

Cristian-Ioan Vasile

Education

- 2016 **Visiting PhD Student**, *Laboratory for Information and Decision Systems (LIDS)*, Massachusetts Institute of Technology (MIT), Advisor: Sertac Karaman.
- 2012–2016 **PhD**, *Hybrid and Networked Systems (HyNeSs) Group, BU Robotics Lab, Division of Systems Engineering, College of Engineering, Boston University*, Advisor: Calin Belta.
Systems Engineering, *GPA: 4.0/4.0*
- 2011–2015 **PhD**, *Department of Automatic Control and Systems Engineering, Politehnica University of Bucharest*, Advisor: Ioan Dumitrache.
Control Engineering, *GPA: 10.00*
- 2009–2011 **Master**, *Department of Automatic Control and Systems Engineering, Politehnica University of Bucharest*.
Intelligent Control Systems, *GPA: 10.00*
- 2005–2009 **Bachelor**, *Faculty of Automatic Control and Computers, Politehnica University of Bucharest*.
Computer Science, focus on Embedded Systems, *GPA: 9.49*
- 2005–2010 **Certificate I & II**, *Department of Teacher Training, Politehnica University of Bucharest*.
Pedagogical Studies – Level 1 (annex to bachelor diploma), *GPA: 10.00*
Pedagogical Studies Graduate Program – Level 2 (Advanced), *GPA: 10.00*

Research Experience

- 2016–current **Postdoctoral Associate**, *Professor Sertac Karaman, Laboratory for Information and Decision Systems (LIDS), Massachusetts Institute of Technology (MIT)*.
- 2016–current **Postdoctoral Associate**, *Professor Daniela Rus, Distributed Robotics Laboratory, Computer Science and Artificial Intelligence Laboratory (CSAIL), Massachusetts Institute of Technology (MIT)*.
- 2013–2016 **Research Assistant**, *Professor Calin Belta, Hybrid and Networked Systems (HyNeSs) Group, BU Robotics Lab, Boston University*.
- 2007–2012 **Volunteer Researcher**, *Professors Ioan Dumitrache and Cătălin Buiu, Laboratory of Natural Computing and Robotics, Politehnica University of Bucharest*.

Research Fellowships and Summer Schools

- Mar 11–18 *Research Fellowship*, Faculty of Philosophy and Science in Opava, Silesian University in Opava, 2012
Czech Republic – reference: Prof PhD Jozef Kelemen
- Sep 5–7 2011 *First International School on Biomolecular and Biocellular Computing*, Osuna, Spain – awarded tuition, travel and accommodation grant – reference: Prof PhD Miguel A. Gutiérrez, [ISBBC2011](#)
- Sep 24 – Oct 1 2010 *Neural Dynamics Approaches to Cognitive Robotics*, Ruhr-Universität, Bochum, Germany – awarded tuition, travel and accommodation grant – reference: Prof PhD Gregor Schöner, [Neural Dynamics 2010](#)

Jul 22–26 1st *Cooperative Cognitive Control for Autonomous Underwater Vehicles*, Jacobs University, Bremen, Germany – awarded tuition and accommodation grant – reference: Prof PhD Kaustubh Pathak and Prof PhD Andreas Birk, [Co3-AUVs 2010](#)

Awards

- BU Dean's Fellow 2012–2013, from the Division of Systems Engineering, College of Engineering, Boston University.
- Roberto Rocca Scholarship Merit-based award for academic excellence and leadership, national selection process, [Roberto Rocca Educational Program](#), TenarisSilcotub.
- NSF Student Travel Award IEEE International Conference on Robotics and Automation (ICRA) 2014 in Hong Kong, China.
- SE PhD Student Travel Award Systems Engineering Division, Boston University: [28] IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2013 in Tokyo, Japan; [24] European Control Conference (ECC) 2015 in Linz, Austria.
- Academic Scholarship Merit-based scholarship during my undergraduate and graduate studies (5.5 years), performance evaluated each semester.
- Award for Publication Awards for publication by the Romanian National Council of Scientific Research for the papers: [10], *Applied Soft Computing* journal; and [9], *BMC Bioinformatics*.

