Dr. Nicolò Michelusi

School of Electrical, Computer and Energy Engineering

Last update: November 20, 2022

Arizona State University

EDUCATION

- Ph.D. degree in "Ingegneria dell'Informazione" (Information Engineering), University of Padova, Italy,   March 2013
  Ph.D. advisor: Prof. Michele Zorzi
- M.Sc. degree in Telecommunications Engineering, University of Padova, Italy,   July 2009
  110/110 with honors
- M.Sc. degree in Telecommunications Engineering, Technical Univ. of Denmark,   June 2009
- B.Sc. degree in Electrical Engineering, University of Padova, Italy,   July 2006
  110/110 with honors

EMPLOYMENT HISTORY

- *Assistant Professor (tenure-track)*, Arizona State University   01/2021 - current
- *Assistant Professor (tenure-track)*, Purdue University   01/2016 - 12/2020
- *Postdoctoral Research Associate*,   02/2013 - 12/2015,
  University of Southern California, Los Angeles, CA, USA
  Postdoc advisor: Prof. Urbashi Mitra
- *Visiting Research Scholar*,   08-10/2012,
  Aalborg University, Denmark
  Research host: Prof. Petar Popovski
- *Visiting Research Scholar*,   01-07/2011,
  University of Southern California, Los Angeles, CA, USA
  Research host: Prof. Urbashi Mitra
- *Summer Trainee* at Nokia Corporation, Copenhagen, Denmark,   06-07/2008
- *Teaching Assistant* at Technical University of Denmark, Copenhagen,   09-12/2008
  for the M.Sc. degree course *02451 Digital Signal Processing* (Prof. Jan Larsen)

SELECTED PROFESSIONAL SOCIETY ACTIVITIES (complete list on page 12)

- *Associate Editor* for the IEEE Transactions on Wireless Communications (2016-2021)
- Symposium Chair for the "Wireless Communications Symposium" at IEEE GLOBECOM 2020
- Chair for the "IoT, M2M, Sensor Networks, and Ad-Hoc Networking" track in the IEEE Vehicular Technology Conference 2020
- Chair for the First International INFOCOM Workshop on Distributed Machine Learning and Fog Networks (FOGML) 2021
- Symposium Chair for "Cognitive Computing and Networking" at ICNC 2018

HONORS & AWARDS

- Recipient of the 2022 Early Achievement Award of the IEEE Communications Society - Communication Theory Technical Committee (CTTC)
- NSF CAREER award 2021
- BAM!Wireless (co-led by Michelusi) placed in the top 10 in the DARPA Spectrum Collaboration Challenge (SC2), preliminary event 1, December 2017 ($750,000 award)
- BAM!Wireless (co-led by Michelusi) placed in the top 5 in the DARPA SC2, preliminary event 2, January 2019 ($375,000 prize award)
- Purdue "Seed for Success" Award 2017 (for DARPA-SC2)
- Purdue "Seed for Success" Award 2018 (for NSF EARS grant)
- Elevated to Senior Member of the IEEE, February 2018

- *T.I.M.E. scholarship* to pursue a double M.Sc. degree at Technical University of Denmark and University of Padova (www.time-association.org) (2007-2009) (€11,000)
- *Toni Mian award*, for best M.Sc. Thesis in Information Engineering (telecom.dei.unipd.it/pages/read/83/) (1/2010) (€2,000)
- Ph.D. scholarship from Italian Ministry of Education, University and Research (2010-2012)
- *Aldo Gini Foundation* scholarship (Padova, Italy) to conduct research at University of Southern California, Los Angeles, USA (10/2010-08/2011) (€3,800)
- *Isabella Sassi Bonadonna 2013* award, to conduct research at a prestigious international research institute or university (11/2013) ($16,000)

MENTORING

Ph.D. students at ASU (current):
1) **Muhammad Faraz** (Fall 2022 -): 1st year Ph.D. student.
2) **Akshay Bondre** (Fall 2022 - , co-advised with Dr. Richmond): 2nd year Ph.D. student.
3) **Bharath Keshavamurthy** (Purdue 2020-2021, ASU 2021-expected 2024): 2nd year Ph.D. student. He completed a project on distributed spectrum sensing (1 journal and 2 conference papers). Currently, working on wireless distributed UAV systems (journal draft in preparation)
   - Dr. Michelusi's role: advisor/supervisor/committee Chair
   - Successfully passed the Qualifying Exam at ASU on April 22nd, 2022
   - Publications (all as first author): 1 Journal published, 1 conference; 1 journal draft in preparation

