

**ИЗБОРНОМ ВЕЋУ
ГРАЂЕВИНСКОГ ФАКУЛТЕТА
УНИВЕРЗИТЕТА У БЕОГРАДУ**

20.05.2021.

ВАНРЕДНОГ ПРОФЕСОРА

ГЕОИНФОРМАТИКА,

(Š ö) 09.06.2021.

РЕФЕРАТ

1. БИОГРАФСКИ ПОДАЦИ

11.08.1969
(П š ö,)
1994. a ,
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: Š
ö.
, 2011.
: ŠSelf-organization for Load Balancing and information Retrieval based on Shared Coordination Spacesö.

2. РАД У НАСТАВИ

1995.

2006.

1999.

1995-1996 2001-2005

2006.

(Institute of

Computer Languages, Faculty of Informatics, TU Wien), 2011.
(Principal Scientist and
University Lecturer) Space Based Computing ó Compilers and Languages.

Lauder Business School (LBS)
2020.

É Swarm-Based Metaheuristics - Master, TU Wien, 2017/2018
É Theory and Application of Algorithms - Master, TU Wien, 2017/2018
É Introduction to Information Systems ó Bachelor, LBS, 2017/2018
É Business Information Systems - Bachelor, LBS, 2017/2018, 2018/2019
É Management Information Systems ó Master, LBS, 2013/2014
É IT Advanced 1 & 2 - Bachelor, LBS, 2011/2012 ó 2015/2016
É IT Specialized 1 & 2 - Bachelor, LBS, 2011/2012 ó 2015/2016
É Mathematics for Finance/Marketing - Bachelor, LBS, 2014/2015, 2016/2017
É Mathematics for Economics and Business 1 - Bachelor, LBS, 2017/2018,
2018/2019
É Mathematics for Economics and Business 2 - Bachelor, LBS, 2017/2018,
2018/2019
É Econometrics ó Master, LBS, 2013/2014

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3. НАУЧНО-ИСТРАЖИВАЧКИ И СТРУЧНИ РАД

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"Sensor System Bahn" funded by FFG Mobilität der Zukunft, 2016-

"Radar Based Infrastr. Monitoring System" funded by FFG Mobilität der Zukunft,
2013-2015

"Coordination Middleware for Wireless Networks of Low Power Nodes" funded by
FFG Bridge 2012-2014

"A Secure Space for Collaborative Security Services" funded by FFG FIT-IT, 2010-2012

öSWISö funded by FFG, 2006-2007

- Editorial

Board member (Associate Editor): IEEE Open Journal of Intelligent Transportation Systems и IEEE Transactions on Emerging Topics in Computational Intelligence.

Радови у међународним часописима

- [1] M^{um} -avi V. A Survey of Swarm-Inspired Metaheuristics in P2P Systems: Some Theoretical Considerations and Hybrid Forms, *International Journal of Swarm Intelligence*, 5(2): 244-282, 2020.
- [2] M^{um} -avi V., Kühn E., Fleischhacker L. Efficient Search and Lookup in Unstructured P2P Overlay Networks inspired by Swarm Intelligence, *IEEE Transactions on Emerging Topics in Computational Intelligence*, 4(3):351-368, 2020.
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- [5] Radenovic S., Kastriot Z., Dedovic N., M^{um} -avi V., Ansari A.H. Bhaskar-Guo-Lakshmikantam-Ciric type results via new functions with applications to integral equations, *Applied Mathematics and Computation*, (Impact Factor 2.3), 357:75-87, 2019.
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- [14] ~~Ћ~~-um V., Kratica J., Tosi D. Solving the Geophysical Inversion Problem Using Genetic Algorithms, YU Journal of Operational Research, 10(2): 283-292, 2000.

