

Curriculum Vitae

Dr.-Ing. Michael Zink

ASSOCIATE PROFESSOR
ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT
UNIVERSITY OF MASSACHUSETTS AMHERST
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IEEE SENIOR MEMBER, ACM SENIOR MEMBER

RESEARCH INTERESTS

Next Generation Internet	Measurement architectures and tools, Cloud computing for scientific applications, Virtual Lab for Computer Networks Education, Information Centric Networking
Multimedia Distribution	Architectures for content distribution, Scalable adaptive streaming, Streaming in wireless networks, AR/VR
Sensor Networks	Virtual private sensor networks, Sense-and-respond architectures, Sensor network design and implementation, Energy-rechargeable wireless sensor networks, disaster resilience
Systems Engineering	Design and implementation of a closed-loop, radar sensor network, Technical project management in interdisciplinary environment

EDUCATION

11/1998 – 09/2003	Darmstadt University of Technology Darmstadt, Germany Ph.D. in Electrical Engineering and Information Technology (with distinction) Ph.D. thesis “Scalable Internet Video-on-Demand Systems”
10/1991 – 07/1997	Darmstadt University of Technology Darmstadt, Germany Diploma (equivalent to M.Sc.) in Electrical Engineering and Information Technology, specializing in Communications Technology <ul style="list-style-type: none">• Diploma thesis “Integration of ATM and Internet Quality of Service Architectures: Overview and Evaluation of RSVP over ATM approaches”• Student thesis “Formal Description of the IPv6 Protocol for OSI Conformance Testing”

PROFESSIONAL APPOINTMENTS

- 09/2015 – present **University of Massachusetts** **Amherst, USA**
- Associate Professor in the Electrical and Computer Engineering Department
 - Co-Director, NSF Engineering Research Center for Collaborative Adaptive Sensing of the Atmosphere
 - Adjunct Associate Professor in the College of Information and Computer Sciences
- 09/2015 – present **TU Darmstadt** **Darmstadt, Germany**
- Adjunct Professor in the Multimedia Communications Lab, Dept. of Electrical Engineering and Information Technology
- 09/2009 – 08/2015 **University of Massachusetts** **Amherst, USA**
- Assistant Professor in the Electrical and Computer Engineering Department
 - Deputy Director for Technical Integration in the NSF Engineering Research Center for Collaborative Adaptive Sensing of the Atmosphere
 - Adjunct Assistant Professor in the College of Information and Computer Sciences
- 09/2008 – 08/2009 **University of Massachusetts** **Amherst, USA**
- Research Assistant Professor in the Computer Science Dep.
 - Deputy Director for Technical Integration in the NSF Engineering Research Center for Collaborative Adaptive Sensing of the Atmosphere
- 08/2005 – 08/2008 **University of Massachusetts** **Amherst, USA**
- Senior Research Scientist in the Computer Science Department
 - Technical Integration Thrust Leader for the NSF Engineering Research Center for Collaborative Adaptive Sensing of the Atmosphere
- 04/2004 – 07/2005 **University of Massachusetts** **Amherst, USA**
- Postdoctoral Fellow in the Computer Networks Research Group in the Computer Science Department
 - Systems Engineer for the NSF Engineering Research Center for Collaborative Adaptive Sensing of the Atmosphere
- 10/2003 – 03/2004 **Darmstadt University of Technology** **Darmstadt, Germany**
- Head of the Multimedia Distribution and Networking group at the Multimedia Communications Lab (KOM)
- 11/1998 – 09/2003 **Darmstadt University of Technology** **Darmstadt, Germany**
- Research Assistant at the Multimedia Communications Lab (KOM). Involved in several teaching and research projects as described below

- 10/1997 – 09/1998 ***National Institute of Standards and Technology*** ***Gaithersburg, MD, USA***
- Guest Researcher at the Information Technologies Lab.
Designed and implemented an MPLS capable router
- 02/1997 – 04/1997 ***Darmstadt University of Technology*** ***Darmstadt, Germany***
- 08/1997 – 09/1997
- Student Assistant at the Multimedia Communications Lab (KOM). Participation in research projects and conference paper preparation
- 01/1992 – 12/1996 ***ID GmbH*** ***Wiesbaden, Germany***
- Technical staff and trainer
 - Novell Certified Network Engineer
 - Novell Certified Network Instructor (Held more than 40 courses)

