

## PERSONAL INFORMATION

## Angelo Trotta



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✉ trotta@cs.unibo.it

Sex Male | Date of birth 06/03/1985 | Nationality Italian

## EDUCATION AND TRAINING

- 
- 09/1999–07/2004 **High school degree**  
Istituto tecnico professionale Leonardo da Vinci, Foggia (Italy)  
Computer expert - Graduated with vote 100/100
- 09/2004–03/2008 **Bachelor degree**  
Alma Mater Studiorum - University di Bologna, Bologna (Italy)  
Department of Computer Science (Summa Cum Laude)
- 09/2007–03/2011 **Master degree**  
Alma Mater Studiorum - University di Bologna, Bologna (Italy)  
Department of Computer Science (Summa Cum Laude)
- 15/10/2012–14/10/2013 **Research assistant**  
Alma Mater Studiorum - University di Bologna - Department of Computer Science and Engineering, Bologna (Italy)  
Research activity on: *modelling and simulation of multi-modal technologies, radio cognitive and learning algorithms to support self-organizing devices in wireless mobile networks.*
- 01/10/2015–01/04/2016 **Visiting student**  
Sorbonne Universités, Université de technologie de Compiègne, CNRS, Heudiasyc UMR 7253, Compiègne, France  
Research activity on: *definition and design of bio-inspired device-to-device protocols optimized for multi-robot networking; study and analysis of the literature regarding telecommunication and controlled mobility in autonomous unmanned vehicles networks; design and develop of simulation tools for the implementation of swarm mobility algorithms for autonomous wireless networks.*
- 01/01/2014–Present **Ph.D. Student**  
Computer Science and Engineering - Alma Mater Studiorum - University di Bologna - Department of Computer Science and Engineering, Bologna (Italy)
- 20/02/2017–Present **Research fellow**  
Research fellowship on: *“Design and performance evaluation of swarm mobility algorithms for self-organizing wireless networks”* - Alma Mater Studiorum - University di Bologna - Department of Computer Science and Engineering, Bologna (Italy)

RESEARCH TOPICS

- Activities
- Swarm intelligence and bio-inspired algorithms for self-organizing networks
  - Autonomous mobility in multi-robot system based on communications aspects
  - Integration of unmanned vehicles mobility control systems and communication protocols
  - Unmanned vehicles aided emergency networks
  - Wireless Sensor Networks and Mobile Wireless systems and applications
  - Cognitive Radio Networks

WORK EXPERIENCE

16/05/2011–12/10/2012 **Research and Development**  
 Zucchetti AXESS S.p.A.  
 via della Filanda, 20, Bologna (Italy)  
 Firmware developer for embedded solutions

**Business or sector** Professional, scientific and technical activities

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B1	B1	B2
French	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
 Common European Framework of Reference for Languages

**Computer skills** Programming languages: c, c++, java, python  
 Simulation tools: OMNeT++, NS-2, NS-3  
 Prototyping hardware: Arduino, RaspberryPI

FOLLOWED SCHOOLS

- Ph.D. school Cognitive Radios and Networks: Theory and Practice  
 Dublin, 13-16 May 2013
- Ph.D. school Nature-inspired Coordination for Complex Distributed Systems  
 Bologna, 5-9 February 2014
- Ph.D. school BISS 2014 - Bertinoro, 3-7 March 2014
- Big Data Analysis of Patterns in Media Content
  - An Introduction to Probabilistic and Quantum Programming
  - Development of dynamically evolving and self-adaptive software
- Ph.D. school Machine Learning: A Computational Intelligence Approach  
 Genova, 9-13 June 2014

Ph.D. school Network design and optimization: from theory to application  
Lipari, 6-12 July 2014

Ph.D. school Data Mining  
Bologna, September 2014

Ph.D. school Models and Algorithms for Matching and Assignment Problems  
Bologna, October-November 2014

#### TEACHING

Tutoring activities Tutor for the course of "Database systems", academic year 2016/2017, Bachelor Degree in Information Science for Management, University of Bologna

Co-supervising Bachelor Thesis co-supervisor: "*Progettazione e implementazione di una rete di sensori mobili Arduino per scenari di Disaster Recovery*", Matteo Martelli, 2013, University of Bologna

Co-supervising Master Thesis co-supervisor: "*Progettazione ed analisi di algoritmi di mobilità controllata per reti mesh aeree con vincoli di copertura e persistenza*", Eda Goga, 2016, University of Bologna

#### PUBBLICATIONS

2015 - Journal A. Trotta, M. Di Felice, L. Bedogni, L. Bononi, F. Panzieri *Connectivity recovery in post-disaster scenarios through Cognitive Radio swarms*, Computer Networks (COMNET), Volume 91, 14 November 2015, Pages 68-89, ISSN 1389-1286

2015 - Journal G. Aloï, L. Bedogni, L. Bononi, O. Briante, M. Di Felice, V. Loscri, P. Pace, F. Panzieri, G. Ruggeri, A. Trotta, "STEM-NET: How to Deploy a Self-Organizing Network of Mobile End-User Devices for Emergency Communication", on Elsevier Computer Communication Journal (COMCOM), 2015

2013 - Journal G. Aloï, L. Bedogni, M. Di Felice, V. Loscri, A. Molinaro, E. Natalizio, P. Pace, G. Ruggeri, A. Trotta, N. Zema, "STEM-NET: An evolutionary network architecture for smart and sustainable cities", on Transactions on Emerging Telecommunication Technologies (Wiley), 2013

