ena recenzija za MathSciNet.

### Aljoša Peperko:

- C1. Z. Shao , Z. Li, — , J. Wan, J. Žerovnik, *Independent rainbow domination of graphs*, *Bull. Malays. Math. Sci. Soc.* (2) **42** (2019), 417–435.
- C2. T. Žužek, — , J. Kušar, *A max-plus algebra approach for generating a non-delay schedule*, *Croat. Oper. Res. Rev. CRORR* **10** (2019), 35–44.
- C3. J. Voglar, M. Zupančič, — , P. Birbarah, N. Miljkovic, I. Golobič, *Analysis of heater-wall temperature distributions during the saturated pool boiling of water*, *Exp. Therm. Fluid Sci.* **102** (2019), 205–214.

- C4. A. Rosenmann, F. Lehner, — , *Polynomial convolutions in max-plus algebra*, Linear Algebra Appl. **578** (2019), 370–401.
- C5. *Inequalities on the spectral radius, operator norm and numerical radius of the Hadamard weighted geometric mean of positive kernel operators*, Linear Multilinear Algebra **67** (2019), 1637–1652.
- C6. *Inequalities on the joint and generalized spectral and essential spectral radius of the Hadamard geometric mean of bounded sets of positive kernel operators*, Linear Multilinear Algebra **67** (2019), 2159–2172.
- C7. *Logarithmic convexity of fixed points of stochastic kernel operators*, Positivity **23** (2019), 367–377.
- C8. B. Gabrovšek, — , J. Žerovnik, *On the independent rainbow domination numbers of generalized Petersen graphs  $P(n, 2)$  and  $P(n, 3)$* , 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 107–112.
- F1. *Polynomial convolutions in max plus algebra*, seminarsko predavanje, Institute of Mathematics of the Czech Academy of Sciences, Praga, Češka, april 2019.
- G1. *Bonsall's and lower cone spectral radius of suprema preserving mappings and approximate point spectrum*, 30<sup>th</sup> International Workshop on Operator Theory and its Applications, Lisbona, Portugalska, julij 2019.
- G2. *On the independent rainbow domination numbers of generalized Petersen graphs  $P(n, 2)$  and  $P(n, 3)$* , 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019.
- G3. *The Bonsall's and lower cone spectral radius of suprema preserving mappings and approximate point spectrum*, International Conference on Matrix Analysis and its Applications (MAT TRIAD), Liblice, Češka, september 2019.
- I1. 5 recenzij za MathSciNet.
- I2. Soavtor dopolnjene izdaje enega univertitetnega učbenika.
- I3. Somentorstvo pri enem magistrskem delu in mentorstvo pri 4 delih diplomskega seminarja (bolonjski študij).
- I4. Soorganizacija dveh posebnih sekcij na konferencah.

## Tatjana Petek:

- B1. — , G. Radić, *A note on equivalence preserving maps*, sprejeto v objavo v Linear Multilinear Algebra.

F1. *Ravninski kvadratični sistemi NDE z dvema integrabilnima singularnima točkama*, vabljeno predavanje, 18. simpozij fizikov Univerze v Mariboru, Maribor, december 2019.

I1. Mentorstvo pri eni doktorski disertaciji (bolonjski študij).

## Iztok Peterin:

B1. D. Božović — , *Graphs with unique maximum packings of closed neighborhoods*, sprejeto v objavo v Discuss. Math. Graph Theory.

B2. W. Imrich, — , *Recognizing generalized Sierpiński graphs*, sprejeto v objavo v Appl. Anal. Discrete Math.

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C1. M. A. Henning, — , *A characterization of graphs with disjoint total dominating sets*, Ars Math. Contemp. **16** (2019), 359–375.

C2. — , I. G. Yero, *Efficient closed domination in digraph products*, J. Comb. Optim. **38** (2019), 130–149.

C3. *The complexity of open  $k$ -monopolies in graphs for negative  $k$* , Opuscula Math. **39** (2019), 425–431.

D1. Urednik revije *Asian-European Journal of Mathematics*.

E1. Vodja programskega in organizacijskega odbora konference *22<sup>nd</sup> Workshop on o Hereditary Graph Properties*, Maribor, junij 2019.

G1. *Product-hereditary properties*, 22<sup>nd</sup> Workshop on o Hereditary Graph Properties, Maribor, junij 2019.

G2.  *$[1, k]$ -domination number of lexicographic product of graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

G3.  *$H$ -rainbow total domination number*, 18<sup>th</sup> Workshop on Graph Theory: Colourings, Independence and Domination, Piechowice, Poljska, september 2019.

G4. *On the packing chromatic number of lexicographic products*, 18<sup>th</sup> Workshop on Graph Theory: Colourings, Independence and Domination, Piechowice, Poljska, september 2019.

I1. 6 recenzij za MathSciNet.

I2. Mentorstvo pri enem magistrskem delu (bolonjski študij).

I3. Sourednik enega konferenčnega zbornika (Book of abstracts).

**Ciril Petr:**

- C1. T. Bousch, A. M. Hinz, S. Klavžar, D. Parisse, — , P. K. Stockmeyer, *A note on the Frame-Stewart conjecture*, Discrete Math. Algorithms Appl. **11** (2019), art. 1950049 [6 str.].
- G1. *Prihodnost Jave v luči zadnjih velikih sprememb*, 24. konferenca sodobne informacijske tehnologije in storitve, Maribor, junij 2019.
- H1. A. Krajnc, C. Petr, M. Skuhala, G. Ramšak, *Prihodnost Jave v luči zadnjih velikih sprememb*, 24. konferenca sodobne informacijske tehnologije in storitve, Maribor, junij 2019, OTS 2019 : zbornik štiriindvajsete konference, 209–218.

**Janez Povh:**

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- B1. L. Mihelač, — , *The impact of the complexity of harmony on the acceptability of music*, sprejeto v objavo v ACM Trans. Appl. Percept.
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- C1. P. J. C. Dickinson, — , *A new approximation hierarchy for polynomial conic optimization*, Comput. Optim. Appl. **73** (2019), 37–67.
- C2. N. Malod-Dognin, J. Petschnigg, S. F. L. Windels, — , H. Hemmingway, R. Ketteler, N. Pržulj, *Towards a data-integrated cell*, Nature Communications **10** (2019), art. 805 [13 str.].
- C3. M. Babič, B. Soldo, — , *New approach to modelling and its application in transportation in urban traffic*, 5<sup>th</sup> ENTRENOVA - Enterprise Research Innovation conference, Rovinj, Hrvaška, september 2019, Proceedings of the ENTRENOVA, 76–81.
- C4. B. Gabrovšek, T. Novak, — , D. Rupnik Poklukar, J. Žerovnik, *Five heuristics for the k-matching problem*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 101–106.
- C5. T. Hrga, — , *Accelerated alternating direction augmented Lagrangian method for semidefinite programs*, 15<sup>th</sup> International Symposium on

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- D1. Sourednik posebne številke revije *Central European Journal of Operations Research*.
- D2. Sourednik zbornika 15<sup>th</sup> *International Symposium on Operational Research*, Bled, september 2019.
- E1. Sopredsednik organizacijskega odbora konference 15<sup>th</sup> *International Symposium on Operational Research*, Bled, september 2019.
- E2. Sopredsednik programskega in organizacijskega odbora konference 4<sup>th</sup> *Hungarian - Slovenian Operations Research Workshop on OR Algorithms and High-Performance Computing*, Bled, september 2019.
- F1. *High Performance Optimization*, vabljeno predavanje, 10<sup>th</sup> International Conference on Optimization and Applications - OPTIMA, Petrovac, Črna Gora, september 2019.
- G1. *Problematika javnega potniškega prometa v Mestni občini Novo mesto*, 11. industrijski forum IRT, Portorož, junij 2019.
- G2. *Multi-type symmetric non-negative matrix factorization*, 6<sup>th</sup> International Conference on Continuous Optimization, Berlin, Nemčija, avgust 2019.
- G3. *High performance computing approach to the max-cut problem*, British Applied Mathematics Colloquium, Bath, Velika Britanija, avgust 2019.
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rence, Rovinj, Hrvaška, september 2019.

- G9. *BigBin : moving boundaries for NP-hard problems with HPC*, HPC : High Performance Computing, Borovec, Bolgarija, september 2019.
- H1. *Jesenska šola na temo velepodatkov in visokozmogljivega računalništva (Big Data and HPD) na Fakulteti za strojništvo Univerze v Ljubljani*, Ventil **25** (2019), 364–365.
- H2. M. Babič, —, *Problematika javnega potniškega prometa v Mestni občini Novo mesto*, 11. industrijski forum IRT, Portorož, junij 2019, Vir znanja in izkušenj za stroko : zbornik foruma, 231–234.
- I1. Soavtor 4 elaboratov.

### Jasna Prezelj Perman:

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- B2. —, F. Vlacci, *Divergence zero quaternionic vector fields and Hamming graphs*, sprejeto v objavo v Ars Math. Contemp.
- E1. Članica znanstvenega in organizacijskega odbora konference *Women of mathematics on the Mediterranean shores*, Bled, september 2019.
- F1. *On a class of volume preserving automorphisms in  $\mathbb{H}^2$* , vabljen predavanje, Holomorphic Mappings and Complex Geometry, Sanya, Kitajska, januar 2019.
- F2. *On the extension problem on 1-convex spaces*, Vabljen predavanje: predstavljen je bil problem razširitve holomorfnih prerezov vektorskih svežnjev nad 1-konveksnimi rezinami fibracij na ustrezne okolice., Bergische Universität Wuppertal, Nemčija, april 2019.
- I1. Mentorstvo pri enem delu diplomskega seminarja (bolonjski študij).

### Nataša Pržulj:

- C1. S. F. L. Windels, N. Malod-Dognin, —, *Graphlet Laplacians for topology-function and topology-disease relationships*, Bioinformatics **35** (2019), 5226–5234.
- C2. N. Malod-Dognin, —, *Functional geometry of protein interactomes*, Bioinformatics **35** (2019), 3727–3734.



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## Vicentiu Radulescu:

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- C1. C. O. Alves, — , L. S. Tavares, *Generalized Choquard equations driven by nonhomogeneous operators*, Mediterr. J. Math. **16** (2019), art. 20 [24 str.].
- C2. A. Bahrouni, H. Ounaies, — , *Bound state solutions of sublinear Schrödinger equations with lack of compactness*, Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. **113** (2019), 1191–1210.
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- C5. M. Marin, A. Öchsner, — , *A polynomial way to control the decay of solutions for dipolar bodies*, Contin. Mech. Thermodyn. **31** (2019), 331–340.
- C6. N. Papageorgiou, — , D. Repovš, *Parametric nonlinear resonant Robin problems*, Math. Nachr. **292** (2019), 2456–2480.
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- C18. L. Wang, — , B. Zhang, *Infinitely many solutions for fractional Kirchhoff-Schrödinger-Poisson systems*, J. Math. Phys. **60** (2019), art. 011506 [18 str.].
- C19. B. Zhang, — , L. Wang, *Existence results for Kirchhoff-type superlinear problems involving the fractional Laplacian*, Proc. Roy. Soc. Edinburgh Sect. A **149** (2019), 1061–1081.
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- D2. Član uredniškega odbora knjižne serije *Mathematics in Science and Engineering*, Elsevier, New York, ZDA.
- D3. Glavni urednik revije *Advances in Nonlinear Analysis*.
- D4. Glavni urednik revije *Nonlinear Analysis. Theory, Methods & Applications*.
- D5. Glavni urednik revije *Boundary Value Problems*.
- D6. Član uredniškega odbora revije *Asymptotic Analysis*.
- D7. Član uredniškega odbora revije *Bulletin of Mathematical Sciences*.
- D8. Član uredniškega odbora revije *Journal of Geometric Analysis*.
- D9. Član uredniškega odbora revije *Journal of Mathematical Analysis and Applications*.
- D10. Član uredniškega odbora revije *Mathematical Methods in the Applied Sciences*.

- F1. *Anisotropic double phase problems and perspectives*, vabljeno predavanje, King Saud University, Riyadh, Saudova Arabija, april 2019.
- F2. *Double phase problems with variable growth*, vabljeno predavanje, Università di Pisa, Italija, maj 2019.
- F3. *Double phase problems with variable growth*, vabljeno predavanje, Bi-Urb Recent advances in variational methods, Urbino, Italija, maj 2019.
- F4. *Singular phenomena in nonlinear elliptic equations*, vabljeno predavanje, BiUrb Recent advances in variational methods, Urbino, Italija, maj 2019.
- F5. *Problèmes non linéaires à croissance variable: modèles isotropes et anisotropes*, vabljeno predavanje, Analyse stochastique et thèmes connexes, Bukarešta, Romunija, maj 2019.
- F6. *Problèmes à double phase et croissance variable*, vabljeno predavanje, l'Université de Picardie Jules Verne, Amiens, Francija, maj 2019.
- F7. *Anisotropic problems with unbalanced growth and mixed regime*, vabljeno predavanje, Rzeszów University of Technology, Rzeszów, Poljska, oktober 2019.
- F8. *Lane-Emden problems with variable double phase and multiple regime*, vabljeno predavanje, Faculty of Applied Mathematics, AGH University of Science and Technology, Krakov, Poljska, oktober 2019.
- F9. *Dušan Repovš: Some key facts about his life and professional career*, vabljeno predavanje, Elsevier Journal of Mathematical Analysis and Applications Conference on Nonlinear Analysis (on the occasion of the 65<sup>th</sup> birthday of Professor Dušan Repovš), Krakov, Poljska, oktober 2019.
- F10. *Anisotropic problems and perspectives*, vabljeno predavanje, 3<sup>rd</sup> Workshop on Nonlinear Analysis and Applications, Changsha, Kitajska, november 2019.
- F11. *Anisotropic problems with unbalanced growth and mixed regime*, vabljeno predavanje, 3<sup>rd</sup> Workshop on Nonlinear Analysis and Applications, Changsha, Kitajska, november 2019.
- F12. *Singular and qualitative phenomena in nonlinear analysis*, vabljeno predavanje, School of Mathematical Sciences, University of Electronic Science and Technology of China, Chengdu, Kitajska, november 2019.
- F13. *Variational principles for equilibrium problems and applications*, vabljeno predavanje, School of Mathematical Sciences, University of Electronic Science and Technology of China, Chengdu, Kitajska, november 2019.
- F14. *Two classes of singular problems in nonlinear PDEs*, vabljeno predavanje, Hunan University of Technology and Business, Changsha, Kitajska,

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- F16. *Double-phase problems with variable exponent and combined growth*, vabljeno predavanje, College of Mathematics and Computer Science, Zhejiang Normal University, Jinhua, Kitajska, december 2019.
- F17. *Problems with nonstandard growth and a discontinuity property of the spectrum*, vabljeno predavanje, College of Mathematical Sciences, Harbin Engineering University, Harbin, Kitajska, december 2019.
- F18. *Three sharp results in nonlinear analysis*, vabljeno predavanje, School of Mathematics and Information Science, Guangzhou University, Guangzhou, Kitajska, december 2019.
- F19. *Variational integrals with variable unbalanced growth*, vabljeno predavanje, Variational Methods and Partial Differential Equations, Tsingtao, Kitajska, december 2019.

### Martin Raič:

- C1. *A multivariate Berry-Esseen theorem with explicit constants*, Bernoulli **25** (2019), 2824–2853.
- F1. *On Götze's multivariate central limit theorem: doubts, clarification and improvements*, vabljeno predavanje, Symposium in Memory of Charles Stein, Singapur, junij 2019.

### Polona Repolusk:

- C1. T. Gologranc, — , *Toll number of the strong product of graphs*, Discrete Math. **342** (2019), 807–814.
- C2. A. Ye, F. Miao, Z. Shao , J. B. Liu, J. Žerovnik, — , *More results on the domination number of Cartesian product of two directed cycles*, Mathematics **7** (2019), 1–9.

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- A1. N. Papageorgiou, V. Rădulescu, — , *Nonlinear Analysis: Theory and Methods*, Springer (Springer Monographs in Mathematics), Cham, Švica, 2019.

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- C2. A. Bahrouni, V. Rădulescu, — , *Double phase transonic flow problems with variable growth: nonlinear patterns and stationary waves*, Nonlinearity **32** (2019), 2481–2495.
- C3. I. Faragó, — , *Eigenvalue problems with unbalanced growth: nonlinear patterns and standing wave solutions*, Nonlinear Anal. **188** (2019), 377–388.
- C4. F. Hegenbarth, — , *Controlled surgery and  $\mathbb{L}$ -homology*, Mediterr. J. Math. **16** (2019), art. 79 [22 str.].
- C5. N. Papageorgiou, V. Rădulescu, — , *Asymmetric Robin problems with indefinite potential and concave terms*, Adv. Nonlinear Stud. **19** (2019), 69–87.
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- C17. — , L. Zdomskyy, *Preservation of gamma-spaces and covering properties of products*, *Proc. Amer. Math. Soc.* **147** (2019), 4979–4985.
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- D2. Član uredniškega odbora revije *Boundary Value Problems*.
- D3. Član uredniškega odbora revije *Complex Variables and Elliptic Equations*.
- D4. Član uredniškega odbora revije *Journal of Mathematical Analysis and Applications*.
- D5. Član svetovalnega odbora revije *Mediterranean Journal of Mathematics*.
- F1. *S<sup>1</sup>-Bott functions on manifolds*, vabljen predavanje, International Conference Morse theory and its applications, Kijev, Ukrajina, september 2019.
- I1. Po podatkih *Mathematical Reviews* je knjiga *Nonlinear Analysis: Theory and Methods* (Springer, 2019) najbolj citirana med vsemi matematičnimi knjigami izdanimi v letu 2019.
- I2. Po podatkih *Web of Science* je 6 člankov izbranih med *Highly Cited in Field* v letu 2019.
- I3. Gostujoči urednik posebne številke *Elliptic equations and their synergies* v reviji *Complex Variables and Elliptic Equations*.

## Raffaella Servadei:

- C1. V. Ambrosio, — , *Supercritical fractional Kirchhoff type problems*, *Fract. Calc. Appl. Anal.* **22** (2019), 1351–1377.
- C2. M. T. O. Pimenta, — , *Some existence results for variational inequalities with nonlocal fractional operators*, *Nonlinear Anal.* **189** (2019), art. 111561 [17 str.].
- D1. Članica uredniškega odbora revije *Electronic Journal of Differential Equations*.
- F1. *Equazioni differenziali e modelli matematici: come la Matematica vede il mondo*, vabljen predavanje, Freschi d'Accademia, conferitole dall'Associazione culturale per le Marche Le Cento Città, Urbino, Italija, maj 2019.

