



Curriculum vitae

Levente Varga

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Personal information

Date of birth: 30 March 1989 **Place of birth:** Miercurea Ciuc (Romania)
Nationality: Hungarian **Citizenship:** Romanian and Hungarian

Work experience

Member of the research project *Since June 2018*
Babeş-Bolyai University, Faculty of Physics, Cluj Napoca (Romania)
Comparative Investigation of the Cortical Circuits in Mouse, NHP and Human research.

Member of the research project *February 2016 – September 2018*
Babeş-Bolyai University, Faculty of Physics, Cluj Napoca (Romania)
Dezvoltarea unui indicator scientometric optim research.

Teacher assistant *Since February 2016*
Babeş-Bolyai University, Faculty of Mathematics and Informatics, Cluj Napoca (Romania)
Computer algorithms and Computer networks.

Organizer *April 2015*
National Students' Scientific Conference, Cluj Napoca (Romania)
Physics, geography and mathematic section.

Member of the research project *November 2013 – October 2014*
**Hungarian Academy of Science, Research Centre for Natural Science,
Institute for Technical Physics and Materials Science, Budapest (Hungaria)**
Evolutionary game theory research.

Organizer *May 2013*
Transylvanian Students' Scientific Conference, Cluj Napoca (Romania)
Computer science section.

Member of the research project *April 2013 – December 2016*
Babeş-Bolyai University, Faculty of Physics, Cluj Napoca (Romania)
Improving scientific evaluation through analysis of scientific networks research.

Participant *March 2013*
National Students' Scientific Conference, Budapest (Hungaria)
Computer science section.

Organizer and participant *May 2012*
Transylvanian Students' Scientific Conference, Cluj Napoca (Romania)
Computer science section,
I. place, *Heart rate synchronization with a microcontroller system* dissertation.

Summer internship *Summer of 2010 and 2011*
SC. XENZOR SRL., Odorheiu Secuiesc (Romania)
System administrator, computer programmer.

Education and training

PhD student *Since October 2014*
Babeş-Bolyai University, Faculty of Physics, Cluj Napoca (Romania)
PhD supervisor Dr. Zoltán Néda.

Game Theory and Telecommunication summer school *September 2014*
Campione d'Italia (Italia)
Evolutionary game theory.

Optimization of computer models *October 2012 – July 2014*
**Babeş-Bolyai University, Faculty of Mathematics and Computer Science,
Cluj Napoca (Romania)**
MSc.

CEEPUS scholarship *March 2014*
Constantine The Philosopher University, Nitra (Slovakia)
Exchange student.

Domain specific languages summer school *July 2013*
**Babeş-Bolyai University, Faculty of Mathematics and Computer Science,
Cluj Napoca (Romania)**
Organizer and participant.

CEEPUS scholarship *March 2013 – April 2013*
Constantine The Philosopher University, Nitra (Slovakia)
Exchange student.

Computer engineer *October 2008 – June 2012*
**Babeş-Bolyai University, Faculty of Mathematics and Computer Science,
Cluj Napoca (Romania)**
BSc.

CEEPUS scholarship *March 2012*
Constantine The Philosopher University, Nitra (Slovakia)
Exchange student.

Mathematics and Informatics class *September 2000 – June 2008*
Orbán Balázs High School, Cristuru Secuiesc (Romania)
High school and elementary school.

Professional skills

Programming languages
C/C++, Java, Android, C#, Assembly,
HTML, JavaScript, CSS, SQL, PHP,
Python,
Erlang,
LabVIEW.

Field of interest

Hardware designing and building.
Programming.
Experimentation.
Research.

Languages

Hunagrian: Mother tongue
English: Proficient user (B2)
Romanian: Proficient user (B2)
German: Basic user (A1)

Personal skills and hobbies

Team spirit, good communication skills, organizing, do-it-yourself, assembling, programming.
Motorcycling, travel, swimming, football.

Other skills

A and B category driving license.

