

Dr. Koteswararao Kondepu

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Educational Qualification

Institute for Advanced Studies IMT Lucca, Italy	Ph.D. in Computer Science and Engineering	2012
Indian Institute of Technology (ISM) Dhanbad, India	M.Tech in Computer Application	2007
Vingan's University (VU), Guntur, India	B.Tech. in Computer Science and Information Technology	2005

Professional Experience

Research Fellow, Scoula Superiore Sant'Anna, Pisa, Italy	Mar 2017 - Present
Senior Research Associate, University of Bristol, UK	Jul 2016 – Mar 2017
Research Associate, Scoula Superiore Sant'Anna, Pisa, Italy	Oct 2013 – Jun 2016
Visiting Research Fellow, Indian Institute of Technology, Dhanbad	Mar 2013 – Jul 2013
Protocol Developer and Trainer, Convergence Labs, Hyderabad, India	Aug 2012 – Jan 2013
Assistant System Engineer, Tata Consultancy Service, Hyderabad, India	Jun 2007 – Apr 2009

Research Expertise

5G, softwarization and virtualization of mobile network, optical networks design, wired-wireless access convergence, communication networks reliability, energy efficient schemes in communication networks and sparse sensor networks

Honors/Awards/Achievements

- Charles Kao Award, The IEEE Communications Society Charles Kao Award (2018) for Best Optical Communications & Networking Paper (“5G Fronthaul–Latency and Jitter Studies of CPRI Over Ethernet”), USA.
- SoftFire Challenges, “Virtual EPC Recovery Experiment in Softfire (VERIfire)”, SoftFire EU Project, 2018.
- Received travel grant from EU Fed4FIRE – GENI Research Experiment Summit (FPGE) 2015 summit, iMinds, Ghent, Belgium, 6-10 July, 2015.
- Distinguished Student Paper Award at OptoElectronics and Communication Conference and Australian Conference on Optical Fibre Technology (OECC/ACOFT), Melbourne, Australia, July 2014.
- On The Spot Award at TATA Consultancy Services Limited (TCSL) supported by "TCS Gems" (a global platform for employee recognition) for excellence work in the project, January 2008
- Best Paper Award at The International Conference on Communication Systems and Technologies 2007 (ICCST-2007) held at University of California, Berkeley, U.S.A, 24-26 October 2007.
- Award of Honor - Gold Medal for securing highest aggregate in the University during my Master of Technology in Computer Application at Indian School of Mines University, Dhanbad, India.

Research Output Overview

Published **14** International Journals and **45** international conferences. Involved in 7 demonstrations, **3** best paper awards and **1** project demo challenge award, **12** technical and coding prizes, **9** invited talks in next generation mobile networks and several oral presentations in international conferences.

Selected Publications

- [1] K. Kondepu, A. Sgambelluri, N. Sambo, F. Giannoe, P. Castoldi, and L. Valcarengi, “Orchestrating lightpath recovery and flexible functional split to preserve virtualized RAN connectivity,” in J. Opt. Commun. Netw, 11 (2018).
- [2] K. Kondepu, C. Jackson, Y. Ou, A. Beldachi, A. Pagès, F. Agraz, F. Moscatelli, W. Miao, V. Kamchevska, N. Calabretta, G. Landi, S. Spadaro, S. Yan, D. Simeonidou, and R. Nejabati, "Fully

SDN-Enabled All-Optical Architecture for Data Center Virtualization with Time and Space Multiplexing," J. Opt. Commun. Netw. 10, B90-B101 (2018).

- [3] Yue Zong, Yanni Ou, Ali Hammad, Koteswararao Kondepu, Reza Nejabati, Dimitra Simeonidou, Yejun Liu, and Lei Guo, "Location-Aware Energy Efficient Virtual Network Embedding in Software-Defined Optical Data Center Networks," J. Opt. Commun. Netw. 10, B58-B70 (2018).
- [4] Yi Shu, Shuangyi Yan, Chris Jackson, Koteswararao Kondepu, Emilio H. Salas, Yan Yan, Reza Nejabati, Dimitra Simeonidou, "Programmable OPS/OCS hybrid data centre network", Optical Fiber Technology, Volume 44, 2018, Pages 102-114, ISSN 1068-5200.
- [5] L. Valcarenghi, K. Kondepu, and P. Castoldi, "Time- versus Size-based CPRI in Ethernet Encapsulation for Next Generation Reconfigurable Fronthaul", J. Opt. Commun. Netw. 2017.
- [6] D. Chitimalla, K. Kondepu, L. Valcarenghi, M. Tornatore, and B. Mukherjee, "5G Fronthaul-Latency and Jitter Studies of CPRI Over Ethernet", J. Opt. Commun. Netw. 9, 172-182, 2017 (Charles Kao Award-2018).
- [7] K. Kondepu, A. Sgambelluri, L. Valcarenghi, F. Cugini, and P. Castoldi, "Exploiting SDN for Integrating Green TWDM-PONs and Metro Networks Preserving End-to-End Delay", J. Opt. Commun. Netw. 9, 67-74, 2017.

Involved in Writing Obtained Research Projects

1. Co-PI of Deity, Govt. of India, funded project on "Network Slice Life-cycle Management for 5G Mobile Network". Duration 2019-2021, funding: (90,000€)
2. SIREN: Service level agreement Enforcement in ORCA, EU H2020 ORCA Project, Duration: 6 months (5)
3. VERIfire: Virtual EPC Recovery Experiment in SoftFIRE, EU H2020 Softfire Challenges, Duration: 1 month (40,000€)
4. METRO-HAUL: METRO High bandwidth, 5G Application-aware optical network, with edge storage, compute and low Latency, H2020 EU project, Duration: 2017-2020 (650,000€).
5. EVER-WISHFUL: Enabling Virtual RAN and EPC experiments in WISHFUL, EU H2020 WISHFUL project, Duration: 2017-2018 (100,000€).
6. ENGAGE-F4F: Evaluating Next Generation optical Access energy Efficiency using Fed4FIRE (ENGAGE-F4F), EU H2020 Fed4FIRE project, 2015-2016 (50,000€).
7. An Energy-Efficient Intruder Detection Scheme for WSNs based on Self-Learning Techniques, Defence research and development organisation (DRDO), India, Duration: 2016-2018 (25,000€).

Certifications

- RINCE2 Practitioner Certificate (Sept 2018 – Current)
- PRINCE2 Foundation Certificate (Sept 2018 – Current)
- Introduction to Computer Science and Programming Using Python (edX Verified Certificate)
- Introduction to R (edX Verified Certificate)

Professional Activities

- Member in Institute of Electrical and Electronics Engineers (IEEE), since 2012.
- IEEE Communication Society Member (ComSoc), since 2012.
- Member in the Institute of Engineers India (IEI) since 2012.
- Reviewer activities for the international journals: IEEE/OSA JOCN, Elsevier OSN, IEEE Wireless Communications Magazine, IEEE Communication Letters, Transactions on ETT, IEEE TGCN
- TPC member: IEEE ICNC 2018, IEEE RTSI 2018, Springer ICSCSP 2018, IEEE EuCNC 2017, IEEE EuCNC 2016, IEEE ICP 2016, IEEE ICCSPCIT 2015, IEEE SNIGM 2012, IEEE SNIGM 2011