Књиге и поглавља у књигама

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- [5] ~~Ћ~~-um - avi V., Kühn E. Self-Organized Load Balancing through Swarm Intelligence, Next Generation Data Technologies for Collective Computational Intelligence, Studies in Computational Intelligence, Springer Verlag, book chapter, 352:195-224, 2011.
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Саопштења на међународним и домаћим скуповима

- [1] Craß S., Kühn E., ~~Ћ~~-um- avi V., Watzke H. An Open Event-Driven Architecture for Reactive Programming and Lifecycle Management in Space-Based Middleware, Euromicro Conference on Software Engineering and Advanced Applications SEAA, Vienna, Austria, 2017. [M33]

- [2] Kühn E., $\text{\textcircled{V}}$ V., Schmid T. Dynamic Migration of Cloud Services, 3rd Symposium on Network Cloud Computing and Applications, IEEE NCCA, Rome, Italy, 2014. [M33]
- [3] Craß S., Hirsch J., Kühn E., $\text{\textcircled{V}}$ V. Modeling a Flexible Replication Framework for Space-Based Computing, Communications in Computer and Information Science (CCIS) Conference, Software Technologies, 457: 256-272, Springer Verlag, 2014. [M33]
- [4] Mitrović M., Petrović N., Vorotovič G., $\text{\textcircled{V}}$ V., Stamenković D. A numerical-analytical method for determination of the impedance of rotating structures by using the software module, 39th Conference of Maintenance of Machines and Equipments (OMOØ14), Faculty of Mechanical Engineering, Belgrade, Serbia, 2014. [M33]
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- [7] $\text{\textcircled{V}}$ V., Tuba M., Rankov S. The Influence of Self-Organization on Reducing Complexity in Dynamic Complex Environments, 12th WSEAS International Conference on Artificial Intelligence, Knowledge Engineering and Data Bases (AIKED '13), Cambridge, UK, 2013. [M33]
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Предавања по позиву

- Trajavi V. Swarm Intelligence in Distributed Systems Use-cases, Keynote Lecture, 11th International Joint Conference on Computational Intelligence IJCCI, 2019.
- Trajavi V. Self-Organizing Principles in Coping with Complexity of Distributed Software Systems, invited talk, Institute of Science and Technology Austria (IST), 2013.
- Trajavi V. Bio-Inspired Intelligence in Coping with Complexity of Distributed Software Systems, Webinar, IEEE CIS, 2019.

Технички извештаји

- Kühn E., Trumavi V. Self-Organizing Coordinating Management Infrastructures for the Supervision of SLAs in Legacy Service Software, Technical Report TU-Vienna, E185/1, SBC-Group, 2007.
- Trumavi V., Kühn E., Lazovi G. On Some Theoretical Considerations for Peer-to-Peer Overlay Network based on Bee Intelligence, Technical Report TU-Vienna, E185/1, SBC-Group, 2011.
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- Trumavi V., Kühn E. Towards a General Methodology for Design, Implementation, Evaluation and Recommendation Process for Bio-Inspired Algorithms, Technical Report TU-Vienna, E185/1, SBC-Group, 2014.

КРАТАК ПРИКАЗ ИЗАБРАНИХ РАДОВА

[1]

(P2P),
(cloud computing).

[2]

š õ
(Dendroctonus micans bark beetles).
P2P

(Physarum Polycephalum, Dictyostelium discoideum, AntNet, k-walker, Gnutella), Actor Peer.

[4]

ad-hoc ().

(workflows). (micro-room concept) (usability studies). micro-room concept

[5], C- (coupled coincidence point) (weakly contractive condition) bó

[6] (multi-stage assembly system)

(one-stage)

[12]

P2P P2P streaming)

(self-organizing)

(slime mold)

(AntNet Gnutella)

[5] (load balancing problem)

SILBA (self-initiative load balancing agents) plug-in

SILBA

4. ИСПУЊЕНОСТ УСЛОВА ЗА ИЗБОР У ЗВАЊЕ

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Општи услов:

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Обавезни услови:

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Изборни услови:

1. Стручно-професионални допринос

- *Председник или члан уређивачког одбора научних часописа или зборника радова у земљи или иностранству*

