

Personal Data

Date of Birth: April 10th, 1981
Place of Birth: Busto Arsizio (Varese), Italy
Citizenship: Italian
Languages: Italian (native), English, German (basic)
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Current Position

Present **Senior Researcher**
April 2014 Networked Embedded Systems Group, University of Duisburg-Essen, Germany

Past Positions

March 2014 **Alexander von Humboldt Post-Doctoral Fellow**
August 2012 Communication and Distributed Systems Group, RWTH Aachen University, Germany

July 2012 **Post-Doctoral Researcher**
January 2012 Communication and Distributed Systems Group, RWTH Aachen University, Germany

December 2011 **Post-Doctoral Researcher**
May 2011 Fondazione Bruno Kessler (FBK-IRST), Embedded System Unit (ES), Trento, Italy

April 2011 **Ph. D. Student**
November 2006 Fondazione Bruno Kessler (FBK-IRST), Embedded System Unit (ES), Trento, Italy
Advisor: Amy Murphy

October 2006 **Research Assistant**
May 2006 Dipartimento di Elettronica e Informazione, Politecnico di Milano, Italy

Awards

- Alexander von Humboldt Post-Doctoral Fellowship. Germany, 2012.
- EWSN/CONET Best Ph.D. Thesis Award, Trento, Italy, 2012.
- Best Paper Award at International Conference on Information Processing in Wireless Sensor Networks (IPSN/SPOTS), Chicago (IL), USA, 2011.
- Best Paper Award at International Conference on Information Processing in Wireless Sensor Networks (IPSN/SPOTS), San Francisco (CA), USA, 2009.

Education

- April 2011
November 2006
- Ph. D. in Information and Communication Technology**
Fondazione Bruno Kessler (FBK-IRST), Embedded System Unit (ES), Trento, Italy
Thesis: *Guaranteeing Communication Quality in Real World WSN Deployments*
Advisor: Amy Murphy
EWSN/CONET Best Ph.D. Thesis Award, Trento, Italy, 2012.
- April 2006
October 2003
- Laurea Specialistica degree (equivalent to M. Sc.) in Computer Engineering**
Politecnico di Milano, Italy
Thesis: *Spazi di tuple e publish-subscribe: un caso di studio di integrazione con i middleware LIME e Reds* (Tuple spaces and publish-subscribe: a case study integrating the LIME and Reds middleware)
co-authored with Andrea Bogni
Advisor: prof. Gian Pietro Picco
Co-advisor: prof. Amy Murphy
Grade: 110/110 cum laude
- October 2003
September 2000
- Laurea degree (equivalent to B. Sc.) in Computer Engineering**
Politecnico di Milano, Italy
Thesis: *Studio e realizzazione di un compilatore per il linguaggio di workflow Xlang* (Analysis and development of a compiler for the workflow language Xlang)
co-authored with Luca Caretoni
Advisor: prof. Carlo Ghezzi
Grade: 110/110 cum laude

Relevant Courses Attended

- *International CONET Summer School: SENIOT, From Sensor Networks to Networked Intelligent Objects*, Bertinoro, Italy, August, 2009. Lecturers: Andrew T. Campbell, Stamatis Karnouskos, Koen Langendoen, Paul Lukowicz, Friedemann Mattern, Luca Mottola, Shashi Prabh, Bernhard Rinner, Kay Roemer, Ali Salehi, Tiemo Voigt, and Kamin Whitehouse.