Publications

Journal Articles

- [1] Kevin Leahy, Eric Cristofalo, **Cristian Ioan Vasile**, Austin Jones, Eduardo Montijano, Mac Schwager, and Calin Belta. Control in Belief Space with Temporal Logic Specifications using Vision-based Localization. *International Journal of Robotics Research*, page (submitted), 2018. .
- [2] **Cristian Ioan Vasile**, Derya Aksaray, and Calin Belta. Time Window Temporal Logic. *Theoretical Computer Science*, 691(Supplement C):27–54, August 2017. [doi:10.1016/j.tcs.2017.07.012](https://doi.org/10.1016/j.tcs.2017.07.012).
- [3] **Cristian Ioan Vasile**, Mac Schwager, and Calin Belta. Translational and Rotational Invariance in Networked Dynamical Systems. *IEEE Transactions on Control of Network Systems*, page (accepted), January 2017. [doi:10.1109/TCNS.2017.2648499](https://doi.org/10.1109/TCNS.2017.2648499).
- [4] Kevin Leahy, Dingjiang Zhou, **Cristian Ioan Vasile**, Konstantinos Oikonomopoulos, Mac Schwager, and Calin Belta. Persistent Surveillance for Unmanned Aerial Vehicles Subject to Charging and Temporal Logic Constraints. *Autonomous Robots*, 40(8):1363–1378, December 2016. [doi:10.1007/s10514-015-9519-z](https://doi.org/10.1007/s10514-015-9519-z).
- [5] Ana Brândușa Pavel and **Cristian Ioan Vasile**. Identifying cancer type specific oncogenes and tumor suppressors using limited size data. *Journal of Bioinformatics and Computational Biology*, 14(6):1–16, December 2016. [doi:10.1142/S0219720016500311](https://doi.org/10.1142/S0219720016500311).
- [6] **Cristian Ioan Vasile**, Ana Brândușa Pavel, and Ioan Dumitrache. Universality of Enzymatic Numerical P Systems. *International Journal of Computer Mathematics (special issue: Membrane Computing)*, 90(4), February 2013. if=0.589, [doi: 10.1080/00207160.2012.748897](https://doi.org/10.1080/00207160.2012.748897).
- [7] **Cristian Ioan Vasile**, Ana Brândușa Pavel, Ioan Dumitrache, and Gheorghe Păun. On the Power of Enzymatic Numerical P Systems. *Acta Informatica*, 49(6):395–412, September 2012. if=0.809, [doi:10.1007/s00236-012-0166-y](https://doi.org/10.1007/s00236-012-0166-y).
- [8] Cătălin Buiu, **Cristian Ioan Vasile**, and Octavian Arsene. Development of membrane controllers for mobile robots. *Information Sciences*, 187:33–51, March 2012. if=2.833, [doi:10.1016/j.ins.2011.10.007](https://doi.org/10.1016/j.ins.2011.10.007).

