SCRISOARE DE MOTIVARE A CANDIDATURII

Pentru un mandat în

Consiliul Departamentului de Tehnologii Digitale și Inginerie Software

Subsemnatul, Ioan-Dumitru Drăgan, cadru didactic în cadrul Departamentului de Tehnologii Digitale și Inginerie Software al Universității de Vest din Timișoara, îmi exprim intenția de a candida pentru o poziție de membru în Consiliul Departamentului.

În cadrul activității mele universitare, am urmărit întotdeauna promovarea calității actului educațional, susținerea inițiativelor colegiale și încurajarea colaborării interdisciplinare. Consider că apartenența la Consiliul Departamentului o responsabilitate majora, aceea de a participa activ la luarea deciziilor, la fundamentarea direcțiilor de dezvoltare ale departamentului și la reprezentarea intereselor colectivului academic.

Mă caracterizează spiritul de echipă, obiectivitatea în analiză, transparența și dorința de dialog constructiv. Doresc ca prin activitatea mea în Consiliu să susțin următoarele direcții:

- promovarea unei culturi academice centrate pe excelență și etică profesională;

- sprijinirea tinerilor colegi în dezvoltarea lor profesională;

- îmbunătățirea proceselor administrative și de comunicare internă.

Consider că pregătirea acumulată, împreună cu abilitățile și capacitățile însușite, îmi vor fi de folos pentru un mandat de Membru în Consiliului Departamentului de Tehnologii Digitale și Inginerie Software.

Timișoara, 14.07.2025

Ioan-Dumitru Drăgan,
Lect. Univ., Departamentul de Tehnologii Digitale și Inginerie Software
Universitatea de Vest din Timișoara

Curriculum Vitae
IOAN-DUMITRU DRĂGAN

PERSONAL DATA

Citizenship:	Romanian
Languages spoken:	Romanian (native), English (professional working proficiency, C1), German (medium, B2), French (basic, A1)
Email:	████████████

RESEARCH INTERESTS

Cloud computing, distributed computing, formal software verification, especially assertion synthesis. Automated reasoning, especially automated first-order theorem proving.

EDUCATION

Doktor der technischen Wissenschaften (Phd)	Vienna University of Technology Austria	Oct 2011 - Mar 2015
Master in computer science	West University of Timişoara Romania	Oct 2009 - Jul 2011
Erasmus student	Johannes Kepler University Linz Austria	Oct 2008 - Feb 2009
Bachelor in computer science	West University of Timişoara Romania	Oct 2006 - Jul 2009

EXPERIENCE

Researcher	Institute eAustria (IeAT) Timişoara, Romania	Apr 2015 - Present

I am currently employed by Institute eAustria (IeAT) (`ieat.ro`) and currently working on Dice (`http://www.dice-h2020.eu`) and CloudLightning (cloudlightning.eu) european projects. The main focus of my current work is development of reliable clouds for big data and data intensive computation.

Lecturer	'West University of Timişoara Timişoara, Romania	Feb 2020 - Present
Assistant Lecturer	"Victor Babeş" University of Medicine and Pharmacy, Timişoara, Romania	Sept 2015- Feb 2020
Project Assistent	Vienna University of Technology Vienna, Austria	Oct 2011- Mar 2015

My work was funded by the Austrian National Research Network Rigorous Systems Engineering - RiSE project (`arise.or.at`) from the Austrian Science Fund (FWF). The main topic I worked on is extendion of the first-order theorem prover Vampire (`www.vprover.org`) with theory support.

Intern - Research assistent	INRIA Sophia Antipolis Nice, France	Sept 2010 - June 2011

Institut national de recherche en informatique et en automatique (**INRIA**) is one of the biggest research institutes in France. I was part of the famous Ariana (`http://www-sop.inria.fr/ariana/index-2.html`) team led by prof. Josiane Zerubia. My duties were related to the implementation of different image processing algorithms using the GPGPU paradigm. The work was focused on image segmentation using probabilistic models.

Intern - Research assistent	Institute eAustria (IeAT) Timişoara, Romania	Oct 2009 - June 2010

Duties included the implementation of different image processing algorithms. I have successfully implemented different variations of segmentation algorithms to work on distributed systems.

Internship	Bosch	June 2013 - July 2013
	Braga, Portugal	

Duties included research and documentation regarding parking assistents for vehicles with trailers. Main duties were related to geometrical modeling of the trajectory for this kind of systems.

COMPUTER SKILLS
Extensive knowledge of different operating systems.
Proficient programming skills in C, C++, MPI and scripting languages.
Intermediate proficiency in programming CUDA, Java, C# and openMP.

LIST OF PUBLICATIONS

P1. **Ioan Dragan**, Konstantin Korovin, Laura Kovács, Andrei Voronkov. Bound Propagation for Arithmetic Reasoning in Vampire. In proceedings 15th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, SYNASC 2013, Timisoara, Romania

P2. **Ioan Dragan**, Laura Kovács, Lingva: Generating and Proving Program Properties using Symbol Elimination. In proceedings of Perspective of System Informatics - 9th Ershov Informatics Conference (PSI), 2014, St. Petersburg, Russia

A1. Armin Biere, **Ioan Dragan**, Laura Kovács, Andrei Voronkov, Integrating SAT solvers in Vampire, Vampire Workshop 2014, (Abstract).

P3. Armin Biere, **Ioan Dragan**, Laura Kovács, Andrei Voronkov, Experimenting with SAT solvers in Vampire, In proceedings of Human-Inspired Computing and Its Applications - 13th Mexican International Conference on Artificial Intelligence, MICAI 2014, Tuxtla Gutierrez, Mexico.