**Marko Slapar:**

- B1. B. Drinovec-Drnovšek, — , *Proper holomorphic curves attached to domains*, sprejeto v objavo v Complex Var. Elliptic Equ.
- I1. Mentorstvo pri enem magistrskem delu (bolonjski študij).
- I2. Recenzija enega univerzitetnega učbenika.

**Tadej Starčič :**

- B1. *On normal forms of complex points of small  $\mathbb{C}^2$ -perturbations of real 4-manifolds embedded in a complex 3-manifold*, sprejeto v objavo v Complex Var. Elliptic Equ.
- F1. *Normal forms of complex points of  $\mathbb{C}^2$ -perturbations of 4-manifolds in complex 3-manifolds*, vabljen predavanje, 4<sup>th</sup> Central European Complex Analysis Meeting, Brno, Češka, november 2019.

**Nik Stopar:**

- B1. A. Đurić, S. Jevđenić, — , *Compressed zero-divisor graphs of matrix rings over finite fields*, sprejeto v objavo v Linear Multilinear Algebra.
- B2. *Rank of elements of general rings in connection with unit-regularity*, sprejeto v objavo v J. Pure Appl. Algebra.
- B3. M. Omladić, — , *Final solution to the problem of relating a true copula to an imprecise copula*, sprejeto v objavo v Fuzzy Sets and Systems.
- C1. G. Dolinar, B. Kuzma, — , *Orthomaps on formally real simple Jordan algebras*, Oper. Matrices **13** (2019), 447–460.
- C2. A. Đurić, S. Jevđenić, P. Oblak, — , *The total zero-divisor graph of a commutative ring*, J. Algebra Appl. **18** (2019), art. 1950190 [16 str.].

**Sašo Strle:**

- F1. *Disoriented homology of surfaces and branched covers*, seminarsko predavanje, Brandeis University, Waltham, ZDA, september 2019.
- G1. *Disoriented homology of surfaces and branched covers*, London Mathematical Society Durham Symposium “Pseudoholomorphic Curves and Gauge Theory in Low-Dimensional Topology”, Durham, Velika Britanija, avgust 2019.

- I1. Odgovorni in področni urednik revije *Obzornik za matematiko in fiziko*.
- I2. Diskusija o znanju in razumevanju pri poučevanju matematike, FMF seminar za učitelje matematike, Fakulteta za matematiko in fiziko, januar 2019.

### Peter Šemrl:

- C1. *Endomorphisms of the poset of idempotent matrices*, J. Algebra **536** (2019), 1–38.
- C2. M. Brešar, — , *Continuous commuting functions on matrix algebras*, Linear Algebra Appl. **568** (2019), 29–38.
- D1. Glavni urednik revije *Linear Algebra and its Applications*.
- D2. Član uredniškega odbora revije *Linear and Multilinear Algebra*.
- D3. Član uredniškega odbora revije *Operators and Matrices*.
- E1. Član znanstvenega odbora konference konference 22<sup>nd</sup> *ILAS Conference*, Rio de Janeiro, Brazilija, julij 2019.
- F1. *Isometries of Grassmann spaces*, enourno vabljeno predavanje, Sveučilište u Zagrebu, Hrvaška, februar 2019.
- F2. *Symmetries of quantum structures*, dve enourni predavanji, 2<sup>nd</sup> Sharjah International Mathematics Spring School, Sharjah, Združeni arabski emirati, marec 2019.
- F3. *Endomorphisms of the poset of idempotent matrices*, vabljeno predavanje, Preserver Weekend in Szeged, Madžarska, april 2019.
- F4. *Automorphisms of effect algebras*, vabljeno predavanje, 30<sup>th</sup> International Workshop on Operator Theory and its Applications, Lisboa, Portugalska, julij 2019.
- G1. *Coexistence preserving maps on effect algebras*, 6<sup>th</sup> Najman Conference on Spectral Theory and Differential Equations, Sveti Martin na Muri, Hrvaška, september 2019.
- I1. Član uredniškega odbora revije *Obzornik za matematiko in fiziko*.
- I2. Predsednik International Linear Algebra Society.
- I3. Član EMS European Solidarity Committee.

### Klemen Šivic:

- C1. I. Klep, S. McCullough, — , A. Zalar, *There are many more positive maps than completely positive maps*, Int. Math. Res. Not. IMRN **2019**



(2019), 3313–3375.

- G1. *New examples of extremal positive linear maps*, 22<sup>nd</sup> Conference of the International Linear Algebra Society, Rio de Janeiro, Brazilija, julij 2019.
- I1. Mentorstvo pri enem delu diplomskega seminarja (bolonjski študij).
- I2. Recenzija enega univerzitetnega učbenika.

## Riste Škrekovski:

- C1. M. Petruševski, — , *Decomposing a graph into two subgraphs with prescribed parities of vertex degrees*, Adv. Math. **8** (2019), 63–68.
- C2. M. Knor, — , *On the minimum distance in a  $k$ -vertex set in a graph*, Appl. Math. Comput. **356** (2019), 99–104.
- C3. Q. Sun, B. Ikica, — , V. Vukašinović, *Graphs with a given diameter that maximise the Wiener index*, Appl. Math. Comput. **356** (2019), 438–448.
- C4. M. Knor, — , A. Tepeh, *Trees with the maximal value of Graovac-Pisanski index*, Appl. Math. Comput. **358** (2019), 287–292.
- C5. K. Hriňáková, M. Knor, — , *An inequality between variable Wiener index and variable Szeged index*, Appl. Math. Comput. **362** (2019), art. 124557 [6 str.].
- C6. T. Došlić, I. Martinjak, — , *Total positivity of Toeplitz matrices of recursive hypersequences*, Ars Math. Contemp **17** (2019), 125–139.
- C7. M. Knor, J. Komorník, — , A. Tepeh, *Unicyclic graphs with the maximal value of Graovac-Pisanski index*, Ars Math. Contemp. **17** (2019), 455–466.
- C8. D. Dimitrov, B. Ikica, — , *Maximum external Wiener index of graphs*, Discrete Appl. Math. **257** (2019), 331–337.
- C9. B. Lidický, K. Messerschmidt, — , *Facial unique-maximum colorings of plane graphs with restriction on big vertices*, Discrete Math. **342** (2019), 2612–2617.
- C10. — , D. Dimitrov, J. Zhong, H. Wu, W. Gao, *Remarks on multiplicative atom-bond connectivity index*, IEEE Access **7** (2019), 76806–76811.
- C11. M. Petruševski, — , *Coverability of graph by three odd subgraphs*, J. Graph Theory **92** (2019), 304–321.
- C12. M. Knor, — , A. Tepeh, *Chemical graphs with the minimum value of Wiener index*, MATCH Commun. Math. Comput. Chem. **81** (2019), 119–132.

- C13. J. Bok, B. Furtula, N. Jedličková, — , *On extremal graphs of Weighted Szeged index*, MATCH Commun. Math. Comput. Chem. **82** (2019), 93–109.
- C14. M. Knor, — , A. Tepeh, *On the Graovac-Pisanski index of a graph*, Acta Math. Univ. Comenian. (N.S.) **88** (2019), 867–870.
- C15. M. Knor, S. Majstorović, — , *Some results on Wiener index of a graph: an overview*, 2<sup>nd</sup> Croatian Combinatorial Days, Zagreb, Hrvaška, september 2018, Proceedings, 49–56.
- D1. Član uredniškega odbora revije *The Art of Discrete and Applied Mathematics* .
- D2. Član uredniškega odbora revije *Mathematica Bohemica*.
- D3. Član uredniškega odbora revije *Matematički Bilten. Bulletin Mathématique de la Société des Mathématiciens de la République de Macédoine*.
- F1. *Some results on unique-maximum coloring of plane graphs*, vabljeno predavanje, Fakulteta matematiky, fiziky a informatiky, Univerzita Komenského, Bratislava, Slovaška, marec 2019.
- F2. *Some results on unique-maximum coloring of plane graphs*, seminarsko predavanje, Graduate Center's CUNY, Math Department and Computer Science Department, New York, ZDA, junij 2019.
- F3. *Some results and problems on unique-maximum colorings of plane graphs*, vabljeno predavanje, College of Mathematical Science, Yangzhou University, Kitajska, julij 2019.
- F4. *Some results and problems on unique-maximum colorings of plane graphs*, vabljeno predavanje, Nanjing University of Science & Technology, School of Computer Science and Engineering, Nanjing, Kitajska, julij 2019.
- F5. *Some results and problems on unique-maximum colorings of plane graphs*, vabljeno predavanje, 8<sup>th</sup> International Symposium on Graph Theory and Combinatorial Algorithms, Xuzhou, Kitajska, julij 2019.
- F6. *Star edge coloring*, vabljeno predavanje, 18<sup>th</sup> Workshop on Graph Theory: Colourings, Independence and Domination, Piechowice, Poljska, september 2019.
- F7. *Some results and problems on unique-maximum colorings of plane graphs*, vabljeno predavanje, 1<sup>st</sup> Workshop on graph theory, combinatorics and applications (GTCA), Al Ain, Združeni arabski emirati, oktober 2019.
- G1. *Some results and problems on unique-maximum colorings of plane graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *On the Graovac-Pisanski index of a graph*, European Conference on

- Combinatorics, Graph Theory and Applications, Bratislava, Slovaška, avgust 2019.
- G3. *Some results on unique-maximum coloring of plane graphs*, 4<sup>th</sup> Macedonian Workshop on Graph Theory and Applications, Ohrid, Sverna Makedonija, avgust 2019.
- G4. *Some results and problems on unique-maximum colorings of plane*, 2<sup>nd</sup> Montenegrin Symposium on Graphs, Informatics and Algebra, Budva, Črna Gora, oktober 2019.
- G5. *Some results and problems on unique-maximum colorings of plane graphs*, 38<sup>th</sup> Colloquium on Combinatorics, Paderborn, Nemčija, november 2019.
- I1. Mentorstvo pri eni doktorski disertaciji in enem delu diplomskega seminarja (bolonjski študij).

### Simon Špacapan:

- B1. *The domination number of plane triangulations*, sprejeto v objavo v J. Combin. Theory Ser. B.
- C1. *On 3-colorings of direct products of graphs*, Discuss. Math. Graph Theory **39** (2019), 391–413.

### Primož Šparl:

- C1. K. Kutnar, D. Marušič, Š. Miklavič, — , *The classification of 2-extendable edge-regular graphs with diameter 2*, Electron. J. Combin. **26** (2019), art. P1.16 [14 str.].
- C2. R. Jajcay, Š. Miklavič, — , G. Vasiljević, *On certain edge-transitive bicirculants*, Electron. J. Combin. **26** (2019), art. P2.6 [14 str.].
- C3. A. Ramos Rivera, — , *New structural results on tetravalent half-arc-transitive graphs*, J. Combin. Theory Ser. B **135** (2019), 256–278.
- C4. A. Ramos Rivera, — , *Symmetry properties of generalized graph truncations*, J. Combin. Theory Ser. B **137** (2019), 291–315.
- C5. E. Dobson, Š. Miklavič, — , *On automorphism groups of deleted wreath products*, Mediterr. J. Math. **16** (2019), art. 149 [27 str.].
- D1. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.
- F1. *Graphs with just the right amount of symmetry*, vabljeno predavanje, Finite Geometry Workshop, Szeged, Madžarska, januar/februar 2019.

- G1. *On loosely attached tetravalent half-arc-transitive graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *What does the fano plane have to do with half-arc-transitive graphs?*, Maps  $\cap$  Configurations  $\cap$  Polytopes  $\cap$  Molecules  $\subseteq$  Graphs: The mathematics of Tomaž Pisanski on the occasion of his 70<sup>th</sup> birthday, Ljubljana, maj 2019.
- I1. Mentorstvo pri eni doktorski disertaciji in 2 magistrskih delih (bolonjski študij).

### Janez Šter:

- C1. *Examples of strongly clean rings*, Comm. Algebra **47** (2019), 4684–4696.
- F1. *Nilpotent polynomials and nilpotent coefficients*, vabljeno predavanje na seminarju, University of Warsaw, Varšava, Poljska, december 2019.
- F2. *Nilpotent Elements and Nilpotent Polynomials in Noncommutative Ring Theory*, vabljeno plenarno predavanje, 8<sup>th</sup> Podlasie Conference on Mathematics, Białystok, Poljska, december 2019.

### Andrej Taranenko:

- B1. *Daisy cubes: a characterization and a generalization*, sprejeto v objavo v European J. Combin.
- C1. E. Zhu, —, Z. Shao, J. Xu, *On graphs with the maximum edge metric dimension*, Discrete Appl. Math. **257** (2019), 317–324.
- G1. *On graphs achieving the trivial upper bound for edge metric dimension*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

### Riccardo Ugolini:

- A1. *Automorphism groups and elliptic complex geometry*, doktorska disertacija, Univerza v Ljubljani, Fakulteta za matematiko in fiziko, Oddelek za matematiko, Matematika - 3. stopnja, Ljubljana, 2019.
- C1. R. B. Andrist, —, *A new notion of tameness*, J. Math. Anal. Appl. **472** (2019), 196–215.

- C2. A. Ramos-Peon, — , *Parametric jet interpolation for Stein manifolds with the density property*, *Internat. J. Math.* **30** (2019), art. 1950046 [16 str.].
- F1. *The automorphism group of  $\mathbb{R}^N$  and its action on sequences*, vabljeno predavanje, American University of Beirut, Libanon, januar 2019.
- F2. *Andersen-Lampert theory and tame sets*, vabljeno predavanje, Università degli Studi di Parma, Italija, marec 2019.

### Aljaž Ule:

- A1. A. J. H. C. Schram, A. Ule (urednika), *Handbook of research methods and applications in experimental economics*, Edward Elgar Publishing, Cheltenham, ZDA, 2019.
- D1. Član uredniškega odbora revije *Serbian Journal of Management*.
- G1. *Commitment aversion revisited*, Asia-Pacific Meeting of the Economic Science Association, Abu Dhabi, Združeni arabski emirati, januar 2019.
- I1. Mentorstvo pri enem magistrskem delu (Universiteit van Amsterdam).

### Aleš Vavpetič:

- C1. L. Lampret, — , *Torsion table for the lie algebra  $\mathfrak{nil}_n$* , *Commun. Algebra* **47** (2019), 3567–3578.
- C2. — , E. Žagar, *A general framework for the optimal approximation of circular arcs by parametric polynomial curves*, *J. Comput. Appl. Math.* **345** (2019), 146–158.
- C3. M. Kandić, — , *Topological aspects of order in  $C(X)$* , *Positivity* **23** (2019), 617–635.
- G1. *A Remes type algorithm for geometric approximation of a circular arc*, 4<sup>th</sup> IM-Workshop on Applied Approximation, Signals and Images, Bernried, Nemčija, marec 2019.
- G2. *The countable sup property for vector lattices of continuous functions*, *Positivity X*, Pretoria, Južna Afrika, julij 2019.
- I1. Mentorstvo pri enem magistrskem in 2 delih diplomskega seminarja (bolonjski študij).

**Aleksander Vesel:**

- C1. D. Korže, M. Žiga, — , *A heuristic approach for searching  $(d, n)$ -packing colorings of infinite lattices*, Discrete Appl. Math. **257** (2019), 353–358.
- C2. D. Korže, — , *Packing coloring of generalized Sierpiński graphs*, Discrete Math. Theor. Comput. Sci. **21** (2019), 1–18.
- C3. *Cube-complements of generalized Fibonacci cubes*, Discrete Math. **342** (2019), 1139–1146.
- G1. *Packing colorings of Sierpiński-type and  $H$  graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
  - I1. 5 recenzij za MathSciNet in ena za Zentralblatt MATH.
  - I2. Somentorstvo pri eni magistrski nalogi (bolonjski študij).
  - I3. Pisec recenzij za revije: “Acta et Commentationes Universitatis Tartuensis de Mathematica”, “Discrete Applied Mathematics” in “Mathematics Interdisciplinary Research”.

**Janoš Vidali:**

- B1. A. L. Gavriljuk, S. Suda, — , *On tight 4-designs in Hamming association schemes*, sprejeto v objavo v Combinatorica.
- B2. K. Berčič, — , *DiscreteZOO: a Fingerprint Database of Discrete Objects*, sprejeto v objavo v Math. Comput. Sci.
- C1. P. Potočnik, — , *Girth-regular graphs*, Ars Math. Contemp. **17** (2019), 349–368.
- C2. A. Jurišić, — , *No strongly regular graph is locally Heawood*, Chebyshevskiĭ Sb. **20** (2019), 198–206.
- C3. A. Jurišić, — , *The Sylvester graph and Moore graphs*, European J. Combin. **80** (2019), 184–193.
- C4. *Computing distance-regular graph and association scheme parameters in SageMath with sage-drg*, 31<sup>st</sup> International Conference on “Formal Power Series and Algebraic Combinatorics”, Ljubljana, julij 2019, FPSAC 2019 - proceedings (Séminaire Lotharingien de Combinatoire, Issue 82B, art.105 [8 str.]).
- G1. *On tight 4-designs in Hamming association schemes*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *Computing distance-regular graph and association scheme parameters in SageMath with sage-drg*, 31<sup>st</sup> International Conference on “Formal Power Series and Algebraic Combinatorics”, Ljubljana, julij 2019.

## Matija Vidmar:

- C1. F. Florin, — , *First passage problems for upwards skip-free random walks via the scale functions paradigm*, Adv. Appl. Probab. **51** (2019), 408–424.
- C2. *First passage upwards for state-dependent-killed spectrally negative Lévy processes*, J. Appl. Probab. **56** (2019), 472–495.
- C3. *Arithmetic of (independent) sigma-fields on probability spaces*, Mod. Stoch. Theory Appl. **6** (2019), 269–284.
- C4. *Observing a Lévy process up to a stopping time*, Statist. Probab. Lett. **150** (2019), 121–125.
- C5. *Independence times for iid sequences, random walks and Lévy processes*, Stochastic Process. Appl. **129** (2019), 3619–3637.