- [9] Ana Brândușa Pavel and **Cristian Ioan Vasile**. PyElph – a Software Tool for Gel Images Analysis and Phylogenetics. *BMC Bioinformatics*, 13(9), January 2012. if=3.03, [doi:10.1186/1471-2105-13-9](https://doi.org/10.1186/1471-2105-13-9) (Open Access).
- [10] **Cristian Ioan Vasile** and Cătălin Buiu. A software system for collaborative robotics applications and its application in particle swarm optimization implementations. *Applied Soft Computing*, 11(8):5498–5507, December 2011. if=2.084, [doi:10.1016/j.asoc.2011.05.009](https://doi.org/10.1016/j.asoc.2011.05.009).
- [11] **Cristian Ioan Vasile** and Alexandru Constantinescu. On the quotient criterion. *Gazeta Matematică*, CX(9):420–422, 2005. in Romanian.
- Conference Articles**
- [12] Jesper Karlsson, **Cristian Ioan Vasile**, Jana Tumova, Sertac Karaman, and Daniela Rus. Multi-vehicle motion planning for social optimal mobility-on-demand. In *IEEE International Conference on Robotics and Automation (ICRA)*, page (accepted), Brisbane, Australia, May 2018. .
- [13] Lucas Liebenwein, Wilko Schwarting, **Cristian Ioan Vasile**, Jonathan DeCastro, Javier Alonso-Mora, Sertac Karaman, and Daniela Rus. Compositional and Contract-based Verification for Autonomous Driving on Road Networks. In *International Symposium on Robotics Research (ISRR)*, pages –, Puerto Varas, Chile, December 2017. [link](#).
- [14] Xiao Li, **Cristian Ioan Vasile**, and Calin Belta. Reinforcement Learning With Temporal Logic Rewards. In *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pages 3834–3839, Vancouver, BC, Canada, September 2017. [doi:10.1109/IROS.2017.8206234](https://doi.org/10.1109/IROS.2017.8206234).
- [15] **Cristian Ioan Vasile**, Vasumathi Raman, and Sertac Karaman. Sampling-based Synthesis of Maximally-Satisfying Controllers for Temporal Logic Specifications. In *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pages 3840–3847, Vancouver, BC, Canada, September 2017. [doi:10.1109/IROS.2017.8206235](https://doi.org/10.1109/IROS.2017.8206235).
- [16] **Cristian Ioan Vasile**, Jana Tumova, Sertac Karaman, Calin Belta, and Daniela Rus. Minimum-violation scLTL motion planning for mobility-on-demand. In *IEEE International Conference on Robotics and Automation (ICRA)*, pages 1481–1488, Singapore, May 2017. [doi:10.1109/ICRA.2017.7989177](https://doi.org/10.1109/ICRA.2017.7989177).
- [17] Francisco Penedo Álvarez, **Cristian Ioan Vasile**, and Calin Belta. Language-Guided Sampling-based Planning using Temporal Relaxation. In *Workshop on the Algorithmic Foundations of Robotics (WAFR)*, pages –, San Francisco, CA, USA, December 2016. [link](#).
- [18] **Cristian Ioan Vasile**, Kevin Leahy, Eric Cristofalo, Austin Jones, Mac Schwager, and Calin Belta. Control in Belief Space with Temporal Logic Specifications. In *IEEE Conference on Decision and Control (CDC)*, pages 7419–7424, Las Vegas, NV, USA, December 2016. [doi:10.1109/CDC.2016.7799415](https://doi.org/10.1109/CDC.2016.7799415).
- [19] Eric Cristofalo, Kevin Leahy, **Cristian Ioan Vasile**, Eduardo Montijano, Mac Schwager, and Calin Belta. Localization of a Ground Robot by Aerial Robots for GPS-deprived Control with Temporal Logic Constraints. In *International Symposium on Experimental Robotics (ISER)*, pages 525–537, Tokyo, Japan, October 2016. [doi:10.1007/978-3-319-50115-4_46](https://doi.org/10.1007/978-3-319-50115-4_46).
- [20] Curtis Madsen, Prashant Vaidyanathan, **Cristian Ioan Vasile**, Rachael Ivison, Junmin Wang, Calin Belta, and Douglas Densmore. Utilizing Signal Temporal Logic to Characterize and Compose Modules in Synthetic Biology. In *International Workshop on Biodesign Automation (IWBD)*, pages 71–73, Newcastle University, Newcastle upon Tyne, UK, August 2016. [link](#).
- [21] Prashant Vaidyanathan, Evan Appleton, Curtis Madsen, **Cristian Ioan Vasile**, Alan Pacheco, Iman Haghighi, Nicholas Roehner, Rachael Ivison, Junmin Wang, Yash Agarwal, Zachary