RESEARCH GRANTS & PROJECTS

- G-27 10/2019 to date PI: **Michael Zink**, Co-PIs: Orran Krieger, Peter Desnoyers, Miriam Leeser, Martin Herbordt, CCRI: Grand: Developing a Testbed for the Research Community Exploring Next-Generation Cloud Platforms, National Science Foundation, Total funding: \$5,000,000, My share: \$1,319,834
- G-26 10/2019 to date PI: **Michael Zink** (33.4%), Co-PIs: Klara Nahrstedt (33.3%), Ramesh Sitaraman (33.3%), CNS Core: Medium: Collaborative Research: Scalable Dissemination and Navigation of Video 360° Content for Personalized Viewing, National Science Foundation, Total funding: \$1,200,000, My share: \$400,000
- G-25 06/2019 – 12/2019 PI: **Michael Zink**, AIR-TT: Proof of Concept Multifunction Micro-drone and Weather Surveillance System: Supplement for two REU students, National Science Foundation, Total funding: \$16,000
- G-24 07/2018 to date PI: Anirban Mandal, Co-PIs: Ewa Deelman, **Michael Zink**, Ivan Rodero, Cong Wang, CC* Integration: Delivering a Dynamic Network-Centric Platform for Data-Driven Science (DyNamo), National Science Foundation, Total funding: \$1,000,000, My share: \$116,473
- G-23 10/2017 to date PI: Rob Ricci, Co-PIs: **Michael Zink**, Brig ‘Chip’ Elliot, Srinivasa Akella, Kuang-Ching Wang, CloudLab Phase II: Community Infrastructure to Expand the Frontiers of Cloud Computing Research, National Science Foundation, Total funding: \$8,392,095, My share: \$303,388
- G-22 7/2017 to date PI: **Michael Zink**, AIR-TT: Proof of Concept Multifunction Micro-drone and Weather Surveillance System, National Science Foundation, Total funding: \$215,930
- G-21 01/2016 – 08/2018 PI: **Michael Zink**, GENI Going Forward: Virtual Computer Networks Lab II, National Science Foundation, Total funding: \$ 117,885
- G-20 09/2015 to date PI: **Michael Zink**, CC*DNI: High-bandwidth Network Connectivity for Remote Sensing Research, National Science Foundation, Total funding: \$163,028
- G-19 04/2015 – 07/2017 PI: **Michael Zink**, Exchange of Actionable Information at the Tactical Edge (EAITE)/DISCO, Office of Naval Research, Total funding: \$218,003

- G-18 03/2015 – 12/2015 PI: **Michael Zink**, NSF I-Coprs: Commercialization of a City-Scale Weather Radar, National Science Foundation, Total funding: \$50,000
- G-17 09/2014 to date PI: Dong-Jun Seo, Co-PIs: **Michael Zink**, Xinbao Yu, Zheng Fang, Jean Gao, CyberSEES: Type 2: Integrative Sensing and Prediction of Urban Water for Sustainable, National Science Foundation, Total funding: \$1,196,295, My share: \$297,549
- G-16 09/2014 – 08/2018 PI: Rob Ricci, Co-PIs: **Michael Zink**, Brig ‘Chip’ Elliot, Srinivasa Akella, Kuang-Ching Wang (UMass portion: Michael Zink 60%, David Irwin 40%), CloudLab: Flexible Scientific Infrastructure to Support Fundamental Advances in Cloud Architectures and Applications National Science Foundation, Total funding: \$10,000,000, UMass funding: \$390,582, My share: \$234,349
- G-15 03/2014 to date PI: **Michael Zink**, CAREER: Sensing as a Service: Architectures for Closed-loop Sensor Network, National Science Foundation, Total funding: \$406,620
- G-14 06/2014 – 04/2019 PI: Arun Venkataramani, Senior Personnel: **Michael Zink**, FIA-NP: Collaborative Research: MobilityFirst, National Science Foundation, Total funding: \$1,350,000, My share: ~\$130,000
- G-13 10/2013 – 08/2016 PI: **Michael Zink**, Co-PIs: Jim Kurose, Jeanne Albrecht, Max Ott, Virtual Computer Networks Lab, National Science Foundation, Total funding: \$299,397, My share: \$207,758
- G-12 09/2013 to date PI: Brenda Philips (60%), Co-PI: **Michael Zink** (40%), HazardSEES Type 2: Next Generation, Resilient Warning Systems for Tornadoes and Flash Floods National Science Foundation, Total funding: \$2,481,020, My share: \$992,408
- G-11 05/2013 – 12/2013 PI: **Michael Zink** (80%), Co-PI: Eric Adams (20%), CASA Radar Integration with NWS Forecaster, National Weather Service, Total funding: \$75,370, My share: \$60,296
- G-10 12/2012 – 12/2014 PI: John Dubach (50%), Co-PI: **Michael Zink** (50%), CC-NIE Integration: Multi-Wave - A Dedicated Data Transport Ring to Support 21st Century Computational Research, National Science Foundation, Total funding: \$867,040, My share: \$438,020