## Žiga Virk:

- C1. *Approximations of 1-dimensional intrinsic persistence of geodesic spaces and their stability*, Rev. Mat. Complut. **32** (2019), 195–213.
- C2. H. Edelsbrunner, — , H. Wagner, *Topological data analysis in information space*, 35<sup>th</sup> International Symposium on Computational Geometry, Portland, ZDA, junij 2019, SoCG 2019 : proceedings, 14 str.
- F1. *Asymptotic dimensions of preordered sets and quasi-coarse spaces*, vabljeno predavanje, 4<sup>th</sup> Summer Conference on Topology and its Applications, Johannesburg, Južna Afrika, julij 2019.
- F2. *Nerve Theorem for rips complexes and geometric features encoded in higher-dimensional persistence*, vabljeno predavanje, 4<sup>th</sup> Summer Conference on Topology and its Applications, Johannesburg, Južna Afrika, julij 2019.
- F3. *Geometric interpretation of persistence*, seminarsko predavanje, University of Minnesota, Minneapolis, ZDA, september 2019.
- F4. *Rips complexes as nerves*, seminarsko predavanje, Institute of Science and Technology Austria, Klosterneuburg, Avstrija, oktober 2019.
- G1. *Approximations by complexes in topology*, Arches Topology Conference, West Hurricane, ZDA, april 2019.
- G2. *Topological data analysis in information space*, 35<sup>th</sup> International Symposium on Computational Geometry, Portland, ZDA, junij 2019.
- G3. *Detecting lengths of geodesics with higher-dimensional persistence*, ÖMG-Conference, Dornbirn, Avstrija, september 2019.

**Aljaž Zalar:**

- C1. I. Klep, S. McCullough, K. Šivic,— , *There are many more positive maps than completely positive maps*, Int. Math. Res. Not. IMRN **2019** (2019), 3313-3375.
- G1. *The singular bivariate quartic tracial moment problem*, 30<sup>th</sup> International Workshop on Operator Theory and its Applications, Lisbona, Portugalska, julij 2019.

**Lyubomyr Zdomskyy:**

- C1. D. Repovš, — , *Preservation of gamma-spaces and covering properties of products*, Proc. Amer. Math. Soc. **147** (2019), 4979–4985.
- C2. D. Sobota, — , *Convergence of measures in forcing extensions*, Israel J. Math. **232** (2019), 501–529.
- C3. F. D. Tall, — , *Completely Baire spaces, Menger spaces, and projective sets*, Topology Appl. **258** (2019), 26–31.
- D1. Član uredniškega odbora revije *Topology and its Applications*.

**Emil Žagar:**

- C1. A. Vavpetič, — , *A general framework for the optimal approximation of circular arcs by parametric polynomial curves*, J. Comput. Appl. Math. **345** (2019), 146–158.
- G1. *Arc length preserving approximation by planar Pythagorean-hodograph curves*, 4<sup>th</sup> IM-Workshop on Applied Approximation, Signals and Images, Bernried, Nemčija, marec 2019.
- G2. *A Remes type algorithm for geometric approximation of a circular arc*, 4<sup>th</sup> IM-Workshop on Applied Approximation, Signals and Images, Bernried, Nemčija, marec 2019.
- G3. *Arc length preserving interpolation by low degree planar Pythagorean-hodograph curves*, Conference on Geometry: Theory and Applications, Innsbruck, Avstrija, junij 2019.
- I1. Mentorstvo pri enem magistrskem delu (bolonjski študij).



## Janez Žerovnik:

- C1. Z. Shao , Z. Li, A. Peperko, J. Wan, — , *Independent rainbow domination of graphs*, Bull. Malays. Math. Sci. Soc. (2) **42** (2019), 417–435.
- C2. Z. Shao , H. Jiang, P. Wu, S. Wang, — , X. Zhang, J. B. Liu, *On 2-rainbow domination of generalized Petersen graphs*, Discrete Appl. Math. **257** (2019), 370–384.
- C3. D. Rupnik Poklukar, — , *Networks with extremal closeness*, Fund. Inform. **167** (2019), 219–234.
- C4. T. Vizinger, — , *A stochastic model for better planning of product flow in retail supply chains*, J. Oper. Res. Soc. **70** (2019), 1900–1914.
- C5. A. Ye, F. Miao, Z. Shao , J. B. Liu, — , P. Repolusk, *More results on the domination number of Cartesian product of two directed cycles*, Mathematics **7** (2019), 1–9.
- C6. Z. Shao , Z. Li, R. Erveš, — , *The 2-rainbow domination numbers of  $C_4 \square C_n$  and  $C_8 \square C_n$* , Nat. Acad. Sci. Lett. **42** (2019), 411–418.
- C7. F. Deng, H. Jiang, J. B. Liu, D. Rupnik Poklukar, Z. Shao , P. Wu, — , *The Sanskruti index of trees and unicyclic graphs*, Open Chem. **17** (2019), 448–455.
- C8. T. Vizinger, — , *Robust optimisation metaheuristics for the inventory-allocation problem*, Multiple Criteria Decis. Mak. **14** (2019), 128–143.
- C9. B. Gabrovšek, T. Novak, J. Povh, D. Rupnik Poklukar, — , *Five heuristics for the  $k$ -matching problem*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 101–106.
- C10. B. Gabrovšek, A. Peperko, — , *On the independent rainbow domination numbers of generalized Petersen graphs  $P(n, 2)$  and  $P(n, 3)$* , 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 107–112.
- C11. T. Novak, — ,  *$K$ -fair domination problem in cactus graphs*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 116–121.
- C12. D. Rupnik Poklukar, — , *Networks with extremal closeness*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 122–127.
- C13. M. Muc, V. Malnarič, J. Klemenc, — , *Physical testing of a trailing arm by discrete optimization*, 15<sup>th</sup> International Symposium on Operational Research, Bled, september 2019, SOR '19 proceedings, 101–106.
- D1. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.

- D2. Član uredniškega odbora revije *Central European Journal of Operations Research (CEJOR)*.
- D3. Sourednik posebne številke revije *Central European Journal of Operations Research (CEJOR)* **27** (2019) no. 3.
- D4. Član uredniškega odbora revije *Mathematics Interdisciplinary Research*.
- D5. Sourednik zbornika *15<sup>th</sup> International Symposium on Operational Research*, Bled, september 2019.
- F1. *Heuristics and metaheuristics : simpler is better !?*, vabljeno predavanje, 8<sup>th</sup> International Workshop on Multiple criteria decision making, Ustroń, Poljska, april 2019.
- G1. *On sufficient properties for sufficient matrices*, 6<sup>th</sup> International Conference on Continuous Optimization, Berlin, Nemčija, avgust 2019.
- I1. Predsednik državne predmetne komisije za matematiko za splošno matura.
- I2. Mentorstvo pri eni doktorski disertaciji.
- I3. Recenzija enega univerzitetnega učbenika.

## TUJI GOSTI

Oddelek za matematiko je v letu 2019 gostil naslednje tuje goste:

**Hermína Alajbegović**, 6 dni, Univerzitet u Zenici, Zenica, Bosna in Hercegovina, avgust 2019, na povabilo Štefka Miklaviča,

**Meric Augat**, 5 dni, Washington University, St. Louis, ZDA, julij 2019, na povabilo Igorja Klepa,

**Abhishek Bhardwaj**, 20 dni, Australian National University, Canberra, Avstralija, april/maj 2019, na povabilo Igorja Klepa,

**Christian Budde**, 5 dni, Bergische Universität Wuppertal, Nemčija, maj 2019, na povabilo Marjete Kramar Fijavž,

**Manoj Changat**, 2 tedna, University of Kerala, Trivandrum, Indija, julij 2019, na povabilo Boštjana Brešarja,

**Rinaldo Colombo**, 4 dni, University of Brescia, Italija, maj 2019, na povabilo Marjete Kramar Fijavž,

**Nelida Črnjarić Žic**, 1 dan, Sveučilište u Rijeci, Hrvaška, april 2019, na povabilo Marjete Kramar Fijavž,

**Pakanun Dokyeesun**, 3 mesece, Silpakorn University, Bangkok, Tajski, februar-maj 2019, na povabilo Sandija Klavžarja,

- Rida T. Farouki**, 6 dni, University of California–Davis, Davis, ZDA, avgust 2019, na povabilo na povabilo Emila Žagarja,
- Dennis Garity**, 2 meseca, Oregon State University, Corvallis, ZDA, september/oktober 2019, na povabilo Dušana Repovša,
- Alexander L. Gavrilyuk**, 7 dni, N .N. Krasovskii Institute of Mathematics and Mechanics, Ural Branch of Russian Academy of Sciences, Yekaterinburg, Rusija, junij 2019, na povabilo Janoša Vidalija,
- Graziano Gentili**, 2 dni, Di MaI Firenze, Firenze, Italija, junij 2019, na povabilo Jasne Prezelj,
- Jovan Golić**, 2 dni, Telecom Italia, Torino, Italija, januar 2019, na povabilo Aleksandra Jurišiča,
- Ismael González Yero**, 5 mesecev, Universidad de Cádiz, Algeciras, Španija, marec-julij 2019, na povabilo Sandija Klavžarja,
- Dejan Govc**, 2 teden, University of Aberdeen, Aberdeen, Velika Britanija, december 2019, na povabilo Dušana Repovša,
- Lisa Groiss**, 4 dni, Johannes Kepler Universität, Linz, Avstrija, september 2019, na povabilo Marjetke Knez,
- Denise Halverson**, 2 meseca, Brigham Young University, Provo, ZDA, maj/junij 2019, na povabilo Dušana Repovša,
- Friedrich Hegenbarth**, 2 meseca, Università degli studi di Milano, Milano, Italija, oktober/november 2019, na povabilo Dušana Repovša,
- John William Helton**, 8 dni, University of California, San Diego, ZDA, julij 2019, na povabilo Igorja Klepa,
- Mike Henning**, 14 dni, University of Johannesburg, Johannesburg, Južna Afrika, maj, julij 2019, na povabilo Sandija Klavžarja,
- Michael Henning**, 2 tedna, University of Johannesburg, Johannesburg, Južna Afrika, junij 2019, na povabilo Boštjana Brešarja,
- Andreas M. Hinz**, 10 dni, LMU München, München, Nemčija, november 2019, na povabilo Sandija Klavžarja,
- Almir Huskanović**, 6 dni, Univerzitet u Zenici, Zenica, Bosna in Hercegovina, avgust 2019, na povabilo Štefka Miklaviča,
- Sara Kališnik**, 1 teden, Wesleyan University, Middletown, Connecticut, ZDA, april 2019, na povabilo Dušana Repovša,
- Mario Kapl**, 4 dni, Johann Radon Institute for Computational and Applied Mathematics (RICAM), Linz, Avstrija, september 2019, na povabilo Marjetke Knez,
- Kolja Knauer**, 10 dni, Université Aix-Marseille, Marseille, Francija, maj 2019, na povabilo Sandija Klavžarja,
- Mark MacLean**, 9 dni, Seattle University, Seattle, Washington, ZDA, maj/junij 2019, na povabilo Štefka Miklaviča,

**Victor Magron**, 14 dni, CNRS LAAS (Laboratoire d'Architecture et Analyse des Systèmes), Toulouse, ZDA, avgust 2019, na povabilo Igorja Klepa,  
**William Martin**, 2 dni, Worcester Polytechnic Institute, Wrochester, ZDA, junij 2019, na povabilo Aleksandra Jurišiča,  
**Atish Mitra**, 2 tedna, North Carolina State University, Raleigh, North Carolina, ZDA, maj 2019, na povabilo Žiga Virka,  
**Ivica Nakić**, 3 dni, Sveučilište u Zagrebu, Hrvaška, november 2019, na povabilo Marjete Kramar Fijavž,  
**Shahla Nasserar**, 12 dni, Brandon University, Brandon, Manitoba, Kanada, julij 2019, na povabilo Polone Oblak,  
**Sibel Ozkan**, 8 dni, Gebze Technical University, Carigrad, Turčija, december 2019, na povabilo Štefka Miklaviča,  
**James Eldred Pascoe**, 14 dni, University of Florida, Gainesville, ZDA, avgust 2019, na povabilo Igorja Klepa,  
**Douglas Rall**, 1 teden, Furman University, Greenville, ZDA, julij 2019, na povabilo Sandija Klavžarja,  
**Douglas Rall**, 2 tedna, Furman University, Greenville, ZDA, september 2019, na povabilo Boštjana Brešarja,  
**Hojr Shookoh Saljooghi**, 22 dni, Isfahan University of Technology, Isfahan, Iran, december 2019, na povabilo Aljoše Peperka,  
**Thomas Takacs**, 4 dni, Johannes Kepler Universität, Linz, Avstrija, september 2019, na povabilo Marjetke Knez,  
**Olivier Togni**, 1 teden, Université de Bourgogne, Dijon, Francija, avgust 2019, na povabilo Boštjana Brešarja,  
**Pascal Weinmüller**, 4 dni, Johannes Kepler Universität, Linz, Avstrija, september 2019, na povabilo Marjetke Knez,  
**Błażej Wróbel**, 7 dni, Uniwersytet Wrocławski, Wrocław, Poljska, maj 2019, na povabilo Oliverja Dragičevića,  
**Nicolò Zava**, 1 mesec, Università degli studi di Udine, Udine, Italija, februar/marec 2019, na povabilo Matija Cenclja,  
**Dževad Zečić**, 6 dni, Univerzitet u Zenici, Zenica, Bosna in Hercegovina, junij 2019, na povabilo Štefka Miklaviča.

## GOSTOVANJA

Člani oddelka za matematiko so bili v letu 2019 na naslednjih raziskovalnih obiskih oziroma študijskih izpopolnjevanjih v tujini:

**Janez Bernik**, 2 tedna, University of Waterloo, Kanada, april/maj 2019,

- Boštjan Brešar**, 6 dni, Université de Bourgogne, Dijon, Francija, maj 2019,
- Tanja Gologranc**, 5 dni, Université du Bourgogne, Dijon, Francija, maj 2019,
- Aleksandar Jurišić**, 3 dni, IMAGINARY, Berlin, Nemčija, februar 2019,
- Sandi Klavžar**, 14 dni, Tianjin University, Zibo University, Nanjing University, Tianjin, Zibo, Nanjing, Kitajska, april, maj 2019,
- Igor Klep**, 3 dni, Universität Konstanz, Konstanz, Nemčija, januar 2019,
- Igor Klep**, 6 dni, University of California, San Diego, ZDA, januar/februar 2019,
- Igor Klep**, 12 dni, University of Florida, Gainesville, ZDA, februar 2019,
- Igor Klep**, 3 meseci, Harvard University, Cambridge, ZDA, september/november 2019,
- Igor Klep**, 37 dni, Massey University at Albany, Auckland, Nova Zelandija, november/december 2019,
- Marjetka Knez**, 3 mesece, Università degli Studi di Siena, Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche, Siena, Italija, april/julij 2019,
- Damjana Kokol Bukovšek**, 13 tednov, University College Dublin, Irska, marec/junij 2019,
- Marjeta Kramar Fijavž**, 1 teden, IPAM, University of California, Los Angeles, ZDA, februar 2019,
- Marjeta Kramar Fijavž**, 3 dni, University of Aveiro, Portugalska, marec 2019,
- Marjeta Kramar Fijavž**, 2 dni, Instituto Superior Tecnico, Lizbona, Portugalska, marec 2019,
- Marjeta Kramar Fijavž**, 5 dni, University of Brescia, Italija, april 2019,
- Aljoša Peperko**, 5dni, Institute of mathematics, Czech academy of sciences, Praga, Češka, april 2019,
- Tatjana Petek**, 1 mesec, Shanghai Normal University, Šanghaj, Kitajska, september 2019,
- Jasna Prezelj**, 7 dni, Bergische Universität Wuppertal, Nemčija, marec 2019,
- Jasna Prezelj**, 14 dni, State University of New York at Stony Brook, ZDA, junij 2019,
- Emil Žagar**, 8 dni, University of California–Davis, Davis, ZDA, september 2019.

## SEMINARJI

## Seminar za algebro in funkcionalno analizo

Vodji seminarja sta Roman Drnovšek in Primož Moravec. V letu 2019 je seminar imel 27 sestankov, na katerih je bilo v povprečju 8 poslušalcev. Spletna stran seminarja je: <http://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-algebra-funkcionalna/>.

- Bojan Kuzma**, *Isometries and their roots*, 10. 1.,  
**Primož Moravec**, *Verjetnost zadoščanja identitetam v končnih grupah*, 17. 1.,  
**Peter Šemrl**, *Automorfizmi efektnih algeber*, 21. 2.,  
**Janez Šter**, *Nilpotentni polinomi in nilpotentni koeficienti*, 28. 2.,  
**Marjeta Kramar Fijavž**, *Bi-Continuous Operator Semigroups for Flows in Infinite Networks*, 7. 3.,  
**Sarah Nakato**, *Non-unique factorizations in rings of integer-valued polynomials*, 14. 3.,  
**Michael Kaplin**, *Extending  $ru$ -continuous operator semigroups from a dense subspace to the whole space*, 21. 3.,  
**Ganna Kudryavtseva**, *Expansions of monoids: the Birget-Rhodes expansion*, 28. 3.,  
**Nelida Črnjarić-Žic**, *Stochastic Koopman Operator and the Numerical Approximations of its Spectral Objects*, 4. 4.,  
**Michael Kaplin**, *Generation of relatively uniformly continuous semigroups on vector lattices*, 11. 4.,  
**Lara Vukšič**, *Valuacije na racionalnih funkcijah v več spremenljivkah*, 18. 4.,  
**Nik Stopar**, *Categorical properties of zero-divisor graphs of commutative rings*, 25. 4.,  
**Elisabeth Gaar**, *Vizing's Conjecture: From Graph Theory to Semidefinite Programming via an Algebraic Model*, 9. 5.,  
**Gregor Podlogar**, *Generične matrike in obsegi*, 16. 5.,  
**Michiya Mori**, *Isometries between projection lattices of von Neumann algebras*, 23. 5.,  
**Danko R. Jocić**, *Inequalities for inner product type transformers in norm ideals of compact operators*, 30. 5.,  
**Shahla Nasserar**, *The number of distinct eigenvalues of a graph*, 6. 6.,  
**Jurij Volčič**, *Germes of noncommutative functions*, 20. 6.,  
**Adam Dent**, *Highest weight vectors for classical reductive groups*, 10. 10.,

- Aljoša Peperko**, *Neenakosti za spektralni radij in operatorsko normo pozitivnih operatorjev na prostorih zaporedij*, 17. 10.,
- Polona Oblak**, *On the Nordhaus-Gaddum type problems for the inverse eigenvalue problem of a graph*, 24. 10.,
- Ivica Nakić**, *Control cost of the heat equation in large domains*, 7. 11.,
- Gregor Podlogar**, *Nekomutativne racionalne invariante rešljivih grup*, 14. 11.,
- Janko Bračić**, *Arensova regularnost in šibko kompaktni operatorji*, 21. 11.,
- Lara Vukšić**, *Razširitve valuacij na Weylovi algebri*, 28. 11.,
- Michael Kaplin**, *New results on relatively uniformly continuous semigroups*, 5. 12.,
- Hojr Shokooh Saljooghi**, *Mutations and their applications in max algebra and linear algebra*, 19. 12.