- Chapasko, Calin Belta, and Douglas Densmore. Genetic Systems Engineering. In *International Workshop on Biodesign Automation (IWBDA)*, pages 25–26, Newcastle University, Newcastle upon Tyne, UK, August 2016. [link](#).
- [22] Derya Aksaray, **Cristian Ioan Vasile**, and Calin Belta. Dynamic Routing of Energy-Aware Vehicles with Temporal Logic Constraints. In *IEEE International Conference on Robotics and Automation (ICRA)*, pages 3141–3146, Stockholm, Sweden, May 2016. [doi:10.1109/ICRA.2016.7487481](#).
- [23] Giuseppe Bombara, **Cristian Ioan Vasile**, Francisco Penedo Alvarez, Hirotohi Yasuoka, and Calin Belta. A Decision Tree Approach to Data Classification using Signal Temporal Logic. In *Hybrid Systems: Computation and Control (HSCC)*, pages 1–10, Vienna, Austria, April 2016. [doi:10.1145/2883817.2883843](#).
- [24] **Cristian Ioan Vasile**, Mac Schwager, and Calin Belta. SE(N) Invariance in Networked Systems. In *European Control Conference (ECC)*, pages 186–191, Linz, Austria, July 2015. [doi:10.1109/ECC.2015.7330544](#).
- [25] **Cristian Ioan Vasile** and Calin Belta. An Automata-Theoretic Approach to the Vehicle Routing Problem. In *Robotics: Science and Systems Conference (RSS)*, pages 1–9, Berkeley, California, USA, July 2014. [link](#).
- [26] Kevin Leahy, Dingjiang Zhou, **Cristian Ioan Vasile**, Konstantinos Oikonomopoulos, Mac Schwager, and Calin Belta. Provably Correct Persistent Surveillance for Unmanned Aerial Vehicles Subject to Charging Constraints. In *International Symposium on Experimental Robotics (ISER)*, pages –, Marrakech/Essaouira, Morocco, June 2014. [link](#).
- [27] **Cristian Ioan Vasile** and Calin Belta. Reactive Sampling-Based Temporal Logic Path Planning. In *IEEE International Conference on Robotics and Automation (ICRA)*, pages 4310–4315, Hong Kong, China, June 2014. [doi:10.1109/ICRA.2014.6907486](#).
- [28] **Cristian Ioan Vasile** and Calin Belta. Sampling-Based Temporal Logic Path Planning. In *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pages 4817–4822, Tokyo, Japan, November 2013. [doi:10.1109/IROS.2013.6697051](#).
- [29] Ana Brândușa Pavel, **Cristian Ioan Vasile**, and Ioan Dumitrache. Robot localization implemented with enzymatic numerical P systems. In *Proc. of the Living Machines 2012: The International Conference on Biomimetic and Biohybrid Systems*, volume 7375 of *Lecture Notes in Computer Science*, pages 204–215, Barcelona, Spain, July 2012. Springer Berlin Heidelberg. [doi:10.1007/978-3-642-31525-1_18](#).
- [30] **Cristian Ioan Vasile**, Ana Brândușa Pavel, Ioan Dumitrache, and Gheorghe Paun. On the Power of Enzymatic Numerical P Systems. In *Proc. of the 10th Brainstorming Week on Membrane Computing*, pages 215–228, Seville, Spain, February 2012. [link](#).
- [31] **Cristian Ioan Vasile**, Ana Brândușa Pavel, Ioan Dumitrache, and Gheorghe Păun. Numerical P Systems. In *Proc. of the 10th Brainstorming Week on Membrane Computing*, pages 26–29, Seville, Spain, February 2012. [collective paper](#): Research Topics in Membrane Computing: After CMC 12, Before BWMC 10, Eds. Gheorghe M., Paun Gh., Perez-Jimenez M.J.
- [32] **Cristian Ioan Vasile**, Pavel Pavel, Ana Brândușa, Ioan Dumitrache, and Jozef Kelemen. Implementing obstacle avoidance and follower behaviors on Koala robots using Numerical P Systems. In *Proc. of the 10th Brainstorming Week on Membrane Computing*, pages 207–214, Seville, Spain, February 2012. [link](#).
- [33] Cătălin Buiu, Ana Brândușa Pavel, **Cristian Ioan Vasile**, and Ioan Dumitrache. Perspectives of using membrane computing in the control of mobile robots. In *Proc. of the Beyond AI -*

Interdisciplinary Aspect of Artificial Intelligence Conference, pages 21–26, Pilsen, Czech Republic, December 2011. [link](#).

- [34] **Cristian Ioan Vasile**, Ana Brândușa Pavel, and Cătălin Buiu. Integrating human swarm interaction in a distributed robotic control system. In *Proc. of the IEEE 7th Annual IEEE Conference on Automation Science and Engineering (CASE)*, pages 743–748, Trieste, Italy, August 2011. [doi:10.1109/CASE.2011.6042493](https://doi.org/10.1109/CASE.2011.6042493).
- [35] **Cristian Ioan Vasile**, Ana Brândușa Pavel, and Cătălin Buiu. Chidori - a bio-inspired cognitive architecture for collective robotics applications. In *Proc. of the IFAC Workshop on Intelligent Control Systems*, pages 52–57, Sinaia, Romania, September 2010. [link](#).
- [36] Ana Brândușa Pavel, **Cristian Ioan Vasile**, and Cătălin Buiu. Cognitive vision system for an ecological mobile robot. In *Proc. of the 13th International Symposium on System Theory, Automation, Robotics, Computers, Informatics, Electronics and Instrumentation (SINTES)*, volume 1, pages 267–272, Craiova, Romania, October 2007. [link](#).