- G-9 04/2012 – 04/2014 PI: **Michael Zink** (60%), Co-PI: Brenda Philips (40%), EAGER: Ultra high-speed bandwidth for performance improvements in radar networks for weather and aircraft surveillance, National Science Foundation, Total funding: \$289,029, My share: \$173,455
- G-8 10/2011 – 09/2015 PI: **Michael Zink** (33.4%) , Co-PIs: Max Ott (33.3%), Ilya Baldine (33.3%), GIMI: Large-scale GENI Instrumentation and Measurement Infrastructure, National Science Foundation, Total funding: \$1,448,523, My share: \$513,949
- G-7 07/2010 to date Investigator: **Michael Zink**, Jerome M. Paros Fund for Measurement and Environmental Sciences Research, Total funding: ~1,000,000 (~\$120,000 per year)
- G-6 10/2009 – 09/2012 PI: **Michael Zink** (33.4%), Co-PIs: Prashant Shenoy (33.3%), Jim Kurose (33.3%), Data Intensive Cloud for GENI National Science Foundation, Total funding: \$535,227, My share: \$178,409
- G-5 10/2009 – 02/2013 PI: Ted Djaferis (50%), Co-PI: **Michael Zink** (50%), Engaging Industry Personnel in the CASA Enterprise, National Science Foundation, Total funding: \$748,965, My share: \$374,482
- G-4 09/2008 – 08/2011 PI: Prashant Shenoy (25%), Co-PIs: Jim Kurose (25%), Deepak Ganesan (25%), **Michael Zink** (25%), Sensor Virtualization and Slivering in an Outdoor Wide-Area Wireless GENI Sensor/Actuator Network Testbed, National Science Foundation, Total funding: \$490,000, My share: \$122,500
- G-3 04/2005 – 08/2015 PI: David McLaughlin, Co-PIs: V. Chandrasekar, Ming Xue, **Michael Zink**, Engineering Research Center for Collaborative Adaptive Sensing of the Atmosphere, National Science Foundation, Total funding: \$31,199,009
- G-2 03/2002 – 03/2004 Multimedia distribution: feedback and adaptation in wireless networks (Technical Project Leader)
Panasonic European Laboratories GmbH
- G-1 11/1998 – 02/2002 MediaNode: support for multimedia enhanced teaching
• Ministry for Science and Art, State of Hesse, Germany