List of publications

Scientific papers

- **Varga, L.**, Tóth, G., and Néda, Z. Commuting patterns: The Flow and Jump model and supporting data. *EPJ Data Science*, 7, 37 (2018). DOI: 10.1140/epjds/s13688-018-0167-3
- Néda, Z., **Varga, L.**, and Biró, T. S. Science and Facebook: The same popularity law! *PLoS ONE*, 12, e0179656 (2017). DOI: 10.1371/journal.pone.0179656
- Lázár, Zs. I., Papp, I., **Varga, L.**, Járαι-Szabó, F., Deritei, D., and Ercsey-Ravasz, M. Stochastic graph Voronoi tessellation reveals community structure. *Phys. Rev. E*, 95, 022306 (2017). DOI: 10.1103/PhysRevE.95.022306
- **Varga, L.**, Tóth, G., and Néda, Z. An improved radiation model and its applicability for understanding commuting patterns in Hungary. *Regional Statistics*, 6, 27–38 (2016).
- Szabó, Gy., **Varga, L.**, and Szabó, M. Anisotropic invasion and its consequences in two-strategy evolutionary games on a square lattice. *Phys. Rev. E*, 94, 052314 (2016). DOI: 10.1103/PhysRevE.94.052314
- **Varga, L.**, Kovács, A., Tóth, G., Papp, I., and Néda, Z. Further We Travel the Faster We Go. *PLoS ONE*, 11, e0148913 (2016). DOI: 10.1371/journal.pone.0148913
- Vukov, J., **Varga, L.**, Allen, B., Nowak, M. A., and Szabó, Gy. Payoff components and their effects in a spatial three-strategy evolutionary social dilemma. *Phys. Rev. E*, 92, 012813 (2015). DOI: 10.1103/PhysRevE.92.012813
- **Varga, L.**, Vukov, J., and Szabó, Gy. Self-organizing patterns in an evolutionary rock-paper-scissors game for stochastic synchronized strategy updates. *Phys. Rev. E*, 90, 042920 (2014). DOI: 10.1103/PhysRevE.90.042920
- Deritei, D., Lázár, Zs. I., Papp, I., Járαι-Szabó, F., Sumi, R., **Varga, L.**, Ravasz Regan, E., and Ercsey-Ravasz, M. Community detection by graph Voronoi diagrams. *New J. Phys.*, 16, 1–17 (2014). DOI: 10.1088/1367-2630/16/6/063007
- Szabó, Gy., **Varga, L.**, and Borsos, I. Evolutionary matching-pennies game on bipartite regular networks. *Phys. Rev. E*, 89, 042820 (2014). DOI: 10.1103/PhysRevE.89.042820

Conference proceedings papers

- **Varga, L.**, Deritei, D., Ercsey-Ravasz, M., Florian, R., Lázár, Zs. I., Papp, I., and Járαι-Szabó, F. Normalizing scientometric indicators of individual publications using local cluster detection methods on citation networks. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 12(9), 1189–1198 (2018).

Conference contributed talks

- “Normalizing scientometric indicators of individual publications using local cluster detection methods on citation networks”, ICCSIB 2018 : 20th International Conference on Cybermetrics, Scientometrics, Informetrics and Bibliometrics, Barcelona, Spain, 29-30 October 2018.
- “Commuting patterns: a modified radiation model and supporting data”, MaCS 2018, 12th Joint Conference on Mathematics and Computer Science, Scuiou, Romania, 14-17 June 2018.

Conference posters

- “An improved radiation model and its applicability for understanding commuting patterns”, meco43: 43rd Conference of the Middle European Cooperation in Statistical Physics, Kraków, Poland, 1-4 May 2018.
- “Genetic-like algorithm applied on citation networks for evaluating scientific publications”, Conference of Complex Systems 2016, Beurs Van Berlage, Amsterdam, The Netherlands, 19-22 September 2016.
- “Testing human mobility models with commuters data” and “Velocity versus distance scaling in human travel”, XXXVI Dynamic Days Europe, Corfu, Greece, 6-10 June 2016.
- “Local Cluster Detection Method for Normalizing Scientometric Indicators” and “Community detection using stochastic graph Voronoi tessellation”, NetSci 2015, Zaragoza, Spain, 1-5 June 2015.