Books & Chapters

- [37] Kevin Leahy, Dingjiang Zhou, **Cristian Ioan Vasile**, Konstantinos Oikonomopoulos, Mac Schwager, and Calin Belta. Provably correct persistent surveillance for unmanned aerial vehicles subject to charging constraints. In M. Ani Hsieh, Oussama Khatib, and Vijay Kumar, editors, *Experimental Robotics*, volume 109 of *Springer Tracts in Advanced Robotics*, pages 605–619. Springer International Publishing, 2016. isbn: 978-3-319-23777-0, [link](#).
- [38] Ana Brândușa Pavel, **Cristian Ioan Vasile**, and Ioan Dumitrache. *Membrane computing in robotics*, volume 4 of *Topics in Intelligent Engineering and Informatics (special issue: Beyond Artificial Intelligence)*, pages 125–136. Springer, 2013. isbn-13: 978-3642344213.
- [39] Ana Brândușa Pavel, **Cristian Ioan Vasile**, and Cătălin Buiu. *Biomathematics and Bioinformatics – Concepts and Applications*. Editura Universitară, Bucharest, Romania, 2011. isbn: 978-606-591-178-9, in Romanian.
- [40] Cătălin Buiu, Ana Brândușa Pavel, and **Cristian Ioan Vasile**. *Cognitive Robots – Bio-inspired Applications*. Editura Universitară, Bucharest, Romania, 2010. isbn: 978-973-749-835-9, in Romanian.
- [41] Ana Brândușa Pavel and **Cristian Ioan Vasile**. *Cognitive Robots – Concepts, Architectures, Applications*, chapter II: Robots with cognitive vision. Case study – ReMaster One robot, pages 35–97. Editura Universitară, Bucharest, Romania, 2008. isbn: 978-973-749-443-6, in Romanian.

Posters

- [42] Prashant Vaidyanathan, Evan Appleton, Curtis Madsen, **Cristian Ioan Vasile**, Alan Pacheco, Iman Haghghi, Nicholas Roehner, Rachael Ivison, Junmin Wang, Yash Agarwal, Zachary Chapasko, Calin Belta, and Douglas Densmore. Genetic Systems Engineering. In *8th International Workshop on Bio-Design Automation*, page Poster, Newcastle upon Tyne, UK, August 2016. [link](#).
- [43] **Cristian Ioan Vasile** and Calin Belta. Reactive Sampling-Based Temporal Logic Path Planning. In *5th Workshop on Formal Methods for Robotics and Automation*, page Poster, Berkeley, CA, USA, July 2014. [link](#).
- [44] **Cristian Ioan Vasile**, Ana Brândușa Pavel, Octavian Arsene, Nirvana Popescu, and Cătălin Buiu. Human-swarm interface design and new control techniques for swarms autonomous mobile robots. In *Proc of the 4th International Conference on Cognitive Systems (CogSys)*, page Poster, ETH Zurich, Switzerland, January 2010. [link](#).

PhD thesis

Title *Motion Planning and Control: a Formal Methods Approach*
Advisor Prof PhD Calin Belta

PhD thesis

Title *Distributed Control for Multi-Robot Systems*
Advisor Prof PhD Ioan Dumitrache

Master thesis

Title *Chidori Architecture – Distributed Control for Multi-robot Systems, (Grade 10.00)*
Advisor Prof PhD Cătălin Buiu

Bachelor thesis

Title *Software system for collaborative robotics applications, (Grade 10.00)*
Advisor Prof PhD Cătălin Buiu

Talks and demonstrations

Talks

- Jan 13 2017 Motion Planning and Control with Temporal Logic Specifications, UC Berkeley.
- Dec 16 2016 Control in Belief Space with Temporal Logic Specifications, Zoox.
- Nov 22 2016 Sampling-based Motion Planning and Control with Temporal Logic Specifications, KTH.
- Dec 8 2015 Temporal Logic Planning and Inference, Distributed Robotics Laboratory, MIT.
- Sep 5 2011 “Membrane Controllers for Mobile Robots” at the First International School on Biomolecular and Biocellular Computing, Osuna, Spain – reference: Prof PhD Miguel A. Gutiérrez, [ISBBC2011](#)
- Jun 18 2011 “Modeling and simulation of human HIV-1 gp120 envelope glycoprotein” at the IBM High Performance Scientific Computing Workshop, Bucharest, Romania
- Nov 10 2010 “Particle Swarm Optimization and its applications in collaborative robotics” at the Laboratory of Natural Computing and Robotics

Demonstrations

- Feb 19–20 2011 “Chidori Architecture – Distributed Swarm Control System and User Interface” poster and stand at the Artificial Intelligence – Multi-Agent Systems (AI-MAS) [Winter Olympics](#), Politehnica University of Bucharest, Bucharest, Romania