TEACHING, ADVISING, MANAGEMENT

Fall 2020	University of Massachusetts ECE 241 – Lecture for undergraduates “Advanced Programming I” (81 Students)	Amherst, USA
Spring 2019	University of Massachusetts ECE 671 – Lecture for graduate students on “Computer Networks” (16 Students)	Amherst, USA
Fall 2018/ Spring 2019	University of Massachusetts ECE 415 – Senior Design Project: Advised a group of 4 students	Amherst, USA
Fall 2018	University of Massachusetts ECE 241 – Lecture for undergraduates “Advanced Programming I” (newly developed course for the revised ECE curriculum) (80 Students)	Amherst, USA
Spring 2018	University of Massachusetts ECE 671 – Lecture for graduate students on “Computer Networks” (14 Students)	Amherst, USA
Fall 2017/ Spring 2018	University of Massachusetts ECE 415 – Senior Design Project: Advised a group of 4 students	Amherst, USA
Fall 2017	University of Massachusetts ECE 597SI/697SI – Lecture for undergraduates and graduates on “Integrative Systems Engineering” (42 Students)	Amherst, USA
Fall 2016	University of Massachusetts ECE 671 – Lecture for graduate students on “Computer Networks” (44 Students)	Amherst, USA
	University of Massachusetts ECE 597SI/697SI – Lecture for undergraduates and graduates on “Integrative Systems Engineering” (32 Students)	Amherst, USA
Spring 2015	University of Massachusetts ECE 374 – Lecture for undergraduates on “Computer Networks & Internet” (62 Students)	Amherst, USA
Fall 2014/ Spring 2015	University of Massachusetts ECE 415 – Senior Design Project: Advised a group of 4 students	Amherst, USA
Fall 2014	University of Massachusetts ECE 242 – Lecture for undergraduates on “Data Structures & Algorithms” (125 Students)	Amherst, USA
Spring 2014	University of Massachusetts ECE 374 – Lecture for undergraduates on “Computer Networks & Internet” (65 Students)	Amherst, USA
Fall 2013/ Spring 2014	University of Massachusetts ECE 415 – Senior Design Project: Advised a group of 4 students	Amherst, USA

Fall 2013	University of Massachusetts	Amherst, USA
	ECE 597SI/697SI – Lecture for graduates on “Integrative Systems Engineering” (47 Students)	
Spring 2013	University of Massachusetts	Amherst, USA
	ECE 374 – Lecture for undergraduates on “Computer Networks & Internet” (52 Students)	
Fall 2012/ Spring 2013	University of Massachusetts	Amherst, USA
	ECE 415 – Senior Design Project: Advised a group of 4 students	
Fall 2012	University of Massachusetts	Amherst, USA
	ECE 697SI – Lecture for graduates on “Integrative Systems Engineering” (8 Students)	
Spring 2012	University of Massachusetts	Amherst, USA
	ECE 374 – Lecture for undergraduates on “Computer Networks & Internet” (37 Students)	
Fall 2011/ Spring 2012	University of Massachusetts	Amherst, USA
	ECE 415 – Senior Design Project: Advised a group of 4 students	
Fall 2011	University of Massachusetts	Amherst, USA
	ECE 597ST/697ST – Lecture for senior undergraduates and graduates on “Systems Simulation” (23 students)	
Spring 2011	University of Massachusetts	Amherst, USA
	ECE 374 – Lecture for undergraduates on “Computer Networks & Internet” (43 Students)	
Fall 2010/ Spring 2011	University of Massachusetts	Amherst, USA
	ECE 415 – Senior Design Project: Advised a group of 4 students	
Fall 2010	University of Massachusetts	Amherst, USA
	ECE 697SI – Lecture for graduates on “Integrative Systems Engineering” (22 Students)	
Spring 2010	University of Massachusetts	Amherst, USA
	ECE 597S/697S – Lecture for senior undergraduates and graduates on “Systems Simulation” (22 students)	
Fall 2009/ Spring 2010	University of Massachusetts	Amherst, USA
	ECE 415 – Senior Design Project: Advised a group of 4 students	
Fall 2006	University of Massachusetts	Amherst, USA
	CS 491M – Lecture for senior undergraduates in the CS and ECE departments “Introduction to Systems Engineering”	
Fall 2005	University of Massachusetts	Amherst, USA
	CS 496A – Independent Study Class “Independent Study in Wireless Networking” (Co-taught with Prof. Kurose)	
Fall 2000	Darmstadt University of Technology	Darmstadt, Germany
	Seminar “Introduction to Operating Systems”	