P4. Roland Lezuo, **Ioan Dragan**, Gergö Barany and Andreas Krall, vanHelsing: A Fast Theorem Prover for Debuggable Compiler Verification, SYNASC 2015, Timişoara, Romania

P5. G. Iuhasz, **Ioan Dragan**, An overview of Monitoring Tools for Big Data and Cloud Applications, MICAS 2015, Timişoara, Romania

P6. Lynn T., Xiong H., Dong D., Momani B., Gravvanis G., Filelis-Papadopoulos C., Elster A., Khan M., Tzovaras D., Giannoutakis K., Petcu D., Neagul M., **Dragan I.**, Kuppudayar P., Natarajan S., McGrath M., Gaydadjiev G., Becker T., Gourinovitch A., Kenny D. and Morrison J.: CLOUDLIGHTNING: A Framework for a Self-organising and Self-managing Heterogeneous Cloud, CLOSER 2016, Rome, Italy

P7. The CloudLightning approach to cloud-user interaction, Teodora Selea, **Ioan Dragan**, Teodor-Florin Fortis, Proceedings of the 1st International Workshop on Next generation of Cloud Architectures, 2017

P8. A look into Emergency Department overcrowding: Ideas and overview, **Ioan Dragan**, Serban Matesoane, Alina Petrica, Diana Lungeanu, E-Health and Bioengineering Conference (EHB), 2017, At Sinaia, Romania, Volume: EHB 2017

P9. Towards the Integration of a HPC Build System in the Cloud Ecosystem, **Ioan Dragan**, Teodora Selea, Teodor-Florin Fortis, Conference on Complex, Intelligent, and Software Intensive Systems, 916-925

J1. Exposing HPC services in the Cloud: the CloudLightning Approach, **Ioan Dragan**, Teodor-Florin Fortis, Marian Neagul, Scalable Computing: Practice and experience 17 (4), 323-330

J2. Architecture of a Scalable Platform for Monitoring Multiple Big Data Framework, Gabriel Iuhasz, Daniel Pop, **Ioan Dragan**, Scalable Computing: Practice and experience 17 (4), 313-321

C1. Applying Self- Principles in Heterogeneous Cloud Environmnets, **Ioan Dragan**, Teodor-Florin Fortiş, Gabriel Iuhasz, Marian Neagul, Dana Petcu, Chapter. Cloud Computing, Computer Communications and Networks

C2. Towards the Integration of a HPC Build System in the Cloud Ecosystem, **Ioan Dragan**, Teodora Selea, Teodor-Florin Fortiş, ChapterinAdvances in Intelligent Systems and Computing,July 2018

O1. Preface to SOSeMC 2016, Teodor-Florin Fortis, **Ioan Dragan**, 2016 IEEE International Conference on Autonomic Computing (ICAC), 2016, 342-342

PHD. **Ioan Dragan**, Title:"First-Order Theorem Proving for Program Analysis and Theory Reasoning", under the supervision of Prof. Laura Kovács and Prof. Andrei Voronkov, defended at Vienna University of Technology (TU Wien), March 2015.

SCIENTIFIC TALKS IN INTERANTIONAL SETTINGS

Mar. 2011	Vienna University of Technology	Austria
May 2011	INRIA Sophia Antipolis	France
May 2013	Alpine Verification Meeting, FBK Trento	Italy
Sept. 2013	SYNASC 2013, Timisoara	Romania
May 2014	Alpine Verification Meeting, Frejus	France
June 2014	Chalmers , Gothenburg	Sweden
July 2014	PSI 2014, St. Petersburg	Russia
July 2014	Vampire Workshop , Vienna	Austria
Sept. 2014	RiSE/Puma Meeting, Mondsee	Austria
Nov. 2014	MICAI 2014, Tuxtla Gutierrez	Mexic
Apr. 2015	Scientific seminar, UVT, Timisoara	Romania
Apr. 2016	Invited talk, IC4/DCU, Dublin	Ireland

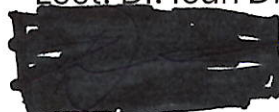## SERVICE TO THE SCIENTIFIC COMMUNITY

- Member of the local organizing team of the 9th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA 2012), Vienna, Austria.
- Member of the local organizing team of the International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2008 and 2009), Timişoara, Romania.
- Volunteer at Vienna Summer of Logic, 2014
- Subreviewer for 11th International Conference on Software Engineering Research, Management and Applications (SERA 2013).
- Subreviewer for 19th International Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR19).
- Subreviewer for 15th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2014).
- Subreviewer for Haifa Verification Conference (HVC 2014).
- Subreviewer for Ershov Informatics Conference (PSI 2014).
- Subreviewer for 6th International Symposium on Symbolic Computation in Software Science (SCSS 2014).
- Subreviewoer for 25th Conference on Automated Deduction (CADE 2015)
- Organizer for 1st Self Organizing Self Managing Clouds Workshop (SOSeMC 2016) co-located with ICAC 2016
- Member in the technical program committee for SOSeMC 2016

Declarație

Subsemnatul, Ioan-Dumitru Drăgan, Lector în cadrul Departamentului de Tehnologii Digitale și Inginerie Software, Facultatea de Informatică, Universitatea de Vest din Timișoara, declar pe propria răspundere că nu am fost nici lucrător și nici colaborator al securității.

Timișoara, 14.07.2025

Lect. Dr. Ioan Drăgan