## Seminar IMFM in FNM v Mariboru iz diskretne matematike

Seminar vodita Boštjan Brešar in Sandi Klavžar. V letu 2019 je imel 24 srečanj. V povprečju je bilo na seminarju 12 udeležencev. Najbolj obiskano predavanje je bilo 18. 3. 2019 (19 poslušalcev). Domača stran seminarja je na naslovu: <http://omr.fnm.um.si/index.php/category/seminar-iz-diskretne-matematike/>.

- Simon Špacapan**, *Dominantno število ravninskih triangulacij*, 7. 1.,
- Tim Kos**, *Prispevki k preučevanju sodobnih dominacijskih invariant grafov*, pregledno. del, 14. 1.,
- Aleksander Kelenc**, *Na razdaljah osnovane invariante in mere v grafih*, 1. del, 21. 1.,
- Tim Kos**, *Prispevki k preučevanju sodobnih dominacijskih invariant grafov*, 1. del, 4. 3.,
- Niko Tratnik**, *Metode za računanje topoloških indeksov*, 11. 3.,
- Aleksander Kelenc**, *Na razdaljah osnovane invariante in mere v grafih*, 2. del, 18. 3.,
- Tim Kos**, *Prispevki k preučevanju sodobnih dominacijskih invariant grafov*, 2. del, 25. 3.,
- Boštjan Brešar**, *Grafi z enoličnimi največjimi odprtimi pakiranjmi*, 1. 4.,
- Ismael Gonzalez Yero** (University of Cadiz, Španija), *On the fractional  $k$ -metric dimension of graphs*, 8. 4.,
- Alen Vegi Kalamar**, *Preštevanje Hamiltonovih ciklov v 2-tlakovanih grafih*, 15. 4.,

- Gregor Rus**, *Množice vozlišč v splošni legi v nekaterih družinah grafov*, 6. 5.,
- Nazanin Movarraei** (Sharif University of Technology, Teheran, Iran), *Dominator coloring and dominating- $\chi$ -coloring of graphs*, 13. 5.,
- Simon Brezovnik**, *Resonančni grafi katakondenziranih sodih obročnih sistemov*, 20. 5.,
- Aleksandra Tepeh**, *k-mavrična celotna dominacija v grafih*, 27. 5.,
- David Gajser**, *Minimalna normalna pokritja grafov*, 3. 6.,
- Amir Sapir** (Sapir Academic College, Izrael), *On Consistent Inconsistencies*, 26. 8.,
- Iztok Peterin**, *H-mavrična celotna dominacija*, 7. 10.,
- Monika Pilśniak** (AGH University, Krakov, Poljska), *Symmetry Breaking in Graphs and 1-2-3 Conjecture*, 14. 10.,
- Gregor Rus**, *O l-razdaljno uravnoveženih produktih grafov*, 21. 10.,
- Tanja Gologranc**, *Indeks kromatične stabilnosti povezav*, 28. 10.,
- Mikhail Semenov** (Russian Academy of Sciences, Rusija), *Social Groups and Their Representations in Network Graphs*, 4. 11.,
- Andrej Taranenko**, *Karakterizacija in posplošitev marjetičnih kock*, 11. 11.,
- Andreas M. Hinz** (LMU München, Nemčija), *The Dudeney-Stockmeyer Conjecture and the Linear Tower of Hanoi*, 18. 11.,
- Daša Štesl**, *O indiciranem kromatičnem številu kartezičnega produkta grafov*, 25. 11.

## Seminar za verjetnost, statistiko in finančno matematiko

Vodje seminarja so Janez Bernik, Tomaž Košir in Mihael Perman. V letu 2019 se je zvrstilo 14 predavanj, na katerih je bilo v povprečju 9 poslušalcev. Informacije o seminarju so dostopne na spletnem naslovu <http://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-financna-matematika/>.

- Veno Mramor**, *Projekcije sferičnega Brownovega gibanja*, 3. 1.,
- Jordan Stoyanov**, *Probability distributions and their moment determinacy*, 14. 3.,
- Martin Raič**, *CLI za razmerje karakterjev*, 28. 3.,
- Matija Vidmar**, *On a family of non-linear optimal martingale transport problems*, 4. 4.,
- József Gáll**, *On approximations of Value at Risk and Expected Shortfall involving kurtosis*, 18. 4.,
- Rok Okorn**, *Uporaba Lévyjevih procesov v finančni matematiki*, 23. 5.,



**Lena Benčina**, *Primerjalna analiza metod za odkrivanje skupnosti v usmerjenih omrežjih*, 30. 5.,

**Špela Poklukar**, *Generativni modeli*, 13. 6.,

**Matija Vidmar**, *Some harmonic functions for killed Markov branching processes with immigration and culling*, 24. 10.,

**Martin Raič**, *Normalna aproksimacija po Steinovi metodi in odvisnost*, 7. 11.,

**Janez Bernik**, *Realni primer vrednotenja realnih opcij*, 14. 11.,

**Tomaz Košir**, *O odnosu med Kendallovim  $\tau$  in Spearmanovim  $\rho$* , 21. 11.,

**Matjaž Omladič**, *Pot do kopul je tlakovana (tudi) z modeli udarov*, 5. 12.,

**Nik Stopar**, *O obstoju kopul na urejenostnih intervalih kvazi-kopul*, 12. 12.

## Seminar iz geometrije

Seminar iz geometrije se sestaja ob ponedeljkih ob 10. uri. Vodijo ga Franci Forstnerič, Tomaz Košir, Janez Mrčun in Pavle Saksida. V letu 2019 je bilo 6 predavanj. Spletna stran seminarja je <http://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-geometrija/>.

**Rok Gregorič**, *Koszulova dualnost in zančni prostori*, 7. 1.,

**Jure Kališnik**, *Reprezentacije semidirektnih produktov*, 14. 1.,

**Jure Kališnik**, *Nerazcepne reprezentacije diedrskih grup*, 21. 1.,

**Jure Kališnik**, *Konstrukcija spinskih grup*, 27. 5.,

**Rok Gregorič**, *Izpeljava Atiyah-Singerjevega izreka o indeksu*, 1. del, 16. 12.,

**Rok Gregorič**, *Izpeljava Atiyah-Singerjevega izreka o indeksu*, 2. del, 23. 12.

## Seminar za geometrijsko topologijo

Vodji seminarja sta Matija Cencelj in Dušan Repovš. V letu 2019 je bilo 26 sestankov. Seminar ima uradno spletno stran na <http://www.pef.uni-lj.si/sgt/>.

**Boštjan Gabrovšek**, *Hitro računanje homologije Hovanova*, 1. del, 9. 1. (2 uri),

**Boštjan Gabrovšek**, *Hitro računanje homologije Hovanova*, 2. del, 16. 1. (2 uri),

**Nicolò Zava**, *An introduction to the coarse hyperspace: An insight on its geometric and algebraic properties*, 1. del, 20. 2. (2 uri),

**Nicolò Zava**, *An introduction to the coarse hyperspace: An insight on its geometric and algebraic properties*, 2. del, 27. 2. (2 uri),

- Nicolò Zava**, *An introduction to the coarse hyperspace: A notion of entropy in the realm of coarse geometry and its relationship with the algebraic entropy*, 6. 3. (2 uri),
- Nicolò Zava**, *The large-scale geometry of (a)symmetric spaces*, 13. 3. (2 uri),
- Petar Pavešić**, *Ali je McCordova preslikava vlaknenje?*, 20. 3. (2 uri),
- Žiga Virk**, *Izrek o živcu za Ripsove komplekse*, 27. 3. (2 uri),
- Aleš Vavpetič**, *Lastnost A*, 3. 4. (2 uri),
- Boštjan Lemež**, *Morseova teorija na Čechovih in Delaunayevih kompleksih*, 1. del, 10. 4. (2 uri),
- Boštjan Lemež**, *Morseova teorija na Čechovih in Delaunayevih kompleksih*, 2. del, 17. 4. (2 uri),
- Boštjan Lemež**, *Morseova teorija na Čechovih in Delaunayevih kompleksih*, 3. del, 8. 5. (2 uri),
- Atish Mitra**, *Coarse extension theory and some  $C^*$  algebras*, 15. 5. (2 uri),
- Denise Halverson**, *On nonembeddability of contractible open manifolds*, 1. del, 22. 5. (2 uri),
- Denise Halverson**, *On nonembeddability of contractible open manifolds*, 2. del, 29. 5. (2 uri),
- Boštjan Lemež**, *Vietoris-Ripsov kompleks metričnega prostora, ki je blizu Riemannovi mnogoterosti*, 1. del, 2. 10. (2 uri),
- Boštjan Lemež**, *Vietoris-Ripsov kompleks metričnega prostora, ki je blizu Riemannovi mnogoterosti*, 2. del, 9. 10. (2 uri),
- Boštjan Lemež**, *Vietoris-Ripsov kompleks metričnega prostora, ki je blizu Riemannovi mnogoterosti*, 3. del, 16. 10. (2 uri),
- Friedrich Hegenbarth**, *On generalized manifolds obtained by Mardešić and Segal*, 23. 10. (2 uri),
- Eva Horvat**, *Algebraični vozli v lečastem prostoru*, 1. del, 6. 11. (2 uri),
- Eva Horvat**, *Algebraični vozli v lečastem prostoru*, 2. del, 13. 11. (2 uri),
- Eva Horvat**, *Algebraični vozli v lečastem prostoru*, 3. del, 20. 11. (2 uri),
- Boštjan Gabrovšek**, *Topološki modeli zavozlanih beljakovin*, 1. del, 27. 11. (2 uri),
- Boštjan Gabrovšek**, *Topološki modeli zavozlanih beljakovin*, 2. del, 4. 12. (2 uri),
- Boštjan Gabrovšek**, *Topološki modeli zavozlanih beljakovin*, 3. del, 11. 12. (2 uri),
- Dejan Govc**, *Računanje homotopskih tipov usmerjenih prapornih kompleksov*, 18. 12. (2 uri).

## Seminar za teorijo grup in kombinatoriko

Vodje seminarja so Aleksander Malnič, Dragan Marušič in Primož Šparl. V letu 2019 se je seminar redno sestel 15 krat. Predavali so:

- Boštjan Kuzman**, *Nekaj rezultatov o spektru grafa*, 27. 2.,  
**Primož Šparl**, *On the automorphism group of a deleted wreath product of graphs*, 1. del, 6. 3.,  
**Primož Šparl**, *On the automorphism group of a deleted wreath product of graphs*, 2. del, 20. 3.,  
**Alja Šubic**, *Hipohamiltonovi grafi*, 10. 4.,  
**Primož Šparl**, *What does the Fano plane have to do with half-arc-transitive actions on tetravalent graphs?*, 24. 4.,  
**Erik Hrvatinić**, *Spekter grafa in njegova uporaba*, 13. 5.,  
**Boštjan Kuzman**, *On domination in graphs*, 22. 5.,  
**Boštjan Kuzman**, *O mavrični dominaciji v regularnih grafih*, 10. 10.,  
**Primož Šparl**, *O simetrijah šibkega leksikografskega produkta grafov*, 1. del, 17. 10.,  
**Primož Šparl**, *O simetrijah šibkega leksikografskega produkta grafov*, 2. del, 24. 10.,  
**Boštjan Kuzman**, *Hamiltonskost grafov praštevilskih vsot*, 7. 11.,  
**Primož Šparl**, *Nekaj lastnosti grafa praštevilskih vsot*, 14. 11.,  
**Primož Šparl**, *Extendability of nearly strongly regular graphs*, 1. del, 21. 11.,  
**Primož Šparl**, *Extendability of nearly strongly regular graphs*, 2. del, 28. 11.,  
**Aleksander Malnič**, *O krovih digrafov*, 19. 12.

## Seminar za kompleksno analizo

Seminar za kompleksno analizo vodita Franc Forstnerič in Barbara Drinovec Drnovšek. Rednih članov je bilo 16. Sestajal se je praviloma enkrat tedensko. Spletno stran najdemo na naslovu: <http://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-kompleksna-analiza/>. V letu 2019 je imel 23 sestankov in povprečno 14 poslušalcev..

- Oliver Dragičević**, *Dissipativity of forms and orthogonal projections onto  $L^p$ -balls in  $L^2$  spaces*, 2. del, 8. 1.,  
**Riccardo Ugolini**, *Parametric jet interpolation by automorphisms in Stein manifolds with the density property*, 26. 2.,  
**Sibel Sahin**, *An introduction to toric pluripotential theory*, 5. 3.,

- Cinzia Bisi**, *On Runge pairs and topology of axially symmetric domains in the quaternionic space  $\mathbb{H}$* , 12. 3.,
- Lorenzo Guerini**, *Ising model and complex dynamics*, 19. 3.,
- Jasna Prezelj**, *Quaternionic automorphisms with volume*, 26. 3.,
- Barbara Drinovec Drnovšek**, *Disc bundles over Hopf surfaces*, 2. 4.,
- Mitja Nedić**, *Supports of Borel measures in the plane satisfying a certain positivity condition*, 9. 4.,
- Graziano Gentili**, *A new direct approach to quaternionic Manifolds*, 16. 4.,
- Zakarias Sjöström Dyrefelt**, *Canonical metrics and stability of Kähler classes*, 23. 4.,
- Blažej Wróbel**, *Dimension-free estimates for Hardy-Littlewood maximal functions in discrete contexts*, 7. 5.,
- Luka Boc Thaler**, *Reduced dynamical systems*, 14. 5.,
- Mi Hu**, *Interior dynamics of Fatou sets*, 21. 5.,
- Đorđije Vujadinović**, *Boundedness of the orthogonal projection on harmonic Fock spaces*, 4. 6.,
- Tobias Harz**, *On smoothing of bounded plurisubharmonic functions*, 3. 10.,
- Hendrik Herrmann**, *Szegő kernel asymptotics and embeddings of Sasakian manifolds*, 3. 10.,
- Luka Boc Thaler**, *Automorphisms of  $C^2$  with non-recurrent Siegel cylinders*, 22. 10.,
- György Pál Gehér**, *Mutual information of two intervals in quantum XX spin chain - a Riemann-Hilbert approach*, 5. 11.,
- Arkadiusz Lewandowski**, *Families of exposing maps in strictly pseudoconvex domains*, 12. 11.,
- Nikolay Shcherbina**, *On the existence of Kobayashi and Bergman metrics for Model domains*, 19. 11.,
- Marko Slapar**, *CR singular points of embeddings of 3-manifolds into  $C^3$* , 26. 11.,
- Brett Chenoweth**, *Carleman approximation by complete immersions*, 3. 12.,
- Tadej Starčič**, *On normal forms of complex points of small  $C^2$ -perturbations of real 4-manifolds in complex 3-manifolds*, 2. del, 17. 12.

## Seminar iz kriptografije in teorije kodiranja

Vodja seminarja je Aleksandar Jurišić. V letu 2019 je bilo na seminarju v povprečju 7 udeležencev. Zvrstila so se naslednja predavanja ter ena delavnica:

**Aleksandar Jurišić**, *Končni obsegi*, 1. del, 3. 1. (2 uri),

**Aleksandar Jurišić**, *Končni obsegi*, 2. del, 10. 1. (2 uri).

72. DELAVNICA (IZ KRIPTOGRAFIJE IN RAČUNALNIŠKE VARNOSTI)

**Florian Diesnis**, *Wireless Smart Cards security (Varnost brezžičnih pametnih kartic)*, 1. 2. (20 min),

**Domen Gašperlin**, *Fully homomorphic encryption (Homomorfno šifriranje)*, 1. 2. (20 min),

**Jan Lampič**, *Miselni poker (Mental poker)*, 1. 2. (20 min),

**Klemen Klanjšček**, *Kriptografska analiza telegramov iz 2. svetovne vojne*, 1. 2. (20 min),

**Jakob Merljak**, *Varnostni mehanizmi v sistemu Android*, 1. 2. (20 min),

**Andrej Rus**, *Floydov algoritem*, 1. 2. (20 min),

**Ante Sosa**, *Lightning Network (Bliskovito omrežje)*, 1. 2. (20 min),

**Joana Valente**, *Algorand*, 1. 2. (20 min)

**Aleksandar Jurišić**, *Končni obsegi*, 3. del, 28. 2. (2 uri),

**Mia Filić**, *GNSS message authentication*, 7. 3. (2 uri),

**Aljaž Zalar**, *Wedderbrunov izrek*, 1. del, 18. 4. (2 uri),

**Aljaž Zalar**, *Wedderbrunov izrek*, 2. del, 25. 4. (2 uri),

**Boris Manteaux**, *Classroom eQuiz and security*, 1. del, 9. 5. (2 uri),

**Boris Manteaux**, *Classroom eQuiz and security*, 2. del, 23. 5. (2 uri),

**Boris Manteaux**, *Classroom eQuiz and security*, 3. del, 30. 5. (2 uri),

**Adam Kejji**, *Chinese Remainder Theorem (Kitajski izrek o ostankih)*, 6. 6. (2 uri),

**Mia Filić**, *Message authentication with confirmation*, 1. del, 11. 6. (2 uri),

**Mia Filić**, *Message authentication with confirmation*, 2. del, 18. 6. (2 uri),

**William Martin**, *Scaffolds: A graph-based system for computations in Bose-Mesner algebras*, 1. 7. (2 uri),

**Michael Lang**, *Triple (and higher) intersection numbers*, 1. del, 8. 7. (2 uri),

**Mia Filić**, *Message authentication with confirmation*, 3. del, 15. 7. (2 uri),

**Janoš Vidali**, *Višja presečna števila*, 2. del, 9. 10. (2 uri),

**Aleksandar Jurišić**, *Višja presečna števila*, 3. del, 16. 10. (2 uri),

**Niko Tratnik**, *Resonančni grafi in molekularni deskriptorji*, 23. 10. (1 ura),

**Janoš Vidali**, *Terwilligerjev polinom za klasične razdaljno-regularne grafe  $z = b = 2$* , 1. del, 30. 10. (2 uri),

**Janoš Vidali**, *Terwilligerjev polinom za klasične razdaljno-regularne grafe  $z = b = 2$* , 2. del, 6. 11. (2 uri),

**Aleksandar Jurišić**, *Uvod v asociativne sheme*, 13. 11. (2 uri),

**Ramanpreet Kaur**, *Computer security*, 1. del, 20. 11. (2 uri),

**Ramanpreet Kaur**, *Computer security*, 2. del, 27. 11. (2 uri),  
**Aleksandar Jurišić**, *Okrogla miza: o raziskovanju v kriptografiji*, 19. 12. (2 uri).