Fall 1999, 2000, 2001, 2002	Darmstadt University of Technology Darmstadt, Germany Lab Exercises “Communication Networks”
Spring 1999	Darmstadt University of Technology Darmstadt, Germany Seminar “MBone: The Multicast Backbone”
2001, 2002, 2003	Darmstadt University of Technology Darmstadt, Germany Substitute for lectures “Communication Networks I + II” and “Multimedia Communication”
08/2005 – present	Supervision of staff: <ul style="list-style-type: none"> • Emmanuel Cecchet, Senior Research Fellow • Amr Rizk, Postdoctoral Research Associate (2015-2016) • David Pepyne, Senior Research Fellow • David Irwin, Postdoctoral Research Associate (2007-2011) • David Westbrook, Senior Research Fellow • Eric Lyons, Research Scientist
11/1998 – 06/2003	Supervision of eight Student Theses and 8 Master Theses at Darmstadt University of Technology

GRADUATE STUDENTS AND POSTDOCS

Nauman Javed	PhD (co-advised with Prof. Wolf), now with Gaikai
Dilip Kumar Krishnappa	PhD, now at Akamai
Cong Wang	PhD, now at RENC/UNC Chapel Hill
Amr Rizk	Postdoc, now Assistant Professor at University of Ulm, Germany
Thiago Teixeira	PhD (co-advised with Prof. Wolf), now with Brightcove
Divyashri Bhat	PhD, now with Apple

INVITED TALKS

- 10/2019 Convergent Research: Lessons from the Collaborative Adaptive Sensing of the Atmosphere (CASA) Engineering Research Center, 2019 NSF ERC Planning Grant Workshop, Alexandria, VA
- 07/2019 CityWarn: A Smart, Hyperlocal, Context-Aware Hazard Notification System, ErmergenCity, Seminar, Secure Mobile Networking Lab, TU Darmstadt, Germany
- 07/2019 Mi360World: Scalable Dissemination and Navigation of Video 360, MAKI Seminar, Multimedia Communications Lab, TU Darmstadt, Germany
- 04/2018 Network Assisted Content Distribution for Adaptive Bitrate Video Streaming, Computer Science Colloquium, University at Albany (SUNY), Albany, NY.
- 07/2014 Software Defined Exchanges: New Opportunities for Future Internet Research, The Fourth GENI Research and Educational Experiment Camp (GREE-SC 2014), Iowa State University, Ames, IA.
- 09/2013 Collaborative Adaptive Sensing of the Atmosphere (CASA), Architecture, Design, Implementation, and Operation of Sensor/Actuator Networks for Severe Weather Observations, Alvine Engineering Professional Effectiveness and Enrichment Program, University of New Haven, New Haven, CT.
- 11/2012 Collaborative Adaptive Sensing of the Atmosphere (CASA): Architecture, Design, Implementation, and Operation of Sensor/Actuator Networks for Severe Weather Observations. Colloquium, University of Connecticut, Storrs, CT.
- 07/2012 Closed-loop Sensor Networks for Atmospheric Sensing. Siemens AG Corporate Technology, Munich, Germany.
- 07/2012 ExoGENI and GIMI: GENI Racks and Their Measurement and Instrumentation Tools. 12th Würzburg Workshop on IP: Joint ITG and Euro-NF Workshop "Visions of Future Generation Networks" (EuroView2012), Würzburg, Germany.
- 08/2011 NowCasting: UMass/CASA Weather Radar Demonstration. 11th Würzburg Workshop on IP: Joint ITG and Euro-NF Workshop "Visions of Future Generation Networks" (EuroView2011), Würzburg, Germany.
- 02/2011 Closed-loop Sensor Networks for Atmospheric Sensing. Keynote at IEEE Sensor App. Symposium, San Antonio, TX.
- 01/2009 Collaborative Adaptive Sensing of the Atmosphere.