Ph.D. students at Purdue University (current):
4) **Frank Po-Chen Lin** (2019-expected 2023, co-advised with Dr. Brinton): 3rd year Ph.D. student working on the design and analysis of communication-efficient federated learning schemes
   - Publications (all as first author): 1 Journal published, 2 conferences; 1 journal draft in preparation
   - Successfully passed the Preliminary Exam to become a PhD candidate on May 10th, 2022
   - Dr. Michelusi's role: advisor/supervisor/committee co-Chair (co-Chair Dr. Brinton)

Ph.D. students (graduated) and post-graduation placement:
5) **Tzu-Hsuan Chou** (Purdue University, graduated 2022, co-advised with Dr. Love): he worked on signal processing for millimeter-wave beam-alignment and THz channel estimation.
   - Dissertation: "*Channel Training and Signal Processing for massive MIMO Wireless Communications*"
   - Dr. Michelusi's role: advisor/supervisor/committee co-Chair (co-Chair Dr. Love)
   - Publications (all as first author): 1 Journal published, 2 conferences; 1 journal submitted, 1 journal draft in preparation
6) **Muddassar Hussain** (Purdue University, graduated 2021): He worked under an NSF-funded project on the design of efficient beam-alignment schemes for millimeter-wave systems
   - Publications: 3 Journals, all as first author; 9 conference publications
   - Dissertation: "*Beam Alignment for Millimeter Wave Wireless Communications : A Multiscale Approach*" (https://doi.org/10.25394/PGS.14496201.v1)
   - Dr. Michelusi's role: advisor/supervisor/committee Chair
   - Currently, Senior Cellular Engineer at Qualcomm
7) **Chang-Shen Lee** (Purdue University, graduated 2021, co-advised with Dr. Scutari): He worked on distributed learning algorithms in large-scale networks with limited communications
   - Publications: 1 Journal, 3 conferences (all first author); 1 Journal under review (major revision)
   - Dr. Michelusi's role: advisor/supervisor/committee Chair (co-Chair Dr. Scutari)
   - Dissertation: "*Distributed Network Processing and Optimization under Communication Constraint*" (https://doi.org/10.25394/PGS.15054333.v1)
   - Currently, Artificial Intelligence Research Engineer at Bloomberg LP

8) **Major Matthew Booth** (Purdue University, graduated 2020, co-advised with Dr. Love): he was part of a Ph.D. program through the U.S. Air Force; during his Ph.D. he worked on signal processing and machine learning applied to millimeter-wave beam-tracking
   - Publications: 1 Journal published as first author
   - Dr. Michelusi's role: advisor/supervisor/committee co-Chair (Chair Dr. Love)
   - Dissertation: "*Multiple Antenna Signal Processing Techniques for Millimeter Wave Communications*" (https://doi.org/10.25394/PGS.12127440.v1)
   - Currently, Deputy Mission Lead, Space Communications at the U.S. Air Force

   M.Sc. students (graduated) and post-graduation placement:

9) **Bharath Keshavamurthy** (Purdue University, graduated 2020): he worked on the DARPA-SC2 project, and on spectrum sensing and access in cognitive radios
   - Publications: 1 conference as first author during his M.Sc. degree
   - Dr. Michelusi's role: advisor/supervisor/committee Chair
   - Thesis: "*Optimization and Heuristics for Cognitive Radio Design*" (https://doi.org/10.25394/PGS.14496201.v1)
   - Currently, a Ph.D. student in Dr. Michelusi's group at ASU

   Undergraduate students mentoring:

10) **Thomas Chen** (independent study, AY 2017-2018): he worked on *modeling of heterogeneous wireless networks via NS3*; currently, Software Engineer at Microsoft

11) **Jonah Aifuwa** (independent study, AY 2018-2019): a student from the Louis Stokes Alliance for Minority Participation (LSAMP) program to incentivize minority participation at Purdue; he worked on *random access in wireless networks*; B.Sc. (2020) and M.Sc. (2021) from Purdue University

12) **Jacqueline Malayter** (independent study, AY 2018-2019): she did independent studies in the areas of wireless communications under Dr. Michelusi's guidance; she obtained her B.Sc. degree in Fall'2020; currently, a Ph.D. student in the school of Electrical and Computer Engineering at Purdue University