Publications

International Journals

- [1] Richard Figura, Matteo Ceriotti, Chia-Yen Shih, Margarita Mulero-Pázmány, Songwei Fu, Roberta Daidone, Sascha Jungen, Juanjo José Negro, and Pedro José Marrón. IRIS: Efficient Visualization, Data Analysis and Experiment Management for Wireless Sensor Networks. In *EAI Endorsed Transactions on Ubiquitous Environments*. Volume 1, Issue 3. November 2014.
- [2] Tomás Fernández-Steeger, Matteo Ceriotti, JÓ Agila Bitsch Link, Matthias May, Klaus Hentschel, and Klaus Wehrle. "And Then, the Weekend Started": Story of a WSN Deployment on a Construction Site. In *Journal of Sensor and Actuator Networks*. Volume 2, Issue 1. March 2013.
- [3] Luca Mottola, Gian Pietro Picco, Matteo Ceriotti, Ștefan Gună, and Amy L. Murphy. Not All Wireless Sensor Networks Are Created Equal: A Comparative Study On Tunnels. In *ACM Transactions on Sensor Networks*. Volume 7, Issue 2. August 2010.
- [4] Daniele Zonta, Huayong Wu, Matteo Pozzi, Paolo Zanon, Matteo Ceriotti, Luca Mottola, Gian Pietro Picco, Amy L. Murphy, Ștefan Gună, and Michele Corrá. Wireless Sensor Networks for Permanent Health Monitoring of Historic Constructions. In *SPIE International Journal on Smart Structures and Systems. Special Issue on Wireless Sensor Advances and Applications for Civil Infrastructure Monitoring*. Volume 6, Issue 5-6. June 2010.

International Conferences and Workshops

- [5] Florian Schmidt, Matteo Ceriotti, Niklas Hauser, and Klaus Wehrle. If You Cant Take The Heat: Temperature Effects On Low-Power Wireless Networks And How To Mitigate Them. In *Proceedings of the 12th European Conference on Wireless Sensor Networks (EWSN'15)*, Porto (Portugal), February 2015.
- [6] Hanno Wirtz, Matteo Ceriotti, and Klaus Wehrle. Pervasive Content-centric Wireless Networking. In *Proceedings of the 15th IEEE International Symposium on a World of Wireless Mobile and Multimedia Networks (WoW-MoM'14)*, Sydney, Australia, June 2014.
- [7] Hanno Wirtz, Torsten Zimmermann, Matteo Ceriotti, and Klaus Wehrle. CA-Fi: Ubiquitous Mobile Wireless Networking without 802.11 Overhead and Restrictions. In *Proceedings of the 15th IEEE International Symposium on a World of Wireless Mobile and Multimedia Networks (WoWMoM'14)*, Sydney, Australia, June 2014.
- [8] Hanno Wirtz, Jan R uth, Torsten Zimmermann, Matteo Ceriotti, and Klaus Wehrle. A Wireless Application Overlay for Ubiquitous Mobile Multimedia Sensing and Interaction. In *Proceedings of the 5th ACM Multimedia Systems Conference (MMSys 2014)*, Singapore, March 2014.
- [9] Florian Schmidt, Matteo Ceriotti, and Klaus Wehrle. Mutation Patterns of Corrupted Packets in Low-Power Wireless Networks. In *Proceedings of the 8th ACM International Workshop on Wireless Network Testbeds, Experimental Evaluation and Characterization (WiNTECH)*, Miami, USA, September 2013.
- [10] Marcel Bosling, Matteo Ceriotti, Torsten Zimmermann, JÓ  gila Bitsch Link, and Klaus Wehrle. Fingerprinting Channel Dynamics in Indoor Low-Power Wireless Networks. In *Proceedings of the 8th ACM International Workshop on Wireless Network Testbeds, Experimental Evaluation and Characterization (WiNTECH)*, Miami, USA, September 2013.
- [11] Matteo Ceriotti, Michele Corrá, Leandro D'Orazio, Roberto Doriguzzi, Daniele Facchin, Ștefan Gună, Gian Paolo Jesi, Renato Lo Cigno, Luca Mottola, Amy L. Murphy, Massimo Pescalli, Gian Pietro Picco, Denis Pregolato, and Carloalberto Torghele. Is There Light at the Ends of the Tunnel? Wireless Sensor Networks for Adaptive Lighting in Road Tunnels. In *Proceedings of the 10th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN'11, SPOTS track)*, Chicago (IL), USA, April 2011. *Best Paper Award*.
- [12] Matteo Ceriotti, Matteo Chini, Amy L. Murphy, Gian Pietro Picco, Francesca Cagnacci, and Bryony Tolhurst. Motes in the Jungle: Lessons Learned from a Short-term WSN Deployment in the Ecuador Cloud Forest In *Proceedings of the 4th Workshop on Real-World Wireless Sensor Networks (RealWSN'10)*, Colombo, Sri Lanka, December 2010.