## Seminar za numerično analizo

Seminar za numerično analizo vodi Bor Plestenjak. Seminar se je v letu 2019 sestal dvajsetkrat. V povprečju je bilo na seminarju 10 udeležencev. Podatki o delu seminarja so dostopni na naslovu <http://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-numericna-analiza/>.

**Marjeta Knez**, *Interpolacija s  $C^2$  zlepki stopnje 4 nad triangulacijo z 10-delitvijo*, 1. del, 9. 1. (1 ura),

**Marjeta Knez**, *Interpolacija s  $C^2$  zlepki stopnje 4 nad triangulacijo z 10-delitvijo*, 2. del, 16. 1. (1 ura),

**Marjeta Knez**, *Interpolacija s  $C^2$  zlepki stopnje 4 nad triangulacijo z 10-delitvijo*, 3. del, 20. 2. (1 ura),

**Gregor Kosec**, *Dinamično termično ocenjevanje daljnovodnih vrvi*, 27. 2. (1 ura),

**Bor Plestenjak**, *Selekcijski kriterij za računanje več lastnih vrednosti*, 13. 3. (1 ura),

**Jure Slak**, *Priprava kvizov za Moodle samo z Matlabom*, 20. 3. (1 ura),

**Michiel Hochstenbach**, *Some linear algebra techniques for Big Data problems*, 3. 4. (1 ura),

**Andrej Muhič**, *Hierarchical regression*, 10. 4. (1 ura),

**Jure Slak**, *Adaptive RBF-FD method*, 24. 4. (1 ura),

**Bor Plestenjak**, *Reševanje singularnega posplošenega problema lastnih vrednosti s perturbacijami*, 15. 5. (1 ura),

**Rida T. Farouki**, *Pythagorean-hodograph curves in real-time motion control applications*, 28. 8. (1 ura),

**Diego Klabjan**, *Scale Invariant Power Iteration under a Euclidean Ball Constraint*, 9. 10. (1 ura),

**Jan Grošelj**, *Poročila z obiskov konferenc*, 1. del, 16. 10. (1 ura),

**Marjeta Knez**, *Poročila z obiskov konferenc*, 2. del, 23. 10. (1 ura),

**Jure Slak**, *Poročila z obiskov konferenc*, 3. del, 6. 11. (1 ura),

**Marjeta Knez**, *Ploskve zlepkov iz tenzorskega produkta s PH izoparametričnimi krivuljami*, 1. del, 13. 11. (1 ura),

**Marjeta Knez**, *Ploskve zlepkov iz tenzorskega produkta s PH izoparametričnimi krivuljami*, 2. del, 20. 11. (1 ura),

**Marjeta Knez**, *Ploskve zlepkov iz tenzorskega produkta s PH izoparametričnimi krivuljami*, 3. del, 27. 11. (1 ura),

**Emil Žagar**, *Optimalna geometrijska interpolacija krožnih lokov*, 1. del, 11. 12. (1 ura),

**Emil Žagar**, *Optimalna geometrijska interpolacija krožnih lokov*, 2. del, 18. 12. (1 ura).

## Topološki seminar

Seminar je imel v povprečju 12 udeležencev, vodil pa ga je Petar Pavešić. V letu 2019 se je zvrstilo 28 predavanj o raznih temah. Domača stran seminarja je na: <http://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-topologija/>.

**Jože Vrabec**, *Alexandrova dualnost*, 3. del, 7. 1.,

**Jože Vrabec**, *Kombinatorični dokaz Aleksandrove dualnosti*, 14. 1.,

**Sara Kališnik**, *Web-Seminar GEOTOP-A: Learning algebraic varieties from samples*, 8. 2.,

**Petar Pavešić**, *Topološka kompleksnost skeletov*, 18. 2.,

**Petar Pavešić**, *Topološka kompleksnost skeletov*, 2. del, 25. 2.,

**Petar Pavešić**, *Topološka kompleksnost skeletov*, 3. del, 4. 3.,

**Jernej Grlj**, *PL Morseova teorija*, 11. 3.,

**Jaka Smrekar**, *PL Morseova teorija*, 2. del, 18. 3.,

**Jaka Smrekar**, *PL Morseova teorija*, 3. del, 25. 3.,

**Petar Pavešić**, *Homotopska teorija končnih prostorov*, 1. 4.,

**Petar Pavešić**, *Šibki homotopski tip končnih prostorov*, 8. 4.,

**Sašo Strle**, *Razvejeni krovi in signatura vozla*, 15. 4.,

**Sašo Strle**, *Razvejeni krovi in signatura vozla*, 2. del, 29. 4.,

**Aleš Vavpetič**, *Urejenost v  $C(X)$* , 6. 5.,

**Aleš Vavpetič**, *Urejenost v  $C(X)$* , 2. del, 13. 5.,

**Atish J. Mitra**, *Coarse Embeddings in Hilbert Space*, 20. 5.,

**Uvodni sestanek topološkega seminarja**, 7. 10.,

**Marko Slapar**, *Thomas-Wood bounds for codimension two real submanifolds of  $\mathbb{C}P^n$* , 14. 10.,

**Davorin Lešnik**, *Naravne topologije na vektorskih prostorih*, 21. 10.,

**Davorin Lešnik**, *Naravne topologije na vektorskih prostorih*, 2. del, 28. 10.,

**Davorin Lešnik**, *Naravne topologije na vektorskih prostorih*, 3. del, 4. 11.,

**Davorin Lešnik**, *Naravne topologije na vektorskih prostorih*, 4. del, 11. 11.,

**Marko Slapar**, *CR singularne točke vložitev 3-mnogoterosti v  $\mathbb{C}^3$* , 18. 11.,

**Damir Franetič**, *Kdaj je prostor (krepko) nerazcepen?*, 25. 11.,

**Damir Franetič**, *Kdaj je prostor (krepko) nerazcepen?*, 2. del, 2. 12.,  
**Rok Gregorič**, *Koliko vedo koverige o prostoru?*, 9. 12.,  
**Rok Gregorič**, *Koliko vedo koverige o prostoru?*, 2. del, 16. 12.,  
**Dejan Govc**, *Tournaplexes*, 23. 12.

## Seminar IMFM in FNM v Mariboru iz topologije

Seminar vodita Iztok Banič in Uroš Milutinović. V letu 2019 je v okviru Seminarja bilo opravljenih 12 dveurnih predavanj. V povprečju je bilo na vsakem seminarju 6 udeležencev.

Obvestila so na spletni strani:

<https://omr.fnm.um.si/index.php/category/seminar-iz-topologije/>.

**Iztok Banič**, *Velike komponente v posplošenih inverzних limitah*, 4. 3. (2 uri),

**Iztok Banič**, *CC-zaporedja*, 15. 3. (2 uri),

**Uroš Milutinović**, *Realna števila in sorodni matematični objekti*, 1. del, 18. 3. (2 uri),

**Iztok Banič**, *Velike komponente*, 22. 3. (2 uri),

**Uroš Milutinović**, *Realna števila in sorodni matematični objekti*, 2. del, 25. 3. (2 uri),

**Uroš Milutinović**, *Realna števila in sorodni matematični objekti*, 3. del, 1. 4. (2 uri),

**Uroš Milutinović**, *Realna števila in sorodni matematični objekti*, 4. del, 8. 4. (2 uri),

**Matevž Črepnjak**, *Inverzne limite inverzних zaporedij poševnih šotorskih funkcij s končnimi vgnetenimi zaporedji*, 10. 6. (2 uri),

**Sina Greenwood**, *Trees and inverse limits of set-valued functions on intervals*, 21. 6. (2 uri),

**Judy Kennedy**, *A construction of Mary Rees*, 21. 6. (2 uri),

**Iztok Banič**, *Novi rezultati o lastnosti polnih projekcij inverzних zaporedij*, 1. del, 7. 10. (2 uri),

**Iztok Banič**, *Novi rezultati o lastnosti polnih projekcij inverzних zaporedij*, 2. del, 14. 10. (2 uri).



## Mednarodni topološki seminar Ljubljana–Maribor–Zagreb

Vodje seminarja so Petar Pavešić (Ljubljana), Iztok Banič (Maribor), Sonja Štimac (Zagreb). V letu 2019 se je *Topološki seminar Ljubljana–Zagreb–Maribor* sestal enkrat in sicer 11. maja v Mariboru, kjer je bilo prisotnih 19 poslušalcev.

**Martina Stojić**, *Simetrična monoidalna kategorija indprofinVect*, 11. 5.,  
**Petar Pavešić**, *A model of the Hawaiian Earring with countably many points*, 11. 5.



# ODDELEK ZA FIZIKO

## PROJEKTI

V letu 2019 smo člani oddelka delovali v okviru raziskovalnega programa

**Zvonko Jagličić**, *Nove slikovno-analitske metode*, (P2-0348),

in infrastrukturnega programa

**Vojko Jazbinšek**, *Infrastrukturna dejavnost pri IMFM*, (I0-0002).

Sodelovali smo v enem domačem projektu:

**J2-8194**, *Zvonko Jagličić*, *Senzorske tehnologije pri kontroli posegov v objekte kulturne dediščine*,

in v enem mednarodnem projektu:

**Zvonko Jagličić**, *Optični magnetometri kot novi biomedicinski senzorji pri slušnem odzivu možganov in pri zaznavi magnetnih nanodelcev*, BI-DE/18-19-003 (dvostranski z Nemčijo).

## VODENJE RAZISKOVALNEGA CENTRA

**Zvonko Jagličić**, *Center za magnetna merjenja CMag*, ki združuje raziskovalce iz več ustanov: FMF, FFA, FKKT, KI, IJS in IMFM.

## MLADI RAZISKOVALCI

V okviru Oddelka za fiziko se je v letu 2019 usposabljal mladi raziskovalec

**Urban Marhl**, mentor V. Jazbinšek.

## BIBLIOGRAFIJE RAZISKOVALCEV

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- C1. V. Brodzsky, Z. Beretzky, P. Baji, F. Rencz, M. Péntek, A. Rotar, K. Tachkov, S. Mayer, J. Simon, M. Niewada, — , L. Gulácsi, *Cost-of-illness studies in nine Central and Eastern European countries*, Eur. J. Health Econ. **20** (2019), 155–172.
- E1. Moderator sekcije “The implementation of sustainable biosimilar policies to increase access to biological medicines in CEE countries” konferenca *ISPOR*, Varšava, Poljska, marec 2019.
- F1. *Health care – the most efficient system is the most cost-effective*, plenarno predavanje, Kopaonik Business Forum, Kopaonik, Srbija, marec 2019.
- G1. *Medical device assessment and procurement – fair and efficient access in countries with limited health budgets*, *ISPOR*, Varšava, Poljska, marec 2019.
- G2. *The importance of health economics modeling in assessing costs of point-of-care HbA1c monitoring of patients with type 2 diabetes mellitus in high-income countries*, 23<sup>rd</sup> IFCC-ECLM European Congress of Clinical Chemistry and Laboratory Medicine, Barcelona, Španija, maj 2019.
- G3. *Budget impact modelling of point-of-care HbA1c monitoring of patients with non-insulin dependent diabetes mellitus type II in mid-income countries*, *ISPOR* 24<sup>th</sup> Annual International Conference, New Orleans, ZDA, maj 2019.
- G4. *Budget impact modelling of point-of-care HbA1c monitoring of patients with non-insulin dependent diabetes mellitus type II in Russia*, *ISPOR* 22<sup>nd</sup> Annual European Congress, København, Danska, november 2019.

## Zvonko Jagličić:

- B1. K. Sheng, X. Tian, M. Jagodič, — , N. Zhang, Q. Y. Liu, C. H. Tung, D. Sun, *Synthesis, structure and magnetism of a novel Cu<sub>4</sub>Ti<sub>5</sub><sup>IV</sup> heterometallic cluster*, sprejeto v objavo v Chin. Chem. Lett.
- B2. M. Krnel, S. Vrtnik, A. Jelen, P. Koželj, — , A. Meden, M. Feuerbacher, J. Dolinšek, *Speromagnetism and asperomagnetism as the ground states of the Tb – Dy – Ho – Er – Tm “ideal” high-entropy alloy*, sprejeto v objavo v Intermetallics.

- C1. J. Bijelić, A. Stanković, B. Matasović, B. Marković, M. Bijelić, Ž. Skoko, J. Popović, G. Štefanić, —, S. Zellmer, T. Preller, G. Garnweitner, T. Đorđević, P. Čop, B. Smarsly I. Djerdj, *Structural characterization and magnetic property determination of nanocrystalline Ba<sub>3</sub>Fe<sub>2</sub>WO<sub>9</sub> and Sr<sub>3</sub>Fe<sub>2</sub>WO<sub>9</sub> perovskites prepared by a modified aqueous sol-gel route*, CrystEngComm **21** (2019), 218–227.
- C2. H. Feizi, R. Bagheri, —, J. Pal Singh, K. H. Chae, Z. Song, M. M. Najafpour, *A nickel(II) complex under water-oxidation reaction: what is the true catalyst?*, Dalton Trans. **48** (2019), 547–557.
- C3. S. Ben Moumen, Y. Gagou, S. Belkhadir, D. Mezzane, M. Amjoud, B. Rožič, L. Hajji, Z. Kutnjak, —, M. Jagodic, M. El Marssi, Y. Kopelevich, I. A. Luk'yanchuk, *Structural, dielectric and magnetic properties of multiferroic (1 - x)La<sub>0.5</sub>Ca<sub>0.5</sub>MnO<sub>3</sub> - (x)BaTi<sub>0.8</sub>Sn<sub>0.2</sub>O<sub>3</sub> laminated composites*, IEEE Trans. Ultrason. Ferroelectr. Freq. Control. **66** (2019), 1935–1941.
- C4. B. Q. Ji, H. F. Su, M. Jagodič, —, M. Kurmoo, X. P. Wang, C. H. Tung, Z. Z. Cao, D. Sun, *Self-Organization into Preferred Sites by Mg<sup>II</sup>, Mn<sup>II</sup>, and Mn<sup>III</sup> in Brucite-Structured M<sup>19</sup> Cluster*, Inorg. Chem. **58** (2019), 3800–3806.
- C5. M. Riaz, R. K. Kumar, H. F. Su, —, M. Kurmoo, C. H. Tung, D. Sun, L. S. Zheng, *Hexadecanuclear Mn<sub>2</sub><sup>II</sup>Mn<sub>14</sub><sup>III</sup> Molecular Torus Built from in Situ Tandem Ligand Transformations*, Inorg. Chem. **58** (2019), 14331–14337.
- C6. S. Vrtnik, J. Lužnik, P. Koželj, A. Jelen, J. Luzar, M. Krnel, —, A. Meden, M. Feuerbacher, J. Dolinšek, *Magnetic phase diagram and magnetoresistance of Gd - Tb - Dy - Ho - Lu hexagonal high-entropy alloy*, Intermetallics **105** (2019), 163–172.
- C7. B. Dojer, A. Pevec, K. Breznik, —, S. Gyergyek, M. Kristl, *Structural and thermal properties of new copper and nickel single-source precursors*, J. Mol. Struct. **1194** (2019), 171–177.
- C8. G. Mali, M. Mazaj, I. Arčon, D. Hanžel, D. Arčon, —, *Unraveling the arrangement of Al and Fe within the framework explains the magnetism of mixed-metal MIL-100(Al, Fe)*, J. Phys. Chem. Lett. **10** (2018), 1464–1470.
- C9. L. N. Alyabyeva, V. I. Torgashev, E. S. Zhukova, D. A. Vinnik, A. S. Prokhorov, S. A. Gudkova, D. R. Góngora, T. Ivek, S. Tomić, N. Novosel, D. Starešinić, D. Dominko, —, M. Dressel, D. A. Zherebtsov, B. Gorchunov, *Influence of chemical substitution on broadband dielectric response of barium-lead M-type hexaferrite*, New J. Phys. (2019), art. 063016, str. 1–14.

- C10. A. Zorko, M. Pregelj, M. Klanjšek, M. Gomilšek, —, J. S. Lord, J. A. T. Verezhak, T. Shang, W. Sun, J.-X. Mi, *Coexistence of magnetic order and persistent spin dynamics in a quantum kagome antiferromagnet with no intersite mixing*, Phys. Rev. B **99** (2019), 214441-1–214441-10.
- C11. M. Milenković, A. T. Papastavrou, D. Radanović, A. Pevec, —, M. Zlataar, M. Gruden-Pavlović, G. C. Vougioukalakis, I. Turel, K. Anđelković, B. R. Čobeljić, *Highly-efficient N-arylation of imidazole catalyzed by Cu(II) complexes with quaternary ammonium-functionalized 2-acetylpyridine acylhydrazone*, Polyhedron **165** (2019), 22–30.
- F1. *Magnetostructural correlations in transition metal complexes and magnetic nanoparticles*, vabljeno predavanje, 26<sup>th</sup> Conference of the Serbian Crystallographic Society, Srebrno jezero, Srbija, junij 2019.
- G1. *Disordered ferromagnetic state in the Ce – Gd – Tb – Dy – Ho hexagonal high-entropy alloy*, 14<sup>th</sup> International Conference on Quasicrystals, Kranjska Gora, maj 2019.
- G2. *Magnetism of the Cu – Gd – Ca “push-pull” intermetallic compound*, 14<sup>th</sup> International Conference on Quasicrystals, Kranjska Gora, maj 2019.
- G3. *Voda v aluauditskom tipu strukture: sinteza, kristalna struktura i magnetna svojstva  $\text{Co}_3(\text{AsO}_4)_{0,5}(\text{HAsO}_4)_2(\text{H}_2\text{AsO}_4)_{0,5}(\text{H}_2\text{O})_{0,5}$  = Water in the alluaudite type structure: synthesis, crystal structure and magnetic properties of  $\text{Co}_3(\text{AsO}_4)_{0,5}(\text{HAsO}_4)_2(\text{H}_2\text{AsO}_4)_{0,5}(\text{H}_2\text{O})_{0,5}$* , 26<sup>th</sup> Conference of the Serbian Crystallographic Society, Srebrno jezero, Srbija, junij 2019.
- G4. *Mechanochemical vs. chemical synthesis in the preparation of  $\text{YMnO}_3$  ceramic materials*, 5<sup>th</sup> Conference of the Serbian Society for Ceramic Materials,, Beograd, Srbija, junij 2019.
- I1. Pisec recenzij za revije: “The European Physical Journal Plus”, “Intermetallics”, “Journal of Alloys and Compounds”, “Journal of Magnetism and Magnetic Materials”, “Chemical Physics Letters”, “Materials Research Bulletin”.
- I2. Mentorstvo pri enem magistrskem in enem diplomskem delu (bolonjski študij).

