Dzmitry Kliazovich

Last updated in June 2016. For more updated version please check LinkedIn profile.

Contact Information

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Highlights

- Excellent record of project acquisition at European (FP7, H2020, ERC) and national (FNR-Luxembourg) levels
- Experienced project leader with a proven track record of team management
- Conference organizer and editor in leading scientific journals
- Over 12 years of scientific research experience with a focus on Telecommunications, Cloud/Edge Computing, Energy Efficiency, Internet-of-Things (IoT) and Big Data

Education

University of California, Los Angeles, CA USA
Visiting Research Fellow at Computer Science Department, 2005/2006

University of Trento, Trento, Italy
Ph.D. in Information and Telecommunication Technologies, December 2006
- Received "Best PhD Thesis Award"

Belarusian State University of Informatics and Radio-electronics (BSUIR), Minsk, Belarus
M.S. in Telecommunication systems, June 2002

Research Projects

FNR-CORE/ECO-CLOUD – 2013/2015, 400K euro The Energy-Efficient Communications in Cloud Computing (ECO-CLOUD) is a project of FNR (National Research Fund, Luxembourg) which aims to provide an integrated solution to the autonomous energy-efficient management of communication networks and processes in a cloud computing environment. Dzmitry Kliazovich is the **coordinator and principle investigator (PI)** in this project.

FNR-AFR/INTERCOM – 2011/2013, 105K euro The Energy-Efficient Networking in Autonomic Cloud Computing (INTERCOM) is a project of FNR (National Research Fund, Luxembourg) which targets to provide a holistic energy-efficient solution to autonomous management of interconnection networks in a cloud computing environment. Dzmitry Kliazovich was the **principle investigator and coordinator (PI)** in this project.

EU-FP7/UNIVERSELF – 2010/2013, 16M euro In the face of growing management complexity of future networking systems UNIVERSELF aims to develop a unified management framework based on the distributed self-management concept. Dzmitry Kliazovich is leading the Technical Research Centre of Finland (VTT) work packages related to the development of hierarchical network expert systems.

FNR-CORE/GREEN-IT – 2010/2012, 430K euro The Energy-efficient Resource Allocation in Autonomic Cloud Computing (GREEN-IT) is a project of FNR (National Research Fund, Luxembourg) aiming to provide an autonomic energy-efficient solution to manage, provision, and administer the various resources of a cloud system such as distributed data centers. Dzmitry Kliazovich is in charge of the University of Luxembourg work package focusing on energy efficient optimization of communication systems.

EU-FP7/EUWB – 2008/2011, 21M euro The Coexisting Short Range Radio by Advanced Ultra-

WideBand (EUWB) project is an effort of 26 leading industrial and academic partners, which aims on leveraging, and enhancement of the scientific knowledge base in the advanced ultra-wideband radio technology. Dzmitry Kliazovich is in charge of the subpart responsible for the development of cognitive techniques and signaling at higher layers of the protocol stack, the effort led by the Create-Net research center.

EU-FP6/SAFESPOT – 2006/2010, 39M euro The Cooperative Systems for Road Safety "Smart Vehicles on Smart Roads" is an integrated EU project aiming at creating dynamic cooperative networks where the vehicles and the road infrastructure communicate to share information gathered on board and at the roadside to enhance the drivers' perception of the vehicle surroundings. Dzmitry Kliazovich is leading University of Trento/Create-Net work packages focused the development of mobility-aware routing for vehicular networks.

Awards

- Exemplary Editor for the year, IEEE Communications Surveys and Tutorials (IF: 9.22), 2013-2014.
- IEEE/ACM Best Paper Award of the International Conference on Green Computing and Communications (GreenCom), Hangzhou, China, December 2010.
- AFR Fellowship, National Research Foundation of Luxembourg (FNR), 2010.
- The European Research Consortium for Informatics and Mathematics (ERCIM) Fellowship, sponsored by National Research Foundation of Luxembourg (FNR) and VTT (Finland), 2009.
- Best Ph.D. Thesis Award, University of Trento, 2007.
- Italian Ministry of Education Ph.D. Scholarship, 2003.

Selected Publications

The full list contains a total of more than 100 publications and available at http://kliazovich.org, h-index: 17.

