

# Iuliu Vasilescu

- Curriculum Vitae -

## PERSONAL DATA

Citizenship: Romanian  
E-mail: iuliu@tiaresearch.com, iuliu@csail.mit.edu  
Phone: + 4 0724 849 008, + 1 702 508 8057

## EDUCATION

PhD in Computer Science and Robotics, 2002-2008, Massachusetts Institute of Technology (MIT), Cambridge, USA  
scale 1-5: GPA: 5.0  
MS in Computer Science 2000-2001 from the "Politehnica" University of Bucharest (UPB), Romania  
scale 1-10: GPA: 9.37, Graduation Project: 10  
BS in Computer Science and Electrical Engineering, 1995-2000 "Politehnica" University of Bucharest, Romania  
scale 1-10: GPA: 9.25, Graduation Project: 10  
Technical Engineer, 1997-1998, Dept. of Applied Computer Science, Institut Supérieur de Technologie, Luxembourg.  
The graduation project AMICA was graded with A+

## AWARDS

US Presidential Fellowship - 2003  
Romanian Government "Merit" Fellowship - 1995-2000 Granted annually to the top 3% students  
Luxembourg Government Fellowship - 1997-1998 Fellowship for study and research abroad  
Third place - 1998 South-Eastern Europe ACM Computer Science Contest, Bucharest, Romania.  
Silver Medal - 1995 International Olympiad of Informatics, Eindhoven, Netherlands.  
Gold Medal - 1994 Balkan Olympiad of Informatics, Salonic, Greece. (ranked 1st)  
Bronze Medal - 1994 Central European Olympiad of Informatics, Cluj, Romania

## TEACHING

Teaching Assistant, MIT: Introduction to Theory of Computation (Recitations, Fall 2003)  
Teaching Assistant, MIT: Introduction to Computer Science (Recitations, Spring 2004)  
Lecturer, UPB: Operating Systems Design (Course and Recitations, Spring 2001),  
Lecturer, UPB: Expert System (Course and Recitations, Fall 2001)  
Lecturer, UPB: Introduction to Artificial Intelligence (Course and Recitations, Spring 2002)  
High School Teacher, Tudor Vladimirescu High School (1997-1998)

## WORK EXPERIENCE

2016- Assistant Professor, Politehnica University of Bucharest, Department of Computer Science  
2009- Founder and CTO of TIA RESEARCH SRL, a company specialized in research and design of custom  
embedded electronics and software  
example of a project: Wireless/GSM multi sensor cloud alert system: <http://www.temperaturealert.com/>  
2014-2015 CTO, Carniprod SRL TULCEA. Managing a maintenance and development team of 120 technicians and  
engineers  
2004-2008 Research Assistant, MIT, as part of my PhD work. Projects include:  
AMOUR - design (mechanical, electronics and algorithms) and fabrication of a modular autonomous  
underwater robot for imaging surveys, surveillance, optical data muling, acoustical localization, autonomous  
docking, dynamic payload transport.  
AquaNet - design (mechanical, electronics and algorithms) of underwater wireless sensor network capable of  
data collection, communications, acoustic localization and tracking, surveillance  
AquaLight - design (mechanical, electronics and algorithms) of an adaptive illumination system for taking  
accurate color underwater images, a long standing problem  
iV Modem - design (electronics and algorithms) of an underwater acoustic modem for data communication and  
range measurement using ultrasound  
AquaOptical - design (electronics and algorithms) of an underwater optical modem for high speed  
communication using green light  
1997-2002 Founder and CTO, DISTINTO SRL a company with 15 employees specialized in production optimization  
software  
AMICCA - design and implementation of an automated system for cost optimization for print industry  
Amica2Print - design and implementation of real time production scheduling for print industry  
TRIBAR - design and programming of a 3DOF pipe cleaning robot  
2000 Head of the Scientific Committee for the Central European Olympiad of Informatics  
1996-2001 Member in the National Committee for Computer Science Competitions, proposing problems and  
evaluating high school students

1992-1996 Independent Software Developer, developing stock and assets management software

## **PUBLICATIONS**

1360 Citations on Google Scholar <https://scholar.google.ro/citations?user=HYZAnoYAAAAJ>

PDFs: <http://iuliu.com/Main/Publications/>

Autonomous Depth Adjustment for Underwater Sensor Networks: Design and Applications

C. Detweiler, M. Doniec, I. Vasilescu, and D. Rus

2012 IEEE/ASME Transactions on Mechatronics

Autonomous Gathering of Livestock Using a Multi-functional Sensor Network Platform

Marek Doniec, Carrick Detweiler, Iuliu Vasilescu, Dean Anderson, and Daniela Rus

2010 Proceedings of 2010 ACM Workshop on Hot Topics in Embedded Networked Sensors (HotEMNETS)

Using a Multi-functional Sensor Network Platform for Large-Scale Applications to Ground, Air, and Water Tasks

Elizabeth Basha, Marek Doniec, Carrick Detweiler, Iuliu Vasilescu, and Daniela Rus

2010 Proceedings of 2010 ACM Workshop on Hot Topics in Embedded Networked Sensors (HotEMNETS)

Complete SE(3) Underwater Robot Control with Arbitrary Thruster Configurations

Marek Doniec, Iuliu Vasilescu, Carrick Detweiler, and Daniela Rus

2010 Proc. of IEEE International Conference on Robotics and Automation (ICRA)

Amour V: a Hovering Energy Efficient Underwater Robot Capable of Dynamic Payloads

Iuliu Vasilescu, Carrick Detweiler, Marek Doniec, Daniel Gurdan, Steffan Sosnowski, Jan Stumpf, and Daniela Rus