**Marko Jagodič:**

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- C1. S. Ben Moumen, Y. Gagou, S. Belkhadir, D. Mezzane, M. Amjoud, B. Rožič, L. Hajji, Z. Kutnjak, Z. Jaglicic, —, M. El Marssi, Y. Kopelevich, I. A. Luk'yanchuk, *Structural, dielectric and magnetic properties of multiferroic  $(1-x)\text{La}_{0.5}\text{Ca}_{0.5}\text{MnO}_3 - (x)\text{BaTi}_{0.8}\text{Sn}_{0.2}\text{O}_3$  laminated composites*, IEEE Trans. Ultrason. FerroelectrFreq. Control. **66** (2019), 1935–1941.
- C2. B. Q. Ji, H. F. Su, —, Z. Jagličić, M. Kurmoo, X. P. Wang, C. H. Tung, Z. Z. Cao, D. Sun, *Self-Organization into Preferred Sites by  $\text{Mg}^{\text{II}}$ ,  $\text{Mn}^{\text{II}}$ , and  $\text{Mn}^{\text{III}}$  in Brucite-Structured  $\text{M}^{19}$  Cluster*, Inorg. Chem. **58** (2019), 3800–3806.
- G1. *Načrtovanje, izvedba in učinek samostojnega raziskovalnega dela nadarjenih dijakov pri fiziki*, Sedemdeset let DMFA Slovenije / 1. mednarodna konferenca o poučevanju matematike, fizike in astronomije, Bled, september 2019.
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**Vojko Jazbinšek:**

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- C2. U. Marhl, A. Jodko-Wladzinska, R. Brühl, T. Sander, —, *Application of source localization algorithms in magnetoencephalography : test on a new generation of magnetometers*, 42<sup>nd</sup> International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO), Opatija, Hrvaška, maj 2019, Proceedings, 357–362.
- E1. Član programskega odbora konference 42<sup>nd</sup> *International convention on information and communication technology, electronics and microelectronics (MIPRO), section DC – Distributed computing in data science and biomedical engineering*, Opatija, Hrvaška, maj 2019.

- G1. *Using OPM magnetometers for source localization in magnetoencephalography*, 7<sup>th</sup> annual Workshop on Optically Pumped Magnetometers, Mainz, Nemčija, avgust 2019.

### Urban Marhl:

- C1. — , M. Gosak, *Proper spatial heterogeneities expand the regime of scale-free behavior in a lattice of excitable elements*, Phys. Rev. E **100** (2019), art. 062203, 11 str.
- C2. — , A. Jodko-Wladzinska, R. Brühl, T. Sander, V. Jazbinšek, *Application of source localization algorithms in magnetoencephalography : test on a new generation of magnetometers*, 42<sup>nd</sup> International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO), Opatija, Hrvaška, maj 2019, Proceedings, 357–362.
- G1. *Application of source localization algorithms in magnetoencephalography : test on a new generation of magnetometers*, 42<sup>nd</sup> International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO), Opatija, Hrvaška, maj 2019.
- G2. *Using OPM magnetometers for source localization in magnetoencephalography*, 7<sup>th</sup> annual Workshop on Optically Pumped Magnetometers, Mainz, Nemčija, avgust 2019.

### Janez Pirnat:

- C1. Z. Trontelj, J. Lužnik, — , V. Jazbinšek, Z. Lavrič, S. Srčič, *Polymorphism in sulfanilamide: <sup>14</sup>N nuclear quadrupole resonance study*, J. Pharm. Sci. **108** (2019), 2865–2870.

### Zvonko Trontelj:

- C1. — , J. Lužnik, J. Pirnat, V. Jazbinšek, Z. Lavrič, S. Srčič, *Polymorphism in sulfanilamide: <sup>14</sup>N nuclear quadrupole resonance study*, J. Pharm. Sci. **108** (2019), 2865–2870.



## TUJI GOSTI

Oddelek za fiziko je v letu 2019 gostil naslednje tuje goste:

**Marko Bošković**, 6 dni, Institut za nuklearne nauke "Vinča", Srbija, december 2019, na povabilo Zvonka Jagličića,

**Patricia Radon**, 14 dni, Physikalisch-Technische Bundesanstalt, Berlin, Nemčija, september 2019, na povabilo Vojka Jazbinška,

**Tilmann Sander-Thoemmes**, 9 dni, Physikalisch-Technische Bundesanstalt, Berlin, Nemčija, septembar 2019, na povabilo Vojka Jazbinška,

**Vojislav Spasojević**, 6 dni, Institut za nuklearne nauke "Vinča", Srbija, december 2019, na povabilo Zvonka Jagličića,

**Frank Wiekhorst**, 3 dni, Physikalisch-Technische Bundesanstalt, Berlin, Nemčija, september 2019, na povabilo Vojka Jazbinška.

## GOSTOVANJA

Člani oddelka za fiziko so bili v letu 2019 na naslednjih gostovanjih:

**Zvonko Jagličić**, 5 dni, Institut za nuklearne nauke "Vinča", Srbija, junij 2019,

**Vojko Jazbinšek**, 14 dni, Physikalisch-Technische Bundesanstalt, Berlin, Nemčija, junij 2019,

**Urban Marhl**, 14 dni, Physikalisch-Technische Bundesanstalt, Berlin, Nemčija, junij 2019,

**Urban Marhl**, 14 dni, Physikalisch-Technische Bundesanstalt, Berlin, Nemčija, oktober 2019.

## SEMINARJI

Sodelavci Oddelka za fiziko sodelujejo na seminarjih, ki potekajo na Oddelku za fiziko FMF in na Oddelkih za fiziko in biofiziko Inštituta J. Stefan.



# ODDELEK ZA TEORETIČNO RAČUNALNIŠTVO

V letu 2019 smo člani oddelka delovali v okviru programske skupine:  
**Primož Potočnik**, *Računsko intenzivne metode v teoretičnem računalništvu, diskretni matematiki, kombinatorični optimizaciji ter numerični analizi in algebrī z uporabo v naravoslovju in družboslovju*, (P1–0294),

in nadaljevali z delom pri projektih:

**J1–1691**, *Primož Potočnik*, Weissova domneva in posplošitve,  
**J1–9187**, *Tomaž Pisanski*, Akcijski grafi in tehnike krovnih grafov,  
**J7–8279**, *Aleš Žiberna*, Bločno modeliranje večnivojskih in časovnih omrežij.

## MLADI RAZISKOVALCI

V okviru oddelka sta se v letu 2019 usposabljala mlada raziskovalca:

**Filip Koprivec**, mentor Matija Pretnar,  
**Toledo Roy Micael Alexi**, mentor Primož Potočnik.

## BIBLIOGRAFIJE RAZISKOVALCEV

**Nino Bašić:**

- C1. — , J. Grošelj, B. Grünbaum, T. Pisanski, *Splittable and unsplittable graphs and configurations*, *Ars Math. Contemp.* **16** (2019), 1–17.
- C2. *Infinite benzenoids*, *Art Discrete Appl. Math.* **2** (2019), #P1.09 [14 str.].
- D1. Tehnični urednik revije *The Art of Discrete and Applied Mathematics*.
- D2. Tehnični urednik revije *Ars Mathematica Contemporanea*.

- D3. Urednik zbornika *Maps  $\cap$  Configurations  $\cap$  Polytopes  $\cap$  Molecules  $\subseteq$  Graphs: The mathematics of Tomaž Pisanski on the occasion of his 70<sup>th</sup> birthday*, Ljubljana, maj 2019.
- E1. Član znanstvenega in organizacijskega odbora konference *Discrete Biomathematics Afternoon at the Adriatic Coast*, Koper, februar 2019.
- G1. *Convexity deficit of benzenoids*, Discrete Biomathematics Afternoon at the Adriatic Coast, Koper, februar 2019.
- G2. *Splittable and unsplittable graphs and configurations*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G3. *Introduction to Algorithms – Sorting*, 2<sup>nd</sup> UTOPIAE Global Virtual Workshop, IJS, Ljubljana, november 2019.

## Vladimir Batagelj:

- A1. — , A. Ferligoj, P. Doreian, *Bibliometric analyses of the network clustering literature*, poglavje v *Advances in Network Clustering and Blockmodeling*, str. 11–64, Wiley, Chichester, Velika Britanija, 2019.
- A2. *Clustering approaches to networks*, poglavje v *Advances in Network Clustering and Blockmodeling*, str. 65–104, Wiley, Chichester, Velika Britanija, 2019.
- A3. P. Doreian, A. Ferligoj, — , *Conclusions and directions for future work*, poglavje v *Advances in Network Clustering and Blockmodeling*, str. 389–398, Wiley, Chichester, Velika Britanija, 2019.
- B1. — , D. Maltseva, *Temporal bibliographic networks*, sprejeto v objavo v J. Informetr.
- B2. — , *On fractional approach to analysis of linked networks*, sprejeto v objavo v Scientometrics.
- B3. D. Maltseva, — , *Towards a systematic description of the field using keywords analysis: main topics in social networks*, sprejeto v objavo v Scientometrics.
- B4. S. Korenjak-Černe, N. Kejžar, — , *Clustering and generalized ANOVA for symbolic data constructed from open data*, sprejeto poglavje za objavo v knjigi *Advances in Data Science: Symbolic, Complex and Network Data, Volume 4*, ISTE/Wiley, London/Velika Britanija, Hoboken/ZDA.
- B5. *Corrected overlap weight and clustering coefficient*, sprejeto poglavje za objavo v knjigi *Challenges in Social Network Research (Lecture Notes in Social Networks)*, Springer, Cham, Švica.

- C1. D. Maltseva, — , *Social network analysis as a field of invasions: bibliographic approach to study SNA development*, *Scientometrics* **121** (2019), 1085–1128.
- D1. Član uredniškega sveta revije *The Art of Discrete and Applied Mathematics*.
- D2. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.
- D3. Član uredniškega odbora revije *Journal of Social Structure*.
- D4. Član uredniškega odbora revije *Social Network Analysis and Mining*.
- D5. Član uredniškega odbora revije *Informatica*.
- D6. Član uredniškega odbora revije *Metodološki zvezki / Advances in Methodology and Statistics*.
- D7. Član uredniškega odbora revije *Presek*.
- D8. Uredništvo monografije (eds. P. Doreian, — , A. Ferligoj) *Advances in Network Clustering and Blockmodeling*, Wiley, Chichester, Velika Britanija, 2019.
- E1. Član znanstvenega odbora konference *SDA workshop: Advance in data science for big and complex data*, University Paris-Dauphine, Pariz, Francija, januar 2019.
- E2. Član organizacijskega odbora konference *Srečanje raziskovalcev s področja analize omrežij*, Ljubljana, januar 2019.
- E3. Član organizacijskega odbora konference *10<sup>th</sup> International Summer School “Analysis of Scientific Networks”*, NRU HSE Study Center “VoronoVo”, Moskva, Rusija, julij 2019.
- E4. Član mednarodnega programskega odbora konference *AIST 2019 - 8<sup>th</sup> International Conference: Analysis of Images, Social networks and Texts*, Kazan, Rusija, julij 2019.
- E5. Član mednarodnega programskega odbora konference *15<sup>th</sup> International Conference on Applied Statistics*, Ribno, september 2019.
- E6. Član mednarodnega programskega odbora konference *7<sup>th</sup> International Workshop on Social Network Analysis - ARS'19*, Vietri sul Mare, Salerno, Italija, oktober 2019.
- F1. *Analysis of large networks*, vabljen predavanje, 9<sup>th</sup> International Conference on Network Analysis, Moskva, Rusija, maj 2019.
- F2. *The analysis of the WoS data on clustering networks*, vabljen predavanje, 9<sup>th</sup> International Conference on Network Analysis, Moskva, Rusija, maj 2019.
- F3. *Clustering in networks*, vabljen predavanje, 16<sup>th</sup> Conference of the International Federation of Classification Societies, Thessaloniki, Grčija,

avgust 2019.

- F4. *On fractional approach to analysis of linked networks*, vabljeno predavanje, 7<sup>th</sup> International Workshop on Social Network Analysis - ARS'19, Vietri sul Mare, Salerno, Italija, oktober 2019.
- F5. *Advances in network clustering and blockmodelling*, vabljeno predavanje, 7<sup>th</sup> International Workshop on Social Network Analysis - ARS'19, Vietri sul Mare, Salerno, Italija, oktober 2019.
- G1. *Temporal bibliographic analysis*, SDA workshop: Advances in data science for big and complex data, University Paris-Dauphine, Pariz, Francija, januar 2019.
- G2. *On fractional approach to analysis of linked networks*, COSTnet COST Action CA15109 Meeting: Future of Statistical Network Science, Università Della Svizzera Italiana, Lugano, Švica, april 2019.
- G3. *Analysis of bibliographic networks (workshop)*, XXXIX Sunbelt Social Networks Conference, Montreal, Kanada, junij 2019.
- G4. *Authors in the field of SNA: derived networks and temporal analysis*, XXXIX Sunbelt Social Networks Conference, Montreal, Kanada, junij 2019.
- G5. *Analysis of bibliographic networks*, 10<sup>th</sup> International Summer School "Analysis of Scientific Networks", NRU HSE Study Center "Voronovo", Moskva, Rusija, julij 2019.
- G6. *The analyses of the WoS data on network clustering*, 16<sup>th</sup> Conference of the International Federation of Classification Societies, Thessaloniki, Grčija, avgust 2019.
- G7. *Clustering approaches to networks: A bibliometric application of clustering with relational constraint*, 7<sup>th</sup> International Workshop on Social Network Analysis - ARS'19, Vietri sul Mare, Salerno, Italija, oktober 2019.
- G8. *Authors in the field of social network analysis: collaboration, citation and bibliographic coupling*, 7<sup>th</sup> International Workshop on Social Network Analysis - ARS'19, Vietri sul Mare, Salerno, Italija, oktober 2019.
- I1. Exploratory Data Analysis. Tečaj na Master's programme "Applied Statistics with Network Analysis", NRU Higher School of Economics, Moskva, Rusija, november 2019.
- I2. Vzdrževanje spletne strani CostNet wiki.

**Andrej Bauer:**

- C1. — , Andrew Swan, *Every metric space is separable in function realizability*, Log. Methods Comput. Sci. **15** (2019), no. 2, art. 14 [7 str.].
- E1. Soorganizator konference *Formalization of Mathematics in Type Theory (Dagstuhl Seminar 18341)*, Dagstuhl, Nemčija, avgust 2019.
- F1. *Spartan Martin-Löf Type Theory*, vabljeno predavanje, School and Workshop on Univalent Mathematics, Birmingham, Velika Britanija, april 2019.
- F2. *Andromeda*, vabljeno predavanje, School and Workshop on Univalent Mathematics, Birmingham, Velika Britanija, april 2019.
- F3. *Derivations as computations*, plenarno vabljeno predavanje, 24<sup>th</sup> ACM SIGPLAN International Conference on Functional Programming – ICFP 2019, Berlin, Nemčija, avgust 2019.

**Katja Berčič :**

- B1. — , J. Vidali, *DiscreteZOO: a Fingerprint Database of Discrete Objects*, sprejeto v objavo v Math. Comput. Sci.
- C1. *Supporting data-driven mathematics: database and interface generation*, 31<sup>st</sup> International Conference on “Formal Power Series and Algebraic Combinatorics”, Ljubljana, julij 2019, FPSAC 2019 - proceedings (Séminaire Lotharingien de Combinatoire, Issue 82B, art.100 [6 str.].
- E1. Soorganizatorica konference *Workshop on Data in Mathematics*, Cernay-la-Ville, Francija, avgust 2019.
- F1. *Towards a unified mathematical data infrastructure: database and interface generation*, vabljeno predavanje, 12<sup>th</sup> International Conference on Intelligent Computer Mathematics, Praga, Češka, julij 2019.
- F2. *Towards a census of relational data in mathematics*, vabljeno predavanje, Conference on “Lernen, Wissen, Daten, Analysen”, Berlin, Nemčija, september/oktober 2019.
- G1. *Supporting data-driven mathematics: database and interface generation*, 31<sup>st</sup> International Conference on “Formal Power Series and Algebraic Combinatorics”, Ljubljana, julij 2019.

**Marko Boben:**

- C1. Y.-H. Liao, X. Puig, — , A. Torralba, S. Fidler, *Synthesizing environment-aware activities via activity sketches*, 2019 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), Long Beach, ZDA, junij 2019, Proceedings, 6284–6292.
- D1. Odgovorni urednik revije *Ars Mathematica Contemporanea*.
- D2. Tehnični urednik revije *The Art of Discrete and Applied Mathematics*.

**Matevž Bren:**

- C1. L. Horvat, — , A. Sotlar, *Ljubljana residents' knowledge of and satisfaction with private security guards' work*, *Varstvoslovje* **21** (2019), 366–381.
- C2. — , M. Lavrič, *Veljavnost študentske ankete na Univerzi v Mariboru, obdobje 2013-16*, 38. mednarodna konferenca o razvoju organizacijskih znanosti, Portorož, marec 2019, *Ekosistem organizacij v dobi digitalizacije: konferenčni zbornik*, 139–149.
- C3. — , M. Lavrič, *The validity of SET at the University of Maribor for 2013-18 period*, 22<sup>nd</sup> QMOD-ICQSS Conference, Krakov, Poljska, oktober 2019, *Leadership and strategies for quality, sustainability and innovation in the 4<sup>th</sup> Industrial revolution : QMOD 2019: proceedings*, 12 str.
- G1. *Veljavnost študentske ankete na Univerzi v Mariboru, obdobje 2013-16*, 38. mednarodna konferenca o razvoju organizacijskih znanosti, Portorož, marec 2019.
- G2. *Inverse molecular docking as a powerful new approach in discerning promiscuous mode of action of natural compounds*, 31<sup>st</sup> International Course and Conference on the Interfaces among Mathematics, Chemistry and Computer Sciences (Math/Chem/Comp, MC<sup>2</sup>-31), Dubrovnik, Hrvaška, junij 2019.
- G3. *The validity of SET at the University of Maribor for 2013-18 period*, 22<sup>nd</sup> QMOD-ICQSS Conference, Krakov, Poljska, oktober 2019.
- I1. Mentorstvo pri 3 diplomskih in somentorstvo pri enem magistrskem delu (bolonjski študij).



**Jan Grošelj:**

- B1. — , M. Knez, *On stable representations of Bell elements*, sprejeto v objavo v *Comput. Math. Appl.*
- C1. N. Bašić, — , B. Grünbaum, T. Pisanski, *Splittable and unsplittable graphs and configurations*, *Ars Math. Contemp.* **16** (2019), 1–17.
- C2. *Interpolation with  $C^2$  quartic macro-elements based on 10-splits*, *J. Comput. Appl. Math.* **362** (2019), 143–160.
- G1. *Smooth cubic Powell-Sabin B-splines on three-directional triangulations*, 4<sup>th</sup> IM-Workshop on Applied Approximation, Signals and Images, Bernried, Nemčija, marec 2019.
- G2. *Quasi-interpolation with cubic Powell-Sabin splines*, 16<sup>th</sup> International Conference on Approximation Theory, Nashville, ZDA, maj 2019.
- G3. *On stable representations of reduced Argyris elements*, Conference on Geometry: Theory and Applications, Innsbruck, Avstrija, junij 2019.
  