- "Performance and Energy Efficiency Metrics for Communication Systems of Cloud Computing Data Centers," IEEE Transactions on Cloud Computing, 2015. Authors: C. Fiandrino, D. Kliazovich, P. Bouvry, A. Y. Zomaya.
- "DENS: Data Center Energy-Efficient Network-Aware Scheduling," Cluster Computing, Springer, vol. 16, no. 1, pp. 65-75, 2013. Authors: D. Kliazovich, P. Bouvry, Samee U. Khan [133 citations]
- "GreenCloud: A Packet-level Simulator of Energy-aware Cloud Computing Data Centers," Journal of Supercomputing, Springer, vol. 62, no. 3, pp. 1263-1283, 2012. Authors: D. Kliazovich, P. Bouvry, S. U. Khan. [310 citations]
- "A Metamodeling Approach for Cross-layer Optimization: A framework and Application to Voice over WiFi," Simulation Modelling Practice and Theory, Elsevier, vol. 19, no. 9, pp. 2117 – 2129, 2011. Authors: F. Granelli, D. Kliazovich, J. Hui, I. Papapanagiotou, M. Devetsikiotis.
- "Towards Cognitive Internet: an Evolutionary Vision," Cognitive Radio and Networking for Heterogeneous Wireless Networks, Springer, 2014, ISBN 978-3-319-01717-4. Authors: F. Granelli, D. Kliazovich, N. Malheiros.
- "Energy Consumption Optimization in Cloud Data Centers," in Cloud Services, Networking, and Management, edited by N. Fonseca and R. Boutaba, Wiley-IEEE Press, ISBN: 978-1-118-84594-3, April 2015. Authors: D. Kliazovich, P. Bouvry, F. Granelli, N. Fonseca.
- "DENS: Data Center Energy-Efficient Network-Aware Scheduling," IEEE/ACM International Conference on Green Computing and Communications (GreenCom), Hangzhou, China, December 2010 **[Best Paper Award]**. Authors: D. Kliazovich, P. Bouvry, S. U. Khan.

Professional Experience

Univ. of Luxembourg/SnT   Jun 2011 - present
Research Associate

University of Sydney   Feb 2014 – May 2014

Visiting Scholar

VTT Technical Research Centre of Finland   Oct 2010 – May 2011
ERCIM Research Fellow

Univ. of Luxembourg   Jan 2010 – Sep 2010
ERCIM Research Fellow

Univ. of Trento, Italy   Jan 2007 – Dec 2009
Research Fellow

CREATE-NET, Trento, Italy   Mar 2008 – May 2011
Scientific Advisor for Wireless Communications

State University of Campinas, Brazil   Oct 2008 – Dec 2008
Visiting Scholar

Siemens, Milan, Italy   Sep 2006 – Dec 2006
Visiting Researcher

Professional Activities

- **General Chair**
  - IEEE International Conference on Cloud Networking (CLOUDNET) held in Luxembourg City on 8-10 October 2014
  - International Workshop on Optimization Issues in Energy Efficient Distributed Systems (OPTI) held in Bologna, Italy on 21-25 July 2014
- **Vice Chair** of the IEEE Technical Committee on Communication Systems, Integration and Modeling (CSIM).
- **Technical Program Committee (TPC) Chair**
  - Latin-American Conference on Communications (LATINCOM), Arequipa, Peru in 2015
  - 13th IEEE International Conference on Ubiquitous Computing and Communications (IUCC), Chengdu, Sichuan, China, 2014
  - International Conference on Computer Communications and Networks (ICCCN), Nassau, Bahamas, 2013
  - IEEE International Workshop on Computer-Aided Modeling, Analysis and Design of Communication Links and Networks (CAMAD), Berlin, Germany, 2013
  - Workshop on Scalable Solutions for GreenIT (SCALSOL), Changzhou, China, 2012
  - IEEE CAMAD 2011, Kyoto, Japan, 2011.
- **Associate Editor**
  - IEEE Communications Surveys and Tutorials (#1 IEEE Journal in Telecommunications area)
  - IEEE Transactions on Cloud Computing
- **Guest Editor**
  - Elsevier Computer Network (Impact Factor 1.87), Special Issue on Communications and Networking in the Cloud, 2015.
  - IEEE Transactions on Cloud Computing, special issue on Cloud Networking, 2015.
  - Journal of Grid Computing (Impact Factor 1.6), special issue on Green Cloud Computing, 2014.
  - International Journal of Metaheuristics, Special Issue on Metaheuristics and the Cloud, 2014.
  - Journal of Green Engineering, Special Issue on Designing the Green Internet, 2013.
- **Steering Committee**
  - IEEE International Conference on Cloud Networking (CloudNet)
- **Symposium Chair**
  - Communications QoS, Reliability and Modelling Symposium (CQRM) symposium at the IEEE International Conference on Communications (ICC), Paris, France, 2017.
  - Communication QoS, Reliability and Modeling (CQRM) symposium at the IEEE Global

Communications Conference (GLOBECOM), Washington, DC, USA 2016.