2010 The International Journal of Robotics Research

Using Optical Communication for Remote Underwater Robot Operation

Marek Doniec, Carrick Detweiler, Iuliu Vasilescu and Daniela Rus

2010 Proc. of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

AquaOptical: A Lightweight Device for High-Rate Long-Range Underwater Point-to-Point Communication

Marek Doniec, Carrick Detweiler, Iuliu Vasilescu, Mandar Chitre, Matthias Hoffmann-Kuhnt, and Daniela Rus

2010 Marine Technology Society Journal

Color-Accurate Underwater Imaging using Perceptual Adaptive Illumination

Iuliu Vasilescu, Carrick Detweiler, and Daniela Rus

2010 Proc. of Robotics: Science and Systems (RSS)

Autonomous Depth Adjustment for Underwater Sensor Networks

Carrick Detweiler, Marek Doniec, Iuliu Vasilescu, Elizabeth Basha, and Daniela Rus

2010 Proceedings of the Fifth ACM International Workshop on UnderWater Networks

Experiments with Cooperative Control of Underwater Robots

Matthew Dunbabin, Peter Corke, Iuliu Vasilescu, and Daniela Rus

2009 The International Journal of Robotics Research

AquaOptical: A Lightweight Device for High-rate Long-range Underwater Point-to-Point Communication

Marek Doniec, Iuliu Vasilescu, Carrick Detweiller, Mandar Chitre, Matthias Hoffmann-Kuhnt, and Daniela Rus

2009 OCEANS US

Using Light Underwater: Devices, Algorithms and Systems for Maritime Persistent Surveillance

Iuliu Vasilescu

2009 PhD Thesis, MIT

Miche: Modular Shape Formation by Self-Disassembly

Kyle Gilpin, Keith Kotay, Daniela Rus, and Iuliu Vasilescu

2008 The International Journal of Robotics Research

Saving Energy with Buoyancy and Balance Control for Underwater Robots with Dynamic Payloads

Carrick Detweiler, Stefan Sosnowski, Iuliu Vasilescu, and Daniela Rus

2008 Proc. of the 11th International Symposium on Experimental Robotics (ISER)

Data-Driven Identification of Group Dynamics for Motion Prediction and Control  
Mac Schwager, Carrick Detweiler, Iuliu Vasilescu, Dean M. Anderson, and Daniela Rus  
2008 Journal of Field Robotics

Experiments with Underwater Robot Localization and Tracking  
Peter Corke, Carrick Detweiler, Mathew Dunbabin, Michael Hamilton, Daniela Rus, and Iuliu Vasilescu  
2007 Proc. of IEEE International Conference on Robotics and Automation (ICRA)

An Underwater Sensor Network with Dual Communications, Sensing, and Mobility  
Carrick Detweiller, Iuliu Vasilescu, and Daniela Rus  
2007 OCEANS Europe

AquaNodes: An Underwater Sensor Network  
Iuliu Vasilescu, Carrick Detweiler, and Daniela Rus  
2007 WuWNet

A soft touch: Compliant Tactile Sensors for Sensitive Manipulation  
Eduardo Torres-Jara, Iuliu Vasilescu, and Raul Coral  
2006 MIT Technical Report

Experiments with Cooperative Networked Control of Underwater Robots  
Matthew Dunbabin, Iuliu Vasilescu, Peter I. Corke, and Daniela Rus  
2006 Proc. of The 10th International Symposium on Experimental Robotics (ISER)

Data muling over underwater wireless sensor networks using an autonomous underwater vehicle  
Mathew Dunbabin, Peter Corke, Iuliu Vasilescu, and Daniela Rus  
2006 Proc. of IEEE International Conference on Robotics and Automation (ICRA)

Krill: An Exploration in Underwater Sensor Networks  
Iuliu Vasilescu, Keith Kotay, Daniela Rus, Leslie Overs, Pavan Sikka, Mathew Dunbabin, P. Chen, and Peter Corke  
2005 Proc. of The Second IEEE Workshop Embedded Networked Sensors. (EmNetS-II)

Autonomous Modular Optical Underwater Robot (AMOUR) Design, Prototype and Feasibility Study  
Iuliu Vasilescu, Paulina Varshavskaya, Keith Kotay, and Daniela Rus  
2005 Proc. of IEEE International Conference on Robotics and Automation (ICRA)

The Complexity of Safety Stock Placement in General-Network Supply Chains  
Ekaterina Lesnaia, Iuliu Vasilescu, and Stephen C. Graves  
2005 Innovation in Manufacturing Systems and Technology

Data collection, storage, and retrieval with an underwater sensor network  
Iuliu Vasilescu, Kotay Kotay, Daniela Rus, Mathew Dunbabin, and Peter Corke  
2005 Proceedings of the 3rd international conference on Embedded networked sensor systems (SenSys)

## **PATENTS**

"Adaptive Illumination for Color-Corrected Underwater Imaging" US Patent **8,106,944**

## **RESEARCH INTERESTS**

Autonomous Robotics, Sensor Networks, Machine Learning, Neural Networks, Nonlinear Control, Underwater Communication, Underwater Imaging, Electronics, Homomorphic Encryption, Cloud Computing Privacy, IoT

## **LANGUAGES**

	Understanding	Speaking	Writing
English	Proficient	Proficient	Proficient
French	Proficient	Intermediate	Intermediate
Italian	Proficient	Intermediate	Intermediate
Romanian	Proficient	Proficient	Proficient

## **HOBBIES**

Ballroom dancing, photography, hiking, skiing, scuba diving, tennis