- I1. Mentorstvo pri eni srednješolski raziskovalni nalogi.

**Boris Horvat:**

- D1. Tehnični urednik revije *The Art of Discrete and Applied Mathematics*.
- D2. Tehnični urednik revije *Ars Mathematica Contemporanea*.
- D3. Tehnični urednik digitalne enciklopedije naravne in kulturne dediščine na Slovenskem *DEDI*, <http://www.dedi.si>
- D4. Član uredniškega odbora spletne enciklopedije *Encyclopedia of graphs*, <http://atlas.gregas.eu>
  
- G1. *Kriptovalute in sodelovanje v kriptoekonomijah*, Posvet o odkrivanju in preprečevanju pranja denarja, Ljubljana, julij 2019.

**Matjaž Konvalinka:**

- C1. V. Iršič, — , *Strong geodetic problem on complete multipartite graphs*, *Ars Math. Contemp.* **17** (2019), 481–491.
- C2. — , V. Tewari, *Smirnov trees*, *Electron. J. Combin.* **26** (2019), art. P3.22 [23 str.].
  
- D1. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.
- D2. Član uredniškega odbora revije *Annals of Combinatorics* .

- D3. Področni urednik revije *Discrete Mathematics & Theoretical Computer Science*.
- E1. Predsednik organizacijskega odbora konference *31<sup>st</sup> International Conference on “Formal Power Series and Algebraic Combinatorics”*, Ljubljana, julij 2019.
- I1. Ena recenzija za MathSciNet.
- I2. Soavtor enega univerzitetnega učbenika.
- I3. Mentorstvo pri eni doktorski disertaciji (bolonjski študij) in somentorstvo pri eni srednješolski raziskovalni nalofi.

### Filip Koprivec:

- A1. *Eksplisitna izpeljava učinkov*, magistrsko delo, Univerza v Ljubljani, Fakulteta za matematiko in fiziko, Oddelek za matematiko, Ljubljana, 2019.
- C1. K. Kenda, —, D. Maldenić, *Optimal missing value estimation algorithm for groundwater levels*, 3<sup>rd</sup> EWaS International Conference on “Insights on the Water-Energy-Food Nexus”, Lefkada, Grčija, junij 2018, EWaS3 2018 – proceedings, 698-1–6981-6.
- C2. M. Čerin, —, K. Kenda, *Early land cover classification with Sentinel 2 satellite images and temperature data*, 22. Mednarodna multikonferenca Informacijska družba, Ljubljana, oktober 2019, Zbornik 22. Mednarodne multikonferenca Informacijska družba. Zvezek C: Odkrivanje znanja in podatkovna skladišča - SiKDD, 45–48.
- C3. —, J. Peternelj, K. Kenda, *Feature selection in land-cover classification using EO-learn*, 22. Mednarodna multikonferenca Informacijska družba, Ljubljana, oktober 2019, Zbornik 22. Mednarodne multikonferenca Informacijska družba. Zvezek C: Odkrivanje znanja in podatkovna skladišča - SiKDD, 37–40.

### Simona Korenjak-Černe:

- C1. A. Lotrič Dolinar, J. Sambt, —, *Clustering EU countries by causes of death*, Popul. Res. Policy Rev. **38** (2019), 157–172.
- C2. —, A. Lotrič Dolinar, *Novejši pristopi v analizi podatkov o smrtnosti*, Econ. Bus. Rev. **21** (2019), 71–78.

- E1. Soorganizatorica vabljene sekcije “Advances in classification analysis for complex data – compositional and symbolic approaches” in članica programskega odbora konference 16<sup>th</sup> *Conference of the International Federation of Classification Societies – IFCS 2019*, Solun, Grčija, avgust 2019.
- G1. *Symbolic data analysis of gender-age-cause-specific mortality in European countries*, 16<sup>th</sup> Conference of the International Federation of Classification Societies - IFCS 2019, Solun, Grčija, avgust 2019.
- G2. *Studying EU countries regarding mortality with SYR program*, 2<sup>nd</sup> International Statistical Conference - ICOS 2019, Sarajevo, Bosna in Hercegovina, november 2019.

### Jurij Kovič:

- C1. *Regular polygonal systems*, *Ars Math. Contemp.* **16** (2019), 157–171.
- D1. Tehnični urednik revije *The Art of Discrete and Applied Mathematics*.
- D2. Tehnični urednik revije *Ars Mathematica Contemporanea*.
- G1. *Platonic configurations*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- H1. *Leonardo da Vinci (1452-1519) - ob petstoletnici njegove smrti : renesančni človek*, *Obzornik Mat. Fiz.* **66** (2019), št. 3, 105-113.
- I1. 5 recenzij za MathSciNet, 2 recenziji za Obzornik za matematiko in fiziko.

### Matjaž Krnc:

- C1. —, T. Pisanski, *Characterization of generalised Petersen graphs that are Kronecker covers*, *Acta Math. Univ. Comenian. (N.S.)* **88** (2019), 891–895.
- C2. J. Beisegel, C. Denkert, E. Köhler, —, N. Pivač, R. Scheffler, M. Strehler, *On the end-vertex problem of graph searches*, *Discrete Math. Theor. Comput. Sci.* **21** (2019), art. 13 [20 str.].
- C3. J. Beisegel, C. Denkert, E. Köhler, —, N. Pivač, R. Scheffler, M. Strehler, *Recognizing graph search trees*, 10<sup>th</sup> Latin and American Algorithms, Graphs and Optimization Symposium (LAGOS 2019), Belo Horizonte, Brazilija, junij 2019, *Proceedings of Lagos 2019 (Electronic Notes in Theoretical Computer Science, Vol. 346)*, 99–110.

- D1. Urednik zbornika 6<sup>th</sup> *Student Computer Science Research Conference - StuCoSReC 2019*, Koper, avgust 2019.
- F1. *Positive aging admits fast asynchronous plurality consensus*, vabljeno predavanje, National Research University, Higher School of Economics, Faculty of Computer Science, Moskva, Rusija, avgust 2019.
- G1. *Recognizing graph search trees*, 10<sup>th</sup> Latin and American Algorithms, Graphs and Optimization Symposium (LAGOS 2019), Belo Horizonte, Brazilija, junij 2019.
- G2. *On the end-vertex problem of graph searches*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

### Alen Orbanić:

- D1. Tehnični urednik revije *The Art of Discrete and Applied Mathematics*.
- D2. Tehnični urednik revije *Ars Mathematica Contemporanea*.
- D3. Član uredniškega odbora spletne enciklopedije *Encyclopedia of graphs*, <http://atlas.gregas.eu>
- I1. Mentorstvo pri dveh magistrskih delih (bolonjski študij).

### Marko Petkovšek:

- C1. Y. Alizadeh, E. Estaji, S. Klavžar, — , *Metric properties of generalized Sierpiński graphs over stars*, Discrete Appl. Math. **266** (2019), 48-55.
- C2. K. Rudolf Piliš, — , J. Jakše, N. Štajner, J. Murovec, B. Bohanec, *Proposal of a new hybrid breeding method based on genotyping, inter-pollination, phenotyping and paternity testing of selected elite F<sub>1</sub> hybrids*, Front. Plant Sci. **10** (2019), art. 1111 [12 str.].
- C3. *Inverse Zeilberger's problem = Obratnažna žadača Cejlbergera*, 3<sup>rd</sup> International Conference "Computer Algebra", Moskva, Rusija, junij 2019, Komp'juternažna algebra: materialy Meždunarodnoj konferencii, 31–39.
- D1. Član uredniškega odbora revije *The Art of Discrete and Applied Mathematics*.
- D2. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.
- D3. Član uredniškega odbora revije *Annals of Combinatorics*.
- D4. Član uredniškega odbora revije *Journal of Symbolic Computation*.
- D5. Član uredniškega odbora revije *Advances in Applied Mathematics*.

- E1. Sopredsednik programskega odbora konference 31<sup>st</sup> *International Conference on "Formal Power Series and Algebraic Combinatorics"*, Ljubljana, julij 2019.
- F1. *In search of explicitly represented solutions*, vabljeno predavanje na "DESY-HU Theorie-Seminar", Deutsches Elektronen-Synchrotron DESY, A research centre of the Helmholtz Association, Zeuthen, Nemčija, november 2019.
- G1. *Inverse Zeilberger's problem = Obratnažna žadača Cejlbergera*, 3<sup>rd</sup> International Conference "Computer Algebra", Moskva, Rusija, junij 2019.
- I1. Mentorstvo pri enem magistrskem delu (bolonjski študij).

### Tomaz Pisanski:

- C1. M. Krnc, — , *Characterization of generalised Petersen graphs that are Kronecker covers*, Acta Math. Univ. Comenian. (N.S.) **88** (2019), 891–895.
- C2. N. Bašić, J. Grošelj, B. Grünbaum, — , *Splittable and unsplitable graphs and configurations*, Ars Math. Contemp. **16** (2019), 1–17.
- D1. Ustanovni in glavni urednik revije *Ars Mathematica Contemporanea*.
- D2. Glavni in odgovorni urednik revije *The Art of Discrete and Applied Mathematics*.
- D3. Član uredniškega sveta revije *Logika & razvedrilna matematika*.
- D3. Član uredniškega odbora spletne enciklopedije *Encyclopedia of graphs*, <http://atlas.gregas.eu>
- G1. *Chiral astral realizations of cyclic 3-configurations*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G2. *The remarkable rhombic dodecahedron graph*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- G3. *Engineering the folding pathway of a modular protein cage for multiple use of building modules*, 8<sup>th</sup> Minisymposium: Recent Advances in Cryo-electron Microscopy, Ljubljana, september 2019.

### Bor Plestenjak:

- C1. M. E. Hochstenbach, K. Meerbergen, E. Mengi, — , *Subspace methods for three-parameter eigenvalue problems*, Numer. Linear Algebra Appl. **26** (2019), art. e2240 [22 str.].

C2. M. E. Hochstenbach, C. Mehl, — , *Solving singular generalized eigenvalue problems by a rank-completing perturbation*, SIAM J. Matrix Anal. Appl. **40** (2019), 1022–1046.

II. Mentorstvo pri dveh delih diplomskega seminarja (bolonjski študij).

## Primož Potočnik:

C1. R. Jajcay, — , S. Wilson, *The Praeger-Xu graphs: cycle structures, maps and semitransitive orientations*, Acta Math. Univ. Comenian. (N.S.) **88** (2019), 269–291.

C2. — , J. Vidali, *Girth-regular graphs*, Ars Math. Contemp. **17** (2019), 349–368.

C3. R. G. Möller, — , N. Seifter, *Sharply  $k$ -arc-transitive-digraphs: finite and infinite examples*, Discrete Math. **342** (2019), 768–776.

C4. R. G. Möller, — , N. Seifter, *Infinite arc-transitive and highly-arc-transitive digraphs*, European J. Combin. **77** (2019), 78–89.

C5. D. Pellicier, — , M. Toledo, *An existence result on two-orbit maniplaxes*, J. Combin. Theory Ser. A **166** (2019), 226–253.

C6. L. Morgan, — , G. Verret, *Arc-transitive digraphs of given out-valency and with blocks of given size*, J. Combin. Theory Ser. B **137** (2019), 118–125.

C7. — , P. Spiga, *Lifting a prescribed group of automorphisms of graphs*, Proc. Amer. Math. Soc. **147** (2019), 3787–3796.

D1. Član uredniškega odbora revije *Ars Mathematica Contemporanea*.

D2. Urednik revije *The Art of Discrete and Applied Mathematics*.

D3. Član uredniškega odbora revije *Discrete Mathematics*.

D2. Član uredniškega odbora spletne enciklopedije *Encyclopedia of graphs*, <http://atlas.gregas.eu>

G1. *Generalised voltage graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

II. Mentorstvo pri enem delu diplomskega seminarja in somentorstvo pri enem magistrskem delu (bolonjski študij).

II. Soavtor enega univerzitetnega učbenika.

**Matija Pretnar:**

- C1. Y. Forster, O. Kammar, S. Lindley, — , *On the expressive power of user-defined effects: effect handlers, monadic reflection, delimited control*, J. Funct. Program. **29** (2019), art. e15 [43 str.].
- I1. Mentorstvo pri 2 magistrskih in enem delu diplomskega seminarja (bolonjski študij).

**Alexander Simpson:**

- C1. — , N. Voorneveld, *Behavioural equivalence via modalities for algebraic effects*, ACM Trans. Program. Lang. Syst. **42** (2019), art. 4 [45 str.].
- D1. Urednik zbornika *22<sup>nd</sup> International Conference on Foundations of Software Science and Computation Structures (FoSSaCS)*, Praga, Češka, april 2019.
- I1. Mentorstvo pri enem magistrskem delu (bolonjski študij).

**Micael Alexi Toledo Roy:**

- C1. D. Pellicier, P. Potočnik, — , *An existence result on two-orbit manifolds*, J. Combin. Theory Ser. A **166** (2019), 226–253.
- G1. *Generalised voltage graphs*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.

**Arjana Žitnik:**

- C1. P. Terwilliger, — , *The quantum adjacency algebra and subconstituent algebra of a graph*, J. Combin. Theory Ser. A **166** (2019), 297–314.
- D1. Članica uredniškega odbora revije *The Art of Discrete and Applied Mathematics*.
- D2. Članica uredniškega odbora revije *Ars Mathematica Contemporanea*.
- E1. Članica znanstvenega in organizacijskega odbora konference *Maps  $\cap$  Configurations  $\cap$  Polytopes  $\cap$  Molecules  $\subseteq$  Graphs: The mathematics of Tomaž Pisanski on the occasion of his 70<sup>th</sup> birthday*, Ljubljana, maj 2019.

- G1. *Chiral astral realizations of cyclic 3-configurations*, 9<sup>th</sup> Slovenian International Conference on Graph Theory, Bled, junij 2019.
- II. Mentorstvo pri dveh diplomskih delih in somentorstvo pri enem magistrskem delu (bolonjski študij).

## TUJI GOSTI

Oddelek za teoretično računalništvo je v letu 2019 gostil:

**Ohad Kammar**, 1 teden, University of Edinburgh, Edinburgh, Velika Britanija, februar 2019, na povabilo Andreja Bauerja,

**Simona Kašterović**, 2 tedna, Univerza v Novem Sadu, Novi Sad, Srbija, marec 2019, na povabilo Andreja Bauerja,

**Paul Potgieter**, 2 tedna, University of South Africa, Pretoria, Južnoafriška republika, oktober 2019, na povabilo Andreja Bauerja,

**Paul Terwilliger**, 14 dni, University of Wisconsin, Madison, ZDA, junij/julij 2019, na povabilo Arjane Žitnik,

**Tom Verhoeff**, 4 dni, Eindhoven University of Technology, Nizozemska, julij 2019, na povabilo Arjane Žitnik.

## GOSTOVANJA

Člani oddelka za teoretično računalništvo so bili v letu 2019 na naslednjih raziskovalnih obiskih oziroma študijskih izpopolnjevanjih v tujini:

**Simona Korenjak Černe**, 3 mesece, Ekonomska fakulteta v Sarajevu (EFSA), Katedra za kvantitativno ekonomijo, Sarajevo, Bosna in Hercegovina, februar/maj 2019,

**Marko Petkovšek**, 4 tedne, Deutsches Elektronen-Synchrotron DESY, A research centre of the Helmholtz Association, Zeuthen, Nemčija, november/december 2019,

**Bor Plestenjak**, 5 dni, École Polytechnique Fédérale de Lausanne, Švica, september 2019.



## SEMINARJI

### Seminar za diskretno matematiko

V okviru seminarja za diskretno matematiko – vodja seminarja je Primož Potočnik, tajnica seminarja pa Arjana Žitnik – predstavljamo raziskovalne dosežke na področju diskretne matematike in teoretičnega računalništva.

Seminar se sestaja ob torkih od 10. do 12. ure. V letu 2019 se je zvrstilo 24 predavanj, na katerih je bilo v povprečju po 10 poslušalcev. Obvestila o seminarju so na <https://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-diskretna-matematika/>.

**Pablo Spiga**, *On the asymptotic enumeration of finite Cayley digraphs and graphs*, 15. 1.,

**Katja Berčič**, *Mathematical Data in Three Acts*, 5. 3.,

**Csilla Bujtas**, *Total domination game on graphs and transversal game on hypergraphs*, 12. 3.,

**Ismael Gonzalez Yero**, *Uniquely identifying the vertices of a graph: the partition case*, 19. 3.,

**Sergio Cabello**, *Finding largest disjoint cliques in interval graphs*, 26. 3.,

**Tomaž Pisanski**, *On the Hamilton decomposition of joins of graphs*, 2. 4.,

**Luke Morgan**, *Bounds for semiprimitive groups*, 9. 4.,

**Izidor Hafner**, *Nadomestitev rombov z dvema trikotnikoma*, 23. 4.,

**Tomaž Pisanski**, *The remarkable rhombic dodecahedron graph*, 7. 5.,

**Bojan Mohar**, *The last temptation of Tutte*, 14. 5.,

**Kolja Knauer**, *Generating  $k$ -connected orientations*, 21. 5.,

**Barbara Ikica**, *Feedback effects in the experimental double auction with private information*, 21. 5.,

**Matjaž Konvalinka**, *Garsia-Milnovo involucijsko načelo in bijektifikacija dokaza o številu matrik z alternirajočim predznakom*, 28. 5.,

**Robin Wilson**, *YEA, WHY TRY HER RAW WET HAT? (Combinatorics and Music)*, 6. 6.,

**Tatiana Jajcayová**, *Inverse monoids of partial automorphisms of combinatorial structures*, 1. 10.,

**Micael Toledo**, *Generalised voltage graphs*, 8. 10.,

**Monika Pilśniak**, *On asymmetric proper colourings*, 15. 10.,

**Vesna Iršič**, *Connected domination game*, 22. 10.,

**Paul Potgieter**, *The Fox-Lovász-Zhao algorithm for weak graph regularity*, 29. 10.,

**Andrés David Santamaría-Galvis**, *Shellings from relative shellings, with application to NP-completeness*, 5. 11.,

**Luke Morgan**, *Shuffling cards with groups*, 12. 11.,

**Matjaž Konvalinka**, *Prvi bijektivni dokaz izreka o številu matrik z alternirajočim predznakom*, 19. 11.,

**Janoš Vidali**, *The Terwilliger polynomial of classical distance-regular graphs with  $b = 2$* , 26. 11.,

**Tomaž Pisanski**, *Dürer's antilattice and other magic antilattices*, 17. 12.

## Seminar za temelje matematike in teoretično računalništvo

Seminar je vodil Andrej Bauer. V povprečju ga je obiskovalo 10 članov. Obvestila o seminarju so na <https://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-temelji/>.