- Selected Areas in Communications (SAC) symposium at the IEEE International Conference on Communications (ICC), Kuala Lapmur, Malaysia, 2016.

- **Domain Expert**
  - Swiss National Science Foundation (SNSF)
  - French National Research Agency (ANR)
  - Fonds de recherche du Québec (FRQ), Canada
- **Keynote and Organizing Chair** in IEEE CAMAD'16 (Toronto, Canada), IEEE Cloudcom'16 (Luxembourg, Luxembourg)
- **Session Chair** in IEEE ICC'16 (Kuala Lumpur, Malaysia), IEEE Cloudnet'15 (Niagara Falls, Canada), ICC'15 (London, UK), IEEE Globecom'14 (Austin, TX, USA), IEEE, IEEE Globecom'13 (Atlanta, GA, USA), IEEE ICC'13 (Budapest, Hungary), IEEE Globecom'11 (Houston, TX, USA), IEEE Globecom'10 (Miami, USA), IEEE CAMAD'11 (Kyoto, Japan)
- **Technical Program Committee Member** in IEEE ICC'16 (Kuala Lumpur, Malaysia), ICT'16 (Thessaloniki, Greece), CLOSER'16 (Rome, Italy), SMARTGREENS'16 (Rome, Italy), ICUMT'16 (Lisbon, Portugal), O4SDI'16 (Kuala Lumpur, Malaysia), ICGREEN'16 (Rhodes, Greece), GLOBECOM'15 (San Diego, CA, USA), ICC'15 (London, UK), GreenCom'15 (Sydney, Australia), IEEE CLOUD'15 (New York, NY, USA), EuCNC'15 (Paris, France), LANOMS'15 (Joao Pessoa, Brazil), SMARTGREENS'15 (Lisbon, Portugal), CLOSER'15 (Lisbon, Portugal), ICME'15 (Torino, Italy), CLOUDTECH'15 (Marrakech, Morocco), ICCVE'15 (Shenzhen, China), EnA-HPC'15 (Dresden, Germany), ICUMT'14 (St. Petersburg, Russia), SMC'14 (San Diego, CA, USA), ICUMT'15 (Brno, Czech Republic), CAMAD'14 (Athens, Greece), GLOBECOM'14 (Austin, TX, USA), ICC'14 (Sydney, Australia), EnA-HPC'14 (Hamburg, Germany), GLOBECOM'13 (Atlanta, GA, USA), CLOSER'14 (Barcelona, Spain), ICC'13 (Budapest, Hungary), ICCVE'13 (Las Vegas, USA), ICT'13 (Casablanca, Morocco), CLOSER'13 (Aachen, Germany), CGC'13 (Karlsruhe, Germany), LATINCOM'13 (Santiago, Chile), EnA-HPC'13 (Hamburg, Germany), IEEE CoCoNet'13 (Budapest, Hungary), FedCSIS'13 (Krakow, Poland), GLOBECOM'12 (California, USA), ICC'12 (Ottawa, Canada), IEEE LATINCOM'12 (Cuenca, Ecuador), IEEE VTC'12-Fall, SCALCOM'12 (Changzhou, China), IEEE ISCC'12 (Cappadocia, Turkey), ICUMT'12 (St. Petersburg, Russia), SCALSOL'12 (Changzhou, China), GLOBECOM'11 (Houston, TX, USA), ICC'11 (Kyoto, Japan), ISCC'11 (Kerkyra, Greece), CAMAD'11 (Kyoto, Japan), GreenCom'11 (Chengdu, China), EnAHPC'11 (Hamburg, Germany), FutureTech'11 (Loutraki, Greece), Mobilight'11 (Bilbao, Spain), LATINCOM'11 (Belem, Para, Brazil), SCALSOL'11, GLOBECOM'10 (Miami, USA), ICC'10 (Cape Town, South Africa), GreenCom'10 (Hangzhou, China), CAMAD'10 (Miami, USA), EnAHPC'10 (Hamburg, Germany), Mobilight'10 (Barcelona, Spain), WCSP'10 (Suzhou, China), FutureTech'10 (Busan, Korea), ICCCN'10 (Zurich, Switzerland), GLOBECOM'09 (Honolulu, Hawaii, USA), ICC'09 (Dresden, Germany), CAMAD'09 (Dresden, Germany), LATINCOM'09 (Medelin, Colombia), VTC'09 (Anchorage, Alaska, USA), GLOBECOM'08 (New Orleans, LA, USA), ICC'08 (Beijing, China), CAMAD'08 (Beijing, China), HPCNCS'08 (Orlando, FL, USA), CAMAD'07 (Athens, Greece), HPCNCS'07 (Orlando, FL, USA), CAMAD'06 (Trento, Italy), SecQoS'05 (Athens, Greece).
- **Senior Member** of IEEE, IEEE Communications Society, and **Vice Chair** of the IEEE ComSoc Technical Committee on Communication Systems Integration and Modeling.