13) **Aniruddh V. Krishnan** (visiting student Summer'17) visited Purdue from IIT Madras under the PURE program; he worked under Dr. Michelusi's guidance on the "*Design of vehicular millimeter wave networks based on Simulation of Urban Mobility*;" he presented a research poster at the end of the program

   Other students mentoring:

14) **Matthew Bliss** (AY 2019-2020) was a Ph.D. student in Dr. Michelusi's research group; he is continuing his Ph.D. studies with a different research group
   - Publications: 2 conference publications (first author)

15) **Rana Hassan** (AY 2017-2018) was a Ph.D. student in Dr. Michelusi's research group; she is continuing her Ph.D. studies at a different University
   - Publications: 1 invited conference publication (first author)

16) **Maria Scalabrin** (AY 2017-2018) was a visiting Ph.D. student from University of Padova, Italy, who graduated in 2018
   - Publications: 1 journal paper, 2 conference papers
   - Currently, Data Scientist at Generali Italia, Italy

   Student Fellowships and Awards:

1) Muddassar Hussain received the **2020 Blisland Dissertation Fellowship**, awarded by Purdue departments and colleges to Ph.D. students entering their final year of their program. It includes a stipend/salary and tuition coverage

2) Under Dr. Michelusi's mentorship, B.Sc. student Thomas Chen was awarded the **2018-2019 OUR Scholarship** ($1000) at Purdue University, recognizing undergraduate student engagement in original research, scholarship, or creative endeavor under the guidance of a Purdue faculty

3) **Two travel grants** to Maria Scalabrin and Rana Hassan to present their research at the "Joint 7th N2Women and WICE: Professional Development Workshop" at IEEE ICC 2018

4) Chang-Shen Lee was awarded a **travel grant** for IEEE CDC 2018
5) Matthew Bliss was awarded the **IEEE ComSoc student travel grant** for IEEE GLOBECOM 2019
6) ASU Ph.D. student Bharath Keshavamurthy was awarded the **USNC-URSI Travel Fellowship** to present at the "2022 National Radio Science Meeting" in January 2022

TEACHING

Undergraduate courses taught at ASU
- **EEE-CSE 120 Digital Design Fundamentals**: Spring '21 (first-time teaching, emergency remote teaching due to Covid)

Undergraduate courses taught at Purdue University
- **ECE 201 Linear Circuits Analysis I**: Spring '16,'18, Fall '16,'17,'18,'20
- **ECE 20001 Electrical & Computer Engineering Fundamentals I**: Fall '19, Spring '20

Graduate courses taught at ASU
- **EEE 598 Learning-Based Sequential Decision-Making Under Uncertainty** (new course development, Fall '21 and scheduled for Spring '23): The objective of this course is to provide graduate students with the foundations of Markov decision theory and algorithms in observable and partially-observable domains, and reinforcement learning
- **EEE 552 Digital and Wireless Communications** (redesigned course, Spring '22 and scheduled for Fall '23): this course stems from the previous offering "EEE 552 Digital Communications;" Dr. Michelusi redesigned this course by emphasizing wireless communications aspects. This new offering of the course provides graduate students with the foundational theory behind modern wireless communication systems, and with hands-on experience on the analysis and simulation of these systems

Graduate courses taught at Purdue University
- **ECE 647 Performance Modeling of Computer Communication Networks** (Spring '17, Spring '19): the objective of this course is to provide graduate students with foundational tools of convex optimization and sequential decision making, and provide example of application in modern communication systems; this course was previously taught by Prof. Xiaojun Lin; Dr. Michelusi helped modernize its content by including a stronger emphasis on sequential decision making.

PUBLICATIONS & PRESENTATIONS

Legend:
- **Bold Font**: ASU or Purdue Ph.D. student mentored by Dr. Michelusi
- <u>Underline</u>: ASU or Purdue Master's student mentored by Dr. Michelusi
- (∞): Visiting scholar hosted by Dr. Michelusi
- $\sim$: Presenting author

Peer-reviewed Journal Publications (J):
<u>Year 2022</u>

J-1) **B. Keshavamurthy**, N. Michelusi, "Learning-Based Spectrum Sensing and Access in Cognitive Radios via Approximate POMDPs," in *IEEE Transactions on Cognitive Communications and Networking*, vol. 8, no. 2, pp. 514-528, June 2022, doi: 10.1109/TCCN.2021.3129802

J-2) N. Michelusi, G. Scutari, **C.S. Lee**, "Finite-Bit Quantization For Distributed Algorithms With Linear Convergence", in *IEEE Transactions on Information Theory*, vol. 68, no. 11, pp. 7254-7280, Nov. 2022, doi: 10.1109/TIT.2022.3176253.