- [13] Huayong Wu, Daniele Zonta, Matteo Pozzi, Paolo Zanon, Matteo Ceriotti, Luca Mottola, Gian Pietro Picco, Ștefan Gună, Amy L. Murphy, and Michele Corrá. Wireless Sensor Networks for Permanent Monitoring of Heritage Buildings. In *Proceedings of the SPIE International Conference on Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems*, San Diego (CA), USA, March 2010.
- [14] Daniele Zonta, Matteo Pozzi, Huayong Wu, Paolo Zanon, Matteo Ceriotti, Luca Mottola, Gian Pietro Picco, Amy L. Murphy, and Ștefan Gună. Real-Time Health Monitoring of Historic Buildings with Wireless Sensor Networks. In *Proceedings of the 7th International Workshop on Structural Health Monitoring (IWSHM'09)*, Stanford (CA), USA, September 2009.
- [15] Matteo Ceriotti, Luca Mottola, Gian Pietro Picco, Amy L. Murphy, Ștefan Gună, Michele Corrá, Matteo Pozzi, Daniele Zonta, and Paolo Zanon. Monitoring Heritage Buildings with Wireless Sensor Networks: The Torre Aquila Deployment. In *Proceedings of the 8th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN'09, SPOTS track)*, San Francisco (CA), USA, April 2009. *Best Paper Award*.
- [16] Matteo Ceriotti, Amy L. Murphy, and Gian Pietro Picco. Data Sharing vs. Message Passing: Synergy or Incompatibility? An Implementation-Driven Case Study. In *Proceedings of the 23rd Annual ACM Symposium on Applied Computing (SAC'08)*, Fortaleza, Brazil, March 2008.

Posters and Demos

- [17] Richard Figura, Sascha Jungen, Matteo Ceriotti, and Pedro José Marrón. Deployment, Reconfiguration and Adaptation through Modelling and Simulation in DREAMS. Poster in *12th European Conference on Wireless Sensor Networks (EWSN'15)*, Porto (Portugal), February 2015.
- [18] Hanno Wirtz, Matteo Ceriotti, Klaus Wehrle. Content-centric Wireless Networking. Poster in *15th International Workshop on Mobile Computing Systems and Applications (HotMobile 2014)*, Santa Barbara, USA, February 2014.
- [19] Matteo Chini, Matteo Ceriotti, Ramona Marfievici, Amy L. Murphy, and Gian Pietro Picco. TRIDENT, Untethered Observation of Physical Communication Made to Share. Demonstration in *Proceedings of the 9th ACM International Conference on Embedded Networked Sensor Systems (SenSys)*, Seattle (WA), USA, November 2011.
- [20] Matteo Ceriotti, and Amy L. Murphy. A MAC Contest between LPL (the Champion) and Reins-MAC (the Challenger, an Anarchic TDMA Scheduler Providing QoS). Demonstration in *Proceedings of the 8th ACM International Conference on Embedded Networked Sensor Systems (SenSys)*, Zurich, Switzerland, November 2010.
- [21] Matteo Ceriotti, and Amy L. Murphy. Introducing an adaptive MAC layer to support Quality of Service in WSN. Poster Abstract in *the 5th European conference on Wireless Sensor Networks (EWSN'08)*, Bologna, Italy, January 2008.

Doctoral Thesis

- [22] Matteo Ceriotti. Guaranteeing Communication Quality in Real World WSN Deployments. Advisor: Dr. Amy L. Murphy. PhD Thesis, University of Trento (Italy), April 2011. *EWSN/CONET Best Ph.D. Thesis Award*.

Non-Refereed Publications

- [23] Florian Schmidt, Matteo Ceriotti, Niklas Hauser, and Klaus Wehrle. HotBox: Testing Temperature Effects in Sensor Networks. *Technical Report: AIB-2014-14, RWTH Aachen*, 2014.
- [24] Matteo Ceriotti, Alexandr Krylovskiy, and Klaus Wehrle. Towards Application-Centric Deployment of Low-Power Wireless Networks. *Sammelband der Beiträge zum 12. GI/ITG KuVS Fachgespräch "Drahtlose Sensornetze" (Technical Report)*, Cottbus, Germany, September 2013.
- [25] Elias Weingaertner, Matteo Ceriotti, and Klaus Wehrle. How to simulate the Internet of Things? *Sammelband der Beiträge zum 11. GI/ITG KuVS Fachgespräch "Drahtlose Sensornetze" (Technical Report)*, Darmstadt, Germany, September 2012.