**Anja Petković**, *Conference report – POPL 2019*, 31. 1.,

**Ohad Kammar**, *A domain theory for statistical probabilistic programming*, 14. 2.,

**Niels Voorneveld**, *PIHOC workshop report*, 7. 3.,

**Andrej Bauer**, *Ali bi lahko realna števila bila števna?*, 14. 3.,

**Danel Ahman**, *Comodels as a gateway for interacting with the external world*, 21. 3.,

**Simona Kašterović**, *Probabilistic reasoning about typed lambda terms*, 28. 3.,

**Danel Ahman**, *Shonan Meeting trip report*, 11. 4.,

**Niels Voorneveld**, *Quantitative Logics for Equivalence of Effectful Programs*, 18. 4.,

**Žiga Sajovic**, *Operational Calculus for Differentiable Programming*, 25. 4.,

**Andrej Bauer**, *Coop*, 16. 5.,

**Miha Habič**, *The generic multiverse, amalgamability, and blockchains*, 23. 5.,

**Florian Rabe**, *Defining Formal Systems in MMT*, 13. 6.,

**Egbert Rijke**, *Group theory in univalent mathematics*, 27. 6.,

**Egbert Rijke**, *Localizations in Homotopy Type Theory*, 19. 9.,

**Egbert Rijke**, *Localizations in Homotopy Type Theory*, 2. del, 26. 9.,

**Egbert Rijke**, *Localizations in Homotopy Type Theory*, 3. del, 3. 10.,

**Egbert Rijke**, *Localizations in Homotopy Type Theory*, 4. del, 10. 10.,

**Davorin Lešnik**, *Haar measure in synthetic topology*, 17. 10.,

- Davorin Lešnik**, *Haar measure in synthetic topology (Part 2)*, 2. del, 24. 10.,
- Paul Potgieter**, *The Fox-Lovász-Zhao algorithm for weak graph regularity*, 29. 10.,
- Danel Ahman**, *Runners in action*, 7. 11.,
- Alex Simpson**, *Programming with streams of interdependent random variables: Language definition*, 14. 11.,
- Alex Simpson**, *Programming with streams of interdependent random variables: Operational semantics*, 21. 11.,
- Alex Simpson**, *Programming with streams of interdependent random variables: Denotational semantics*, 28. 11.,
- Matjaž Leonardis**, *Can probability really help us go beyond deductive logic?*, 5. 12.

## Sredin seminar

Seminar za računalniško matematiko je začel svoje delo leta 1971 in poskuša s svojimi temami spremljati dogajanje na področju diskretne matematike ter računalništva doma in po svetu. Vodja seminarja je Vladimir Batagelj.

Seminar ima svojo spletno stran na naslovu <http://vladowiki.fmf.uni-lj.si/doku.php?id=vlado:pub:sreda>. Obvestila o seminarju so na <https://www.fmf.uni-lj.si/si/obvestila/agregator/seminar-sreda/>.

Seminar se sestaja ob sredah ob 18. uri.

V letu 2019 so se zvrstila naslednja predavanja (1284–1291):

- Paco Arévalo**, *Urban poverty measurement in Ecuador: a fuzzy multidimensional approach*, 6. 3.,
- Felipe Vaca**, *An introduction to graph embeddings and urban networks*, 13. 3.,
- Marjan Cugmas**, *Global network structure and local network mechanisms of knowledge-flow networks*, 20. 3.,
- Dmitry Zaytsev**, *Political and policy networks: state-of-the-art and breakthrough research agenda*, 17. 4.,
- Jasna Horvat**, *Prisila i ograničenja u istraživačkoj radionici Ars Horvatiana*, 3. 7.,
- Karolina Czopek**, *Does high centrality in peer networks translate into language progress? Second language acquisition from the social network perspective*, 4.12.,

**Maria Prosperina Vitale**, *The analysis of student mobility flows in higher education. Insights from empirical data*, 11.12.,

**Daria Maltseva, Vladimir Batagelj**, *iMetrics: The Development of the Discipline with Many Names*, 18.12.

## Seminar za zgodovino matematičnih znanosti

Seminar za zgodovino matematičnih znanosti, ki ga vodi Jurij Kovič, je v koledarskem letu 2019 potekal najprej ob ponedeljkih od oktobra pa ob četrtdkih od 14.15 do 16.00 na Fakulteti za matematiko in fiziko v Plemljevem seminarju na Jadranski 19 v Ljubljani. Seminar je imel 25 sestankov, povprečno število poslušalcev je bilo 8.

Več o delu seminarja in posameznih predavanjih lahko izveste na spletni strani seminarja: [http://wiki.fmf.uni-lj.si/wiki/Seminar\\_za\\_zgodovino\\_matematičnih\\_znanosti](http://wiki.fmf.uni-lj.si/wiki/Seminar_za_zgodovino_matematičnih_znanosti).

Teme posameznih predavanj so bile:

**Nada Razpet**, *Galileo Galilei in njegova doba*, 7. 1. (2 uri),

**Aleksander Simonič**, *Ramanujan in praštevilski izrek*, 14. 1. (2 uri),

**Jurij Kovič**, *Leonardo da Vinci – življenje in delo*, 1. del, 25. 2. (2 uri),

**Jurij Kovič**, *Leonardo da Vinci – življenje in delo*, 2. del, 4. 3. (2 uri),

**Milan Hladnik**, *Slovenski doktorski študenti matematike na dunajski univerzi*, 11. 3 (2 uri),

**Nada Razpet**, *Da Vincijevo delovanje v “fiziki”*, 18. 3. (2 uri),

**Milan Hladnik**, *Manj znani slovenski doktorandi matematike na dunajski univerzi*, 25. 3. (2 uri),

**Marko Razpet**, *Bernoullijeva lemniskata*, 1. 4. (2 uri),

**Izidor Hafner**, *Kdo je odkril dvanajsterec Bilinskega in kaj je Cowleyjev dodecarhombus*, 8. 4. (2 uri),

**Milan Hladnik**, *Prvi članek dr. Franca Hočevarja*, 15. 4. (2 uri),

**Marko Razpet**, *Knjiga kvadratov Leonarda Pisanskega*, 6. 5. (2 uri),

**Nada Razpet**, *Matematika in narava*, 13. 5. (2 uri),

**Milan Hladnik**, *Profesor Plemelj, dokumenti in fotografije*, 1. del, 20. 5. (2 uri),

**Milan Hladnik**, *Profesor Plemelj, dokumenti in fotografije*, 2. del, 27. 5. (2 uri),

**Ogled razstave**, *Ideja – znanost in tehnologija antične Grčije*, 30. 9.,

**Uvodno srečanje**, *Diskusija o osnutku plakata za 8. Evropski matematični kongres leta 2020 v Portorožu*, 7. 10. (1 ura),

- Milan Hladnik**, *Plemljeva gimnazijska enačba*, 17. 10. (2 uri),  
**Nada Razpet**, *Sakralna geometrija*, 24. 10. (2 uri),  
**Marko Razpet**, *Ivo Lah in njegova števila*, 7. 11. (2 uri),  
**Mitja Rosina**, *Geometrija, zgodovina in doživetja Sončevih mrkov*, 14. 11. (2 uri),  
**Milan Hladnik**, *Profesor Plemelj in Fermatov problem*, 21. 11. (2 uri),  
**Izidor Hafner**, *A History of Folding in Mathematics (predstavitev knjige)*, 28. 11. (2 uri),  
**Milan Hladnik**, *Fermatov problem za sedmo potenco*, 5. 12. (2 uri),  
**Marko Razpet**, *Figurativna števila skozi zgodovino*, 12. 12. (2 uri),  
**Nada Razpet**, *Miselne igre za enega ali več igralcev*, 19. 12. (2 uri).



# MATEMATIČNI KOLOKVIJI

**Matematični kolokviji** in na Fakulteti za matematiko in fiziko Univerze v Ljubljani so praviloma ob četrtek ob 18:15 v predavalnici 2.02 na Jadranski 21 v Ljubljani.

Napovedi kolokvijev in arhiv s povzetki so na voljo na spletnem naslovu:  
<http://wiki.fmf.uni-lj.si/wiki/MatematicniKolokviji>

V letu 2019 so se zvrstila naslednja predavanja:

10. januar 2019

**Helena Šmigoc**

University College Dublin, Irska

OD POZITIVNIH MATRIK DO POZITIVNIH KOEFICIENTOV

21. februar 2019

**Ilse Fischer**

Universität Wien, Dunaj, Avstrija

WHERE ARE THE BIJECTIONS? PLANE PARTITIONS AND ALTERNATING SIGN MATRICES

13. marec 2019

**Kaie Kubjas**

Sorbonne Université, Francija in Aalto University, Finska

SEMIALGEBRAIC GEOMETRY OF NONNEGATIVE RANK

25. marec 2019

**Monika Dörfler**

Universität Wien, Dunaj, Avstrija

A MATHEMATICAL DESCRIPTION OF MUSICAL SIGNALS

9. maj 2019

**Rinaldo M. Colombo**

University of Brescia, Italija

HYPERBOLIC CONSERVATION LAWS

16. maj 2019

**Barry Cipra**

Ameriški matematik in samostojni pisatelj, ZDA

IN PRAISE OF NOT PAYING ATTENTION

30. maj 2019

**Ron Gebhardtsbauer**

Pennsylvania State University, ZDA

ACTUARIAL SCIENCE AND PLACES WHERE MATHEMATICS/STATISTICS CAN HELP

4. junij 2019

**Robin Wilson**

London School of Economics, Velika Britanija

A CENTURY OF GRAPH THEORY

28. avgust 2019

**Rida T. Farouki**

Department of Mechanical and Aerospace Engineering, University of California – Davis, ZDA

PYTHAGOREAN-HODOGRAPH CURVES IN REAL-TIME MOTION CONTROL APPLICATIONS

7. oktober 2019

(Tri predavanja)

**Volker Mehrmann**

Technische Universität Berlin, Nemčija

ENERGY BASED NETWORK MODELLING, SIMULATION, AND OPTIMIZATION OF MULTI-PHYSICS SYSTEMS

**María J. Esteban**

Université Paris-Dauphine, Francija

MIN-MAX CHARACTERIZATION AND COMPUTATIONS OF EIGENVALUES IF DIRAC OPERATORS IN RELATIVISTIC QUANTUM MECHANICS

**Martin R. Bridson, FRS**

University of Oxford, Velika Britanija

SYMMETRIES, CURVED UNIVERSES AND UNSOLVABLE PROBLEMS



# MATEMATIČNA KNJIŽNICA

## Z BIBLIOGRAFSKIM ODDELKOM

V letu 2019 je v knjižnico tekoče prihajalo 107 naslovov tiskanih in elektronskih matematičnih revij, od tega smo v zameno prejeli zvezke iz 22 naslovov in kot dar 7 naslovov. Na ta način smo pridobili 278 enot.

Pri knjigah smo pridobili 187 novih naslovov (od tega 2 doktorata, 43 magistrirjev in 51 zaključnih del študentov 1. stopnje Bolonjskega študija). Skupaj smo pridobili 200 knjižnih enot (57 iz nakupa, 46 kot dar, ostalo so obvezni izvodi).

Zaposlenim in študentom na Univerzi v Ljubljani smo omogočali elektronski dostop do revij, ki jih naša knjižnica naroča. V okviru konzorcijev, v katerih sodelujejo fakultete Univerze v Ljubljani z drugimi slovenskimi univerzami, pa je bil omogočen še elektronski dostop do dodatnih revij v bazah *SpringerLink*, *ScienceDirect*, *Wiley Interscience* in *Taylor & Francis*. Poleg tega je bil mogoč tudi dostop do starih člankov, predvsem ameriških znanstvenih revij, v arhivu *JSTOR*.

V sistem COBISS smo vnesli 303 zapise monografij in zbornikov, 968 bibliografskih zapisov člankov in recenzij, ter 168 zapisov izvedenih del. Poleg tega smo v tem letu iz Knjižnice za mehaniko v našo knjižnico prenesli 2300 enot gradiva. Vso literaturo, ki jo hranimo v knjižnici lahko najdete preko sistema COBISS+.

V letu 2019 je imela naša knjižnica približno 1.000 aktivnih članov. Obiskov v knjižnici je bilo 6.145, preko sistema COBISS+ oz. mCOBISS pa še 16.667. Za potrebe izposoje smo opravili 14.306 transakcij. Med obiskovalci knjižnice je še vedno največ študentov, predvsem tistih, ki študirajo na naši fakulteti. Preko medknjižnične izposoje smo v tem letu posredovali 25 enot.

Tudi v letu 2019 so konzorcij za nakup matematične baze podatkov *MathSciNet* (<http://www.ams.org/mathscinet/>) sestavljale tri slovenske univerze. Poleg te baze podatkov lahko za pregledovanje matematične literature člani uporabljajo tudi bazo podatkov *Zentralblatt MATH* (<http://www.zentralblatt-math.org/zmath/en/>). Podatke o citiranosti (*Web of Science*) najdejo na naslovu <http://webofknowledge.com/WOS>. Faktorje vpliva za posamezne revije lahko najdejo v COBISS+ (katalog ali drugi informacijski viri). Kot že nekaj let, smo tudi v letu 2019 v knjižnici

pripravili tudi po abecedi oz. velikosti faktorja vpliva urejeno verzijo seznama revij s faktorjem vpliva 2018 za 17 kategorij.

Knjižnico financirata Oddelek za matematiko Fakultete za matematiko in fiziko Univerze v Ljubljani ter Inštitut za matematiko, fiziko in mehaniko. Poleg tega pa del sredstev za nakup tujih znanstvenih revij prispeva tudi ARRS.

Knjižnica je odprta za študente od ponedeljka do petka od 7. do 15. ure, za vse člane IMF in FMF pa 24 ur na dan, vse dni.

Maja Klavžar

# ARS MATHEMATICA CONTEMPORANEA

Mednarodna matematična revija *Ars Mathematica Contemporanea* (AMC) je v letu 2019 objavila svoj 16. in 17. letnik v štirih številkah.

Skupaj je bilo v obeh letnikih objavljenih 77 člankov. Od tega je bilo 12 člankov slovenskih avtorjev oziroma soavtorjev.

Razširjeni uredniški odbor AMC sestavlja prek 70, večinoma tujih matematikov. Revija zaenkrat še izhaja v papirnati obliki (ISSN 1855-3966). Vsi objavljeni članki so prosto dostopni tudi v elektronski obliki na svetovnem spletu: <https://amc-journal.eu/index.php/amc> (ISSN 1855-3966).

Revijo indeksirajo naslednje baze podatkov: *Mathematical Reviews*, *zb-MATH*, *COBISS*, *SCOPUS*, *Science Citation Index-Expanded*, *Web of Science*, *ISI Alerting Service*, *Current Contents/Physical, Chemical & Earth Sciences (CC/PC & ES)*, *dblp computer science bibliography (indexed cover-to-cover)*.

## Vol. 16, No. 1 (2019)

**Nino Bašić, Jan Grošelj, Branko Grünbaum, Tomaž Pisanski**, *Splittable and unsplittable graphs and configurations*, str. 1–17,

**Xia Guo, Yan Yang**, *A note on the 4-girth-thickness of  $K_{n,n,n}$* , str. 19–24,

**Alan F. Beardon, Juan Alberto Rodríguez-Velázquez**, *On the  $k$ -metric dimension of metric spaces*, str. 25–38,

**János Barát, Zoltán Lóránt Nagy**, *Transversals in generalized Latin squares*, str. 39–47,

**Stephen P. Glasby, Cheryl E. Praeger**, *On the parameters of intertwining codes*, str. 49–58,

**Gabriela Araujo-Pardo, György Kiss, Christian Rubio-Montiel, Adrián Vázquez-Ávila**, *On chromatic indices of finite affine spaces*, str. 67–79,

**Bo Ling, Ben Gong Lou, Ci Xuan Wu**, *Pentavalent symmetric graphs of order four times an odd square-free integer*, str. 81–95,

**Lajos Gyórfy, Géza Makay, András Pluhár**, *The pairing strategies of the 9-in-a-row game*, str. 97–109,

**Marcin Anholcer, Bartłomiej Bosek, Jarosław Grytczuk**, *Weight choosability of oriented hypergraphs*, str. 111–117,

- Giovanni Lo Faro, Antoinette Tripodi**, *The Doyen-Wilson theorem for 3-sun systems*, str. 119–139,
- Irene Sciriha, Didar A. Ali, John Baptist Gauci, Khidir R. Sharaf**, *The conductivity of superimposed key-graphs with a common one-dimensional adjacency nullspace*, str. 141–155,
- Jurij Kovič**, *Regular polygonal systems*, str. 157–171,
- Julian D. Allagan, Vitaly Voloshin**,  *$\mathcal{F}$ -WORM colorings of some 2-trees: partition vectors*, str. 173–182,
- Csilla Bujtás, Marko Jakovac**, *Relating the total domination number and the annihilation number of cactus graphs and block graphs*, str. 183–202,
- Milad Ahanjideh, Ali Iranmanesh**, *The validity of Tutte's 3-flow conjecture for some Cayley graphs*, str. 203–213,
- Andrea Lucchini, Mariapia Moscatiello**, *Comparing the expected number of random elements from the symmetric and the alternating groups needed to generate a transitive subgroup*, str. 237–244,
- Elif Saygı**, *On the domination number and the total domination number of Fibonacci cubes*, str. 244–255,
- Sumire Sawada, Simona Settepanella, So Yamagata**, *Pappus's Theorem in Grassmannian  $Gr(3, \mathbb{C}^n)$* , str. 257–276.

## Vol. 16, No. 2 (2019)

- Jan Goedgebeur, Edita Máčajová, Martin Škoviera**, *Smallest snarks with oddness 4 and cyclic connectivity 4 have order 44*, str. 277–298,
- Takayuki Hibi, Nan Li, Teresa Xueshan Li, Li Li Mu, Akiyoshi Tsuchiya**, *Order-chain polytopes*, str. 299–317,
- Laiachi El Kaoutit, Paolo Saracco**, *Comparing topologies on linearly recursive sequences*, str. 319–329,
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**ISSN 1318–539X**