()

IEEE Open Journal of Intelligent Transportation Systems IEEE Transactions on Emerging Topics in Computational Intelligence

- *Рецензент у водећим међународним научним часописима, или рецензент међународних или националних научних пројеката*

IEEE Transactions on Evolutionary Computation (Impact Factor 8.5) Applied Soft Computing (Impact Factor 5.472)

– *Председник или члан организационог или научног одбора на научним скуповима националног или међународног нивоа*

:

- **Chair of the Keynote Presentation** at the 11th International Joint Conference on Computational Intelligence IJCCI 2019
- **Program Committee Member:**
- SEFM 2017 - International Conference on Software Engineering and Formal Methods
- ICSEA 2018, ICSEA 2019, ICSEA 2020 - International Conference on Software Engineering Advances
- Organization and **Co-Chair** of BI-OO-NET 2017 - International Workshop on Bio-Inspired Network Optimization
- Organization of SEFM 2016 - International Conference on Software Engineering and Formal Methods & **Publicity Chair & Program Committee Member & Chair of the session** Verification
- Organization of European Meeting on Cybernetics and Systems Research EMSCR Conference & **Chair of the session** Biologically and Socially Inspired Self- Systems, Symposium L. Self- Systems Biological Foundations and Technological Applications, 21st European Meeting on Cybernetics and Systems Research EMSCR 2012 Conference
- *Председник или члан комисија за израду завршних радова на академским основним, мастер или докторским студијама*

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:

- "Sensor System Bahn" funded by: FFG Mobilität der Zukunft, 2016-
- "Radar Based Infrastr. Monitoring System" funded by FFG Mobilität der Zukunft, 2013-2015
- "Coordination Middleware for Wireless Networks of Low Power Nodes" funded by FFG Bridge 2012-2014
- "A Secure Space for Collaborative Security Services" funded by FFG FIT-IT, 2010-2012
- öSWISö funded by FFG, 2006-2007

2. Допринос академској и широј заједници

– *Чланство у страним или домаћим академијама наука, или чланство у стручним или научним асоцијацијама у које се члан бира.*

:

É IEEE Women in Computational Intelligence (2019)

- É IEEE CIS Member Activities Committee (2019)
- É Task Force on Bio-Inspired Self-Organizing Collective Systems
- É IEEE Computational Intelligence Society/ Women in Computational Intelligence
- É IEEE CIS Webinars sub-committee (2019)
- É IEEE Women in Engineering Committee (2019)
- Социјалне вештине (поседовање комуникационих способности, способности за презентацију, способности за тимски рад и вођење тима).

:

É™–um- avi V. Swarm Intelligence in Distributed Systems Use-cases, Keynote Lecture, 11th International Joint Conference on Computational Intelligence IJCCI, 2019.

É™–um- avi V. Self-Organizing Principles in Coping with Complexity of Distributed Software Systems, invited talk, Institute of Science and Technology Austria (IST), 2013.

É™–um- avi V. Bio-Inspired Intelligence in Coping with Complexity of Distributed Software Systems, Webinar, IEEE CIS, 2019.

3. Сарадња са другим високошколским, научноистраживачким установама

- *Руковођење или чланство у органу професионалног удружења или организацији националног или међународног нивоа.*

:

- **председавајући IEEE Women in Computational Intelligence (2019)**

- *Предавања по позиву на универзитетима у земљи или иностранству.*

:

- Self-Organizing Principles in Coping with Complexity of Distributed Software Systems, Institute of Science and Technology Austria (IST), 2013.

5. ЗАКЉУЧАК И ПРЕДЛОГ

ГЕОИНФОРМАТИКА

ванредног професора

: _____, 07.07.2021.

Проф. др Бранислав Бајат, дипл. инж. геод.
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Научни саветник др Татјана Давидовић,
Математички институт САНУ

В. проф. др Филип Марић,
Математички факултет Универзитета у
Београду