[26] Matteo Ceriotti, Roberto Doriguzzi, Ștefan Gună, Renato Lo Cigno, Luca Mottola, Amy L. Murphy, Matteo Nardelli, Gian Pietro Picco, and Carloalberto Torghele. Adaptive Lighting in Road Tunnels Using Wireless Sensor Networks. *Demo Abstract at the 1st European TinyOS Technology Exchange (ETTX'09)*, Cork, Ireland, February 2009.

Professional Service

- Program committee member of:
 - Workshop on Real World Wireless Sensor Networks (RealWSN 2015)
 - International Conference on Sensor Systems and Software (S-CUBE 2-15)
 - International Conference on Sensor Technologies and Applications (SENSORCOMM 2015)
 - International Conference on Distributed Computing in Sensor Systems (DCOSS 2014)
 - European Conference on Wireless Sensor Networks (EWSN 2014, 2015)
 - International Workshop on Software Engineering for Sensor Network Applications (SESENA 2013)
 - International Conference on Information Processing in Sensor Networks (IPSN 2013)
 - International Conference on Cyber, Physical, and Social Computing (CPSCom 2012)
- Reviewer for (among others):
 - Transactions on Sensor Networks (TOSN)
 - Transactions on Computers (TC)
 - Transactions on Mobile Computing (TMC)
 - Ad Hoc Networks (ADHOC)

Public Talks

- “Sensor Networks in the Real World: Toward an Easy to Deploy Technology”, invited talk at the Sino-German Workshop on Monitoring and Early Warning of Geohazards under Global Climate Changes, Beijing, September 2012.
- “Bringing Anarchy to TDMA in the Versatile, Fully-Distributed Reins-MAC”, invited talk at the Workshop on Information Processing Systems and Wireless Sensor Networks, Helsinki, Finland, November 2011.
- “TeenyLime: Data Sharing Abstractions for Real-World Wireless Sensor Networks”, tutorial at the 8th European Conference on Wireless Sensor Networks (EWSN’10), Bonn (Germany), February 2011.
- “Motes in the Jungle: Lessons Learned from a Short-term WSN Deployment in the Ecuador Cloud Forest”, paper presentation at the 4th Workshop on Real-World Wireless Sensor Networks (RealWSN’10), Colombo (Sri Lanka), December 2010.
- “Monitoring Heritage Buildings with Wireless Sensor Networks”, invited talk at the 1st Workshop on Structural Health Monitoring, Helsinki, Finland, November 2009.
- “Monitoring Heritage Buildings with Wireless Sensor Networks: The Torre Aquila Deployment”, paper presentation at the 8th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN’09, SPOTS track), San Francisco (CA), USA, April 2009.
- “Data Sharing vs. Message Passing: Synergy or Incompatibility? An Implementation-Driven Case Study”, paper presentation at the 23rd Annual ACM Symposium on Applied Computing (SAC’08), Fortaleza, Brazil, March 2008.

Tutorials

- Matteo Ceriotti, Ștefan Gună, Luca Mottola, Amy L. Murphy, and Gian Pietro Picco. “TeenyLime: Data Sharing Abstractions for Real-World Wireless Sensor Networks”, at the 8th European Conference on Wireless Sensor Networks (EWSN’10), Bonn (Germany), February 2011.