Systems Engineering Colloquium, Department of Systems and Information Engineering, University of Virginia, Charlottesville, VA

- 09/2006 CASA IP1 Meteorological Command and Control. Presentation to members of the DOE ARM Program, Amherst, MA
- 01/2005 CASA - Collaborative Adaptive Sensing of the Atmosphere. Darmstadt University of Technology, Darmstadt, Germany.
- 06/2004 Meteorological Command and Control in CASA's IP1A Test Bed. MIT Lincoln Laboratory, Lincoln, MA, USA.
- 05/2004 Content Distribution in CASA. Dagstuhl Seminar on Content Distribution Networks, Dagstuhl, Germany.
- 03/2003 Scalable Adaptive Streaming in the Internet. Department of Informatics, University of Oslo, Oslo, Norway.
- 02/2002 Scalable Streaming for Internet Video Distribution. University of Massachusetts, Amherst, MA, USA.

PROFESSIONAL ACTIVITIES

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|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10/2008 – to date | Editorial Board Member of the Springer Multimedia Systems Journal |
| 06/2019 – to date | Steering Committee Member of the ACM Multimedia Systems Conference |
| 2020 | Technical Program Co-Chair: <ul style="list-style-type: none">• CNERT: Computer and Networking Experimental Research using Testbeds (INFOCOM Workshop) Program committee member: <ul style="list-style-type: none">• IFIP Networking 2020 |
| 2019 | General Chair: <ul style="list-style-type: none">• ACM Multimedia Systems Conference 2019 Program committee member: <ul style="list-style-type: none">• ACM Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV)• INFOCOM 2019• ACM Multimedia Asia 2019 |
| 2018 | Technical Program Co-Chair: <ul style="list-style-type: none">• ACM Multimedia Systems Conference 2018 Program committee member: <ul style="list-style-type: none">• IFIP Networking 2018• ACM SIGCOMM 2018 Workshop on Virtual Reality and Augmented Reality Network |
| 2017 | Program committee member: <ul style="list-style-type: none">• ACM Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV)• ACM Multimedia 2017• ACM Multimedia Systems Conference 2017• IEEE Workshop on Multimedia Streaming in Information Centric Networks• 26th International Conference on Computer Communications and Networks (ICCCN)• IFIP Networking 2017 |
| 2016 | Technical Program Co-Chair: <ul style="list-style-type: none">• International Conference in Networking Science & Practice (ITC) 28 Area 4 “Next generation and future Internet architectures”• Demo Session at ACM MM Systems Program committee member: <ul style="list-style-type: none">• 24th IEEE International Conference on Network Protocols• ACM Multimedia |

- 9th USENIX Workshop on Cyber Security Experimentation and Test (CSET)
 - Infocom Workshop on Multimedia Streaming in Information-/Content- Centric Networks (MuSIC)
 - ACM Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV)
 - IEEE Local Computer Networks Conference 2016
 - ACM Multimedia Systems Conference
- 2015
- Technical Program Committee Co-Chair:
- NOSSDAV 2015
- Program committee member:
- NetSys 2015
 - ACM Multimedia Systems 2015
 - LCN 2015
 - IEEE MASS Workshop on Content-Centric Networking (CCN 2015)
 - Workshop on Multimedia Streaming in Information Centric Networks (MuSiC)
- 2014
- Program committee member:
- ACM Multimedia Systems 2014
 - NOSSDAV 2014
 - LCN 2014
 - GREE 2014
- 2013
- Program committee member:
- ACM Multimedia Systems 2013
 - NOSSDAV 2013
 - ICCCN 2013
 - LCN 2013
 - ACM MM 2013 (Area Chair)
- 2012
- Technical Program Committee Chair:
- TridentCom 2012
- Program committee member:
- ACM Multimedia Systems 2012
 - LCN 2012
- 2011
- Program committee member:
- INFOCOM 2011
 - ACM Multimedia Conference 2011
 - ACM Multimedia Systems 2011
 - NOSSDAV 2011
- 2010
- Program committee member:
- INFOCOM 2010
 - ACM Multimedia Conference 2010