Membership and Community Service

- Membership IEEE Member, IEEE RAS Member, IEEE CSS Member
- Reviewer International Journal of Robotics Research
 - IEEE Robotics and Automation Letters, Autonomous Robots
 - IEEE Transactions on Automation Science and Engineering
 - IEEE Transactions on Control of Network Systems
 - IEEE Transactions on Automatic Control
 - IEEE Control Systems Letters
- Automatica
- Theoretical Computer Science Journal
- Discrete Event Dynamic Systems

AIAA Journal of Guidance, Control, and Dynamics

IEEE Transactions on NanoBioscience

Applied Soft Computing Journal

Sensors Journal

Robotics: Science and Systems Conference (RSS 2016)

IEEE International Conference on Robotics and Automation (ICRA 2015, 2016, 2017, 2018)

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2016, 2017)

International Workshop on the Algorithmic Foundations of Robotics (WAFR 2016)

IEEE International Symposium on Multi-Robot and Multi-Agent Systems (MRS 2017)

ACM International Conference on Hybrid Systems: Computation and Control (HSCC 2016, 2017)

IEEE Conference on Decision and Control (CDC 2014, 2015, 2016, 2017)

IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys 2015)

IFAC Workshop on Intelligent Control Systems (WICS 2010)

Organizer RSS 2017 Workshop on The What without the How: Specifying Planning Problems in Robotics (Cambridge, MA, USA, 2017)

IFAC Workshop on Intelligent Control Systems (Sinaia, Romania, 2010)

Judge CEESA First Tech Challenge robotics competition, American International School of Bucharest, April 2011 and March 2012

Interests

Robotics formal methods, motion and path planning, swarm robotics, distributed and decentralized control
Control correct-by-construction control strategies, temporal logics, sampling based algorithms, incremental computing

Teaching Experience

2011–2012 **Teaching Assistant**, *Politehnica University of Bucharest*.

Laboratory Classes:

- Robotics and Virtual Reality (Spring 2012);
- Control Engineering (Spring 2012);
- Programming real-time applications (Spring 2012);
- Diagnosis and Decision Techniques (Spring 2012);
- Artificial Intelligence (Fall 2011).

2010–2011 **Associate Teaching Assistant**, *Politehnica University of Bucharest*.

Laboratory Classes:

- Robotics and Virtual Reality (Spring 2010, Spring 2011);
- Control Engineering (Spring 2011);
- Cognitive Robotics (winter 2010);
- Intelligent Multi-agent Systems for Ambient Assistance (winter 2010).

2009–2010 **Volunteer Teaching Assistant**, *Politehnica University of Bucharest*.

Laboratory Classes:

- Robotics and Virtual Reality (Spring 2009);
- Microprocessor Based Design (Spring 2009, Spring 2010).

Skills

Computer skills

Programming languages C, Java, Python, Matlab, PHP, SQL, Bash Frameworks ANTLR, MPI, wxPython, matplotlib

Professional skills

- Computer programming and computer operating skills
- Teaching skills – graduated two Pedagogical Studies Programs (levels I and II), gained practical experience during laboratory classes;
- Scientific writing – published or submitted 3 books and 11 articles in international conferences and journals
- Preparing learning materials – gained practical experience in creating appropriate learning materials that meet the needs of undergraduate and graduate students as TA – these include: e-learning materials, laboratory applications, exercises, homework, projects, tests
- Programming and handling educational robots – Khepera II&III, e-puck, Hemisson
- Research and development skills – gained practical experience in applying computational intelligence techniques in robotic applications as volunteer RA; did independent research in robotics, control theory, image processing and bioinformatics

Organizational skills

- Learning activity of student – organized laboratory activity and curriculum
- Research activity – organized research activity for individual and teams of undergraduate and graduate students
- Community – participated in the organization committee of the IFAC Workshop on Intelligent Control Systems (2010) and also organized the exhibition stand of the Laboratory of Natural Computing and Robotics at the AI-MAS Winter Olympics (2011)

Social skills

- Team working – collaborated on many research projects and scientific papers with students and professors
- Communication – presented ideas and research in public presentations at conferences and seminars, participated in brainstorming sessions and research meetings for projects
- Open minded – I like to explore new frontiers and ideas
- Learning – I learn both in a group sessions and by myself; I like learning from discussions and collaboration with colleagues and professors

Languages

Romanian native language

English Advanced

TOEFL Score: 111 – R:30, L:30, S: 23, W: 28

German Advanced

German Certificate “Zertifikat Deutsch”, Goethe Institute (98%)

Other skills

- Driving license – category B
- Artistic – violin and music theory, 9.95/10 in national examination “Capacitate” (2001)

References

- Available upon request.