Teaching Activities

- Spring 2015 - University of Duisburg-Essen, Germany:
 - Tutor for *Wireless Sensor Network Application Development Project*.
- Fall 2014 - University of Duisburg-Essen, Germany:
 - Tutor for *Wireless Sensor Network Seminar*.
- Spring 2014 - University of Duisburg-Essen, Germany:
 - Tutor for *Wireless Sensor Network Application Development Project*.
 - Tutor for *Wireless Sensor Network Seminar*.
- Spring 2013 - RWTH Aachen University, Germany:
 - Teaching Assistant for *Laboratory on Wireless Sensor Networks* (graduate course taught by Prof. Klaus Wehrle).
- Fall 2012 - RWTH Aachen University, Germany:
 - Teaching Assistant for *Research Focus Class on Internet of Things* (graduate course taught by Prof. Klaus Wehrle).
- Spring 2012 - RWTH Aachen University, Germany:
 - Teaching Assistant for *Research Focus Class on Sensor Networks* (graduate course taught by Prof. Klaus Wehrle).
- Spring 2011 - University of Trento, Italy:
 - Teaching Assistant for *Wireless Sensor Networks* (graduate course taught by Prof. Gian Pietro Picco).
- Spring 2010 - University of Trento, Italy:
 - Teaching Assistant for *Wireless Sensor Networks* (graduate course taught by Prof. Gian Pietro Picco).
- Spring 2009 - University of Trento, Italy:
 - Teaching Assistant for *Wireless Sensor Networks* (graduate course taught by Prof. Gian Pietro Picco);
 - Teaching Assistant for *Programming Fundamentals I* (undergraduate course taught by Prof. Gian Pietro Picco).
- Fall 2007 - University of Trento, Italy:
 - Teaching Assistant for *Programming Fundamentals I* (undergraduate course taught by Prof. Gian Pietro Picco).

Supervised Theses

- Ninja Heiße, *Combining Wireless Sensor Networks and Mobile Robots for Energy-Efficient Surveillance* (Ongoing) Master Thesis, University of Duisburg-Essen (Germany), 2015
- Michael Krane, *Evaluation of a Lightweight Debugging Platform for Mobile Sensor Networks* (Ongoing) Bachelor Thesis, University of Duisburg-Essen (Germany), 2015
- Niklas Hauser, *Temperature Dependency of Bit Error Distributions in WSNs* Bachelor Thesis, RWTH Aachen University (Germany), 2014
- Bernhard Kirchen, *DynaTop: Enabling Dynamic Topologies in Sensor Network Testbeds* Master Thesis, RWTH Aachen University (Germany), 2014

- Alexandr Krylovskiy, *Application-Centric Deployment of Low-Power Wireless Networks*
Master Thesis, RWTH Aachen University (Germany), 2013
- Thomas Müller, *Ask Low-Power Networks Their History*
Bachelor Thesis, RWTH Aachen University (Germany), 2013
- Rene Fibus, *Mote Placement with a Smartphone*
Bachelor Thesis, RWTH Aachen University (Germany), 2013
- Maximilian Wilms, *Investigating Network Quality Control by Distributed Parameter Adaptation in WSNs*
Diploma Thesis, RWTH Aachen University (Germany), 2013
- Torsten Redmann, *Enabling Efficient Decentralized Sharing and Configuration of Services in WSNs*
Diploma Thesis, RWTH Aachen University (Germany), 2013
- Marcel Bosling, *Decentralized Detection of Communication State Changes in WSNs*
Diploma Thesis, RWTH Aachen University (Germany), 2013
- Matteo Chini, *From the Analysis of the Physical Network to the Installation of a Wireless Sensor Network*
Master Thesis, University of Trento (Italy), 2010
- Marco Menegazzi, *A Java Frontend for Simulations of WSNs Based on the Data Sharing Paradigm*
Master Thesis, University of Trento (Italy), 2010

References

- Prof. Dr. Pedro José Marrón* Networked Embedded Systems Group
University of Duisburg-Essen
Shützenbahn 70, D-45157 Essen, Germany
Tel.: +49 201 183 4170
email: pjmarron@uni-due.de
- Prof. Dr.-Ing. Klaus Wehrle* Chair of Communication and Distributed Systems (Informatik 4)
RWTH Aachen University
Ahornstrae 55, D-52074 Aachen, Germany
Tel.: +49 241 80 21400
email: wehrle@comsys.rwth-aachen.de
- Dr. Amy L. Murphy* Embedded Systems Unit (ES)
Center for Information Technology (IRST)
Bruno Kessler Foundation (FBK)
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email: murphy@fbk.eu
- Prof. Gian Pietro Picco* Dipartimento di Ingegneria e Scienza dell'informazione (DISI)
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Additional references are available upon request.