- ACM Multimedia Systems Conference 2010
- 2009 Program committee member:
 - INFOCOM 2009
 - ACM Multimedia 2009
 - YouTube and the 2008 Election Cycle in the United States
 - IEEE FNM 2009
 - WASA 2009
- 2008 Program committee member:
 - INFOCOM 2008
 - ACM Multimedia 2008
 - MMCN 2008
 - PAM 2008
- 2007 Program committee member:
 - ACM Multimedia 2007
 - MMCN 2007
- 2006 Program committee member:
 - ACM Multimedia 2006
 - MMCN 2006
 - CCNC 2006
 - Euromicro 2006
 - NOSSDAV 2006
- 2005 Program committee member:
 - ACM Multimedia 2005
 - CCNC 2005
 - WWW 2005
 - ICPP 2005
 - Euromicro 2005
- 2004 Program committee member:
 - MMCN 2004
 - NRBC 2004
- 2003 Program committee member:
 - ACM Multimedia 2003
 - MMCN 2003
- 2000 to date Adhoc reviews for the journals:
 - IEEE Transactions on Multimedia, ACM Transactions on Multimedia Computing Communications and Applications
 - Inderscience International Journal on Sensor Networks
 - Elsevier International Journal on Computer and Telecommunication Networking
 - IEEE Transactions on Networking

AWARDS

*Excellence in DASH Award at ACM Multimedia Systems 2016
for our paper “SQUAD: A Spectrum-based Quality Adaptation
for Dynamic Adaptive Streaming over HTTP”*

*Best Paper Award at SPIE/ACM Multimedia Communication
and Networking Conference 2008*

*“Journal’s best reviewer in 2007”, Springer/ACM Multimedia
Systems Journal*

*Best Paper Award at the Second GENI Research and
Educational Experiment Workshop (GREE2013).*

NSF CAREER Award (2014)

BOOKS

- B-2 Thanasis Korakis, Michael Zink, Max Ott (Eds.). Testbeds and Research Infrastructure. Development of Networks and Communities. Springer. ISBN 978-3-642-35575-2
- B-1 M. Zink. Scalable Video-on-Demand: Adaptive Internet-based Distribution. Wiley. October 2005. ISBN 0-470-02268-X.

BOOK CHAPTER

- BC-2 Thierry Rakotoarivelo, Guillaume Jourjon, Olivire Nehani, Max Ott, and Michael Zink. A walk through the geni experiment cycle. In *Rick McGeer, Mark Berman, Chip Elliott, and Rob Ricci, editors, The GENI Book, chapter 10, pages 266–290*. Springer, Springer Switzerland, 2016.
- BC-1 M. Zink, and P. Shenoy. Caching and Distribution Issues for Streaming Content Distribution. In *Web Content Delivery*. Springer. August 2005. ISBN 0-387-24356-9.

JOURNAL ARTICLES

(Names in **bold** indicate my graduate students, names in *italic* my postdoc, and names in **bold and italic** CASA researchers I supervise.)

- J-19 Hamideh Habibi, **Ishita Dasgupta**, Seongjin Noh, Sunghee Kim, Michael Zink, Dong-Jun Seo, Matthew Bartos, Branko Kerkez. High-resolution hydrologic forecasting for very large urban areas, *Journal of Hydroinformatics*, vol. 21, no. 3, pp. 441-454, May 2019. DOI: <https://doi.org/10.2166/hydro.2019.100>
- J-18 M. Zink, R. Sitaraman and K. Nahrstedt, Scalable 360° Video Stream Delivery: Challenges, Solutions, and Opportunities, *Proceedings of the IEEE*, vol. 107, no. 4, pp. 639-650, April 2019. DOI: [10.1109/JPROC.2019.2894817](https://doi.org/10.1109/JPROC.2019.2894817)
- J-17 M. M. Tajiki, B. Akbari, M. Shojafar, S. H. Ghasemi, M. L. Barazandeh, N. Mokari, L. Chiaraviglio, M. Zink, CECT: computationally efficient congestion-avoidance and traffic engineering in software-defined cloud data centers, *Cluster Computing* 21(4), 2018, Pages 1881-1897, ISSN 1573-7543, DOI: <https://doi.org/10.1007/s10586-018-2815-6>
- J-16 **Cong Wang**, Michael Zink, David Irwin, Energy-agile design for parallel HPC applications, *Sustainable Computing: Informatics and Systems, Volume 19, 2018, Pages 123-134, ISSN 2210-5379*, DOI: <https://doi.org/10.1016/j.suscom.2018.07.009>
- J-15 **Divyashri Bhat**, *Amr Rizk*, Michael Zink, Ralf Steinmetz. SABR: Network Assisted Content Distribution for QoE-driven Adaptive Bitrate Video Streaming. *ACM Transactions on Multimedia Computing, Communications and Applications, Special Issue on SI: QoE Management for Multimedia Services. Appl. 14, 2s, Article 32 (April 2018), 25 pages.* DOI: <https://doi.org/10.1145/3183516>
- J-14 **Cong Wang**, **Divyashri Bhat**, *Amr Rizk*, and Michael Zink. Design and Analysis of QoE-Aware Quality Adaptation for DASH: A Spectrum-Based Approach. *ACM Transactions on Multimedia Computing, Communications and Applications. 13, 3s, Article 45 (July 2017), 24 pages.* DOI: <https://doi.org/10.1145/3092839>
- J-13 **Dilip Kumar Krishnappa**, M. Zink, C. Griwodz, P. Halvorsen. Cache-centric Video Recommendation: An Approach to Improve the Efficiency of YouTube Caches. *ACM Transactions on Multimedia Computing, Communications and Applications. 11(4),48:1-48:20, 2015.*
- J-12 Mark Berman, Piet Demeester, Jae Woo Lee, Kiran Nagaraja, Michael Zink, Didier Colle, **Dilip Kumar Krishnappa**, Dipankar