Selected Invited Talks and Keynotes

- Towards Efficient Internet-of-Things Systems, Univ. of Trento, Italy, May 2016.
- Keynote on Cloud Computing: Communications and Energy Efficiency at the Engineering and Telecommunication Technology (En&T) conference, Moscow, Russia, Nov 26, 2014.
- Energy-Efficient Design in Cloud Computing Communication Systems, University of Sydney, Mar 23, 2014.
- Cognitive TCP/IP, COST IC0902 meeting, Trinity College, Dublin, Ireland, Mar 11, 2013.
- Energy-Efficient Cloud Computing, seminar at the University of Trento, Nov 16, 2012.

- Energy-Efficient Design in Cloud Computing Communication Systems, seminar at the University of Trento, Nov 15, 2012.
- GreenCloud: A Packet-level Simulator of Energy-aware Cloud Computing Data Centers, COST IC0804 meeting, Koc University, Istanbul, Turkey, Oct 5, 2012.
- Cross-Layer Network Architectures, the 3rd GREENET seminar, Barcelona, Spain, Sep 19, 2012.
- ICT for Green, ICT Cluster meeting, Luxembourg, Apr 5, 2012.
- Energy-Efficiency in Cloud Computing Data Centers, University of Cambridge, Sep 21, 2011.
- Energy-Efficiency in Cloud Computing Data Centers, Dutch Trade Forum, University of Luxembourg, Sep 15, 2011.
- Green Computing Research: Roadmap and Achievements, University of Trento, Trento, Italy, Jan 11, 2012.
- Data Center Energy-Efficient Network-Aware Scheduling, GreenDays @ Paris, Paris, France, May 31, 2011.

Trainings Received

- Writing in Science by Prof. Kristin Sainani, Stanford, September 2014.
- Introduction to Entrepreneurship and Entrepreneurial Behavior by Luxembourg School of Commerce (LSC), January 2013.
- Training on Entrepreneurship and Entrepreneurial Behavior by Vincent Hieff, November 2012.
- FP7 Autumn School 2012, by PNO, September 2012.
- Luxembourg Innovation Master Class by Prof. John Bessant (Exeter University, visiting Professor at Imperial College), October 2011.
- ERC Starting Grant Writing Workshop, by Yellow Research, September 2011.
- How to Write a Competitive Proposal for Framework 7 by Dr. Sean McCarthy, 2010.

Teaching Experience

- Distributed Systems and Middleware (bachelor level), University of Luxembourg, 2011-2015.
- Smart ICT for Business Innovation, University of Luxembourg, 2015.
- Cloud Computing and Networking (PhD level), University of Trento, 2013.
- Advances in Telecommunication Networks (master level), University of Trento, 2008-2009.
- Introduction into Telecommunication Networks (bachelor level), University of Trento, 2008-2009.

Patents and Market Studies

- "Cross-Layer Error Recovery Optimization for 3G LTE Systems," European Patent, EP 2 130 387 B1, 2011. Inventors: D. Kliazovich, F. Granelli, S. Redana, N. Riato
- "NLOS, WiMAX, and Broadband Wireless: Competitive Market Analysis," Report, November 2005.