2017 - Conferences A. Trotta, M. Di Felice, K. R. Chowdhury, L. Bononi, *Fly and Recharge: Achieving Persistent Coverage using Small Unmanned Aerial Vehicles (SUAVs)*, IEEE ICC 2017 Mobile and Wireless Networking, 21-25 May 2017, Paris, France

2017 - Conferences N. R. Zema, A. Trotta, G. Sanahuja, E. Natalizio, M. Di Felice, L. Bononi, *CUSCUS: An integrated simulation architecture for Distributed Networked Control Systems*, 2017 14th Annual IEEE Consumer Communications and Networking Conference (CCNC), 8-11 January 2017, Las Vegas, NV

2016 - Conferences A. Trotta, L. Bedogni, M. Di Felice, L. Bononi, E. Natalizio, *Enhancing TV White-Spaces Database with Unmanned Aerial Scanning Vehicles (UASVs)*, in Proc. of the 2nd Workshop on Micro Aerial Vehicle Networks, Systems, and Applications for Civilian Use (DroNet 2016), 26 June 2016, Singapore, Singapore

2015 - Conferences L. Bedogni, A. Trotta, M. Di Felice, On 3-Dimensional Spectrum Sharing for TV White and Gray Space Networks, to appear in Proc. of the 16th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM 2015), 14-17 June 2015, Boston (MA), USA.

- 2014 - Conferences M. Di Felice, A. Trotta, L. Bedogni, K.R. Chowdhury, L. Bononi, Self-Organizing Aerial Mesh Networks for Emergency Communication, in Proc. of the 25th IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC 2014 - Mobile and Wireless Networks), 2-5 September 2014, Washington, DC, USA.
- 2014 - Conferences L. Bedogni, M. Di Felice, A. Trotta, L. Bononi, Distributed Mobile Femto-Databases for Cognitive Access to TV White Spaces using PAWS, in Proc. of the 79th IEEE Vehicular Technology Conference (VTC 2014-Fall), 14-17 September 2014, Vancouver, Canada.
- 2013 - Conferences M. Di Felice, L. Bedogni, A. Trotta, L. Bononi, F. Panzieri, G. Ruggeri, G. Aloï, V. Loscri, P. Pace, Smartphones Like Stem Cells: Cooperation and Evolution for Emergency Communication in Post-Disaster Scenarios, in Proc. of the First IEEE International Black Sea Conference on Communications and Networking 2013 (IEEE BlackSeaCom 2013), July 3-5, 2013, Batumi, Georgia.
- 2013 - Conferences A. Trotta, M. Di Felice, L. Bedogni, L. Bononi, Re-establishing Network Connectivity in Post-Disaster Scenarios Through Mobile Cognitive Radio Networks, in Proc. of the 12th IEEE Mediterranean Ad Hoc Networking Workshop (IEEE Med-Hoc-Net 2013) **[BEST PAPER AWARD]**, June 24-26, 2013, Ajaccio, France.
- 2013 - Conferences L. Bedogni, A. Trotta, M. Di Felice, L. Bononi, Machine-to-Machine Communication over TV White Spaces for Smart Metering Applications, in Proc. of the 22nd IEEE International Conference on Computer Communications and Networks (ICCCN 2013), July 30-August 2, 2013, Nassau, Bahamas.
- 2013 - Conferences M. Di Felice, A. Trotta, L. Bedogni, L. Bononi, F. Panzieri, G. Ruggeri, V. Loscri, P. Pace, STEM-Mesh: Self-Organizing Mobile Cognitive Radio Network for Disaster Recovery Operations, in Proc. of the 9-th IEEE International Wireless Communications and Mobile Computing Conference (IWCMC 2013), July 1-5, 2013, Cagliari, Italy.
- 2017 - Demonstrations N. R. Zema, A. Trotta, G. Sanahuja, E. Natalizio, M. Di Felice, L. Bononi, *CUSCUS: CommUnicationS-Control distribUted Simulator*, 2017 14th Annual IEEE Consumer Communications and Networking Conference (CCNC), 8-11 January 2017, Las Vegas, NV

## PROGRAM COMMITTEES

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- TPC *Technical PC* member of the IEEE Third International Workshop on Emerging COgnitive Radio Applications and aLgorithms (CORAL 2017), held in conjunction with the IEEE WOWMOM 2017 conference, 12-15 June, 2017, Macao, Cina
- TPC *Technical PC* member of the IEEE Third International Workshop on Emerging COgnitive Radio Applications and aLgorithms (CORAL 2016), held in conjunction with the IEEE WOWMOM 2016 conference, 21-24 June, 2016, Coimbra, Portugal
- TPC *Technical PC* member of the IEEE 81th Vehicular Technology Conference (VTC Fall 2015), Next Generation Wireless Networks Symposium, 6-9 September, 2015, Boston, MA, USA
- TPC *Technical PC* member of the IEEE Third International Workshop on Emerging COgnitive Radio Applications and aLgorithms (CORAL 2015), held in conjunction with the IEEE WOWMOM 2015 conference, 14-17 June, 2015, Boston, MA, USA

## ADDITIONAL INFORMATION

Personal data    Amateur radio license (2013)