- Raychaudhuri, Henning Schulzrinne, Ivan Seskar, Sachin Sharma. Future Internets Escape the Simulator. *Communications of the ACM*. 58(6), 78-89, 2015.
- J-11 **Nauman Javed, Eric Lyons**, Michael Zink, Tilman Wolf. Adaptive Wireless Mesh Networks: Surviving Weather Without Sensing It. *Elsevier Computer Communications*. Vol. 54,120-130, 2014.
- J-10 **Dilip Kumar Krishnappa, Eric Lyons**, David Irwin, and Michael Zink, CloudCast: Cloud Computing for Short-term Weather Forecasts. *IEEE Computing Science in Science & Engineering Magazine*. 15(4), 30-37, Sep. 2013.
- J-9 N. Sharma, D. Irwin, P. Shenoy, and M. Zink. MultiSense: Proportional-Share for Mechanically Steerable Sensor Networks. *Multimedia Systems Journal*,18(5), 425-444, July 2012.
- J-8 S. Khemmarat, R. Zhou, **D. Kumar Krishnappa**, L. Gao, and M. Zink. Watching User Generated Videos with Prefetching. *International Journal on Signal Processing: Image Communication*. 27(4), 343-359, April 2012.
- J-7 M. Zink, **E. Lyons, D. Westbrook**, J. Kurose, D. Pepyne. Closed-loop Architecture for Distributed Collaborative Adaptive Sensing of the Atmosphere: Meteorological Command & Control. *International Journal of Sensor Networks, Inderscience*. 7(1/2), 4-18, February 2010.
- J-6 D. McLaughlin, D. Pepyne, V. Chandrasekar, B. Philips, J. Kurose. M. Zink et al. Short-Wavelength Technology and the Potential for Distributed Networks of Small Radar Systems. *Bulletin of the American Meteorological Society*. 90(12), 1797-1817, January 2010.
- J-5 P. Serrano, C. Bernardos, A. de la Oliva, A. Banchs and M. Zink. FloorNet: Deployment and Evaluation of a Multihop Wireless 802.11 Testbed. *EURASIP Journal on Wireless Comm. and Networking*, 2010.
- J-4 E. Bass, L. Baumgart, B. Philips, K. Kloesel, K. Dougherty, H. Rodriguez, W. Donner, J. Santos, W. Diaz, and M. Zink. Incorporating Emergency Management Needs in the Development of Weather Radar Networks. *Journal of Emergency Management*. 7(1), 45-52, March 2009.
- J-3 M. Zink, K. Suh, Y. Gu, and J. Kurose. Characteristics of YouTube Network Traffic at a Campus Network - Measurements, Models, and Implications. *Elsevier Computer Networks*. Vol. 53, No. 4, 501-514, March 2009.

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