J-3) S. Hosseinalipour, S. S. Azam, C. G. Brinton, N. Michelusi, V. Aggarwal, D. J. Love, and H. Dai, "Multi-Stage Hybrid Federated Learning Over Large-Scale D2D-Enabled Fog Networks," in *IEEE/ACM Transactions on Networking*, vol. 30, no. 4, pp. 1569-1584, Aug. 2022, doi: 10.1109/T-NET.2022.3143495.

J-4) **M. Hussain**, N. Michelusi, "Learning and Adaptation for Millimeter-Wave Beam Tracking and Training: a Dual Timescale Variational Framework", in *IEEE Journal on Selected Areas in Communications*, vol. 40, no. 1, pp. 37-53, Jan. 2022, doi: 10.1109/JSAC.2021.3126086

Year 2021

J-5) **F.P.C. Lin**, S Hosseinalipour, S.S. Azam, C. G. Brinton, N. Michelusi, "Semi-Decentralized Federated Learning with Cooperative D2D Local Model Aggregations," in *IEEE Journal on Selected Areas in Communications*, vol. 39, no. 12, pp. 3851-3869, Dec. 2021, doi: 10.1109/JSAC.2021.3118344

J-6) **C.S. Lee**, N. Michelusi, G. Scutari, "Finite Rate Distributed Weight-Balancing and Average Consensus Over Digraphs," in *IEEE Transactions on Automatic Control*, vol. 66, no. 10, pp. 4530-4545, Oct. 2021, doi: 10.1109/TAC.2020.3030871

J-7) **T.H. Chou**, N. Michelusi, D. J. Love, J. V. Krogmeier, "Fast Position-Aided MIMO Beam Training via Noisy Tensor Completion," in *IEEE Journal of Selected Topics in Signal Processing*, vol. 15, no. 3, pp. 774-788, April 2021, doi: 10.1109/JSTSP.2021.3063837

Year 2020

J-8) **M. Hussain**, (∞)M. Scalabrin, M. Rossi, N. Michelusi, "Mobility and Blockage-aware Communications in Millimeter-Wave Vehicular Networks," *IEEE Transactions on Vehicular Technology*, vol. 69, no. 11, pp. 13072-13086, Nov. 2020, doi: 10.1109/TVT.2020.3020898

Year 2019

J-9) **M. Booth**, V. Suresh, N. Michelusi, D. Love, "Multi-Armed Bandit Beam Alignment and Tracking for Mobile Millimeter Wave Communications," *IEEE Communications Letters*, vol. 23, no. 7, pp. 1244-1248, July 2019, doi: 10.1109/LCOMM.2019.2919016

J-10) Y. Zhang, C. R. Anderson, N. Michelusi, D. J. Love, K.R. Baker, and J. V. Krogmeier, "Propagation Modeling Through Foliage in a Coniferous Forest at 28 GHz," in *IEEE Wireless Communications Letters*, vol. 8, no. 3, pp. 901-904, June 2019, doi: 10.1109/LWC.2019.2899299

J-11) N. Michelusi, M. Nokleby, U. Mitra, R. Calderbank, "Multi-Scale Spectrum Sensing in Dense Multi-Cell Cognitive Networks," in *IEEE Transactions on Communications*, vol. 67, no. 4, pp. 2673-2688, April 2019, doi: 10.1109/TCOMM.2018.2886020

J-12) **M. Hussain**, N. Michelusi, "Energy-Efficient Interactive Beam Alignment for Millimeter-Wave Networks," in *IEEE Transactions on Wireless Communications*, vol. 18, no. 2, pp. 838-851, Feb. 2019, doi: 10.1109/TWC.2018.2885041

Year 2018

J-13) N. Michelusi, "Optimal Spectrum Sharing with ARQ based Legacy Users via Chain Decoding", *IEEE Transactions on Wireless Communications*, vol. 17, no. 9, pp. 6122-6134, Sept. 2018, doi: 10.1109/TWC.2018.2854611

J-14) J. Zhang, U. Mitra, H. Kuan-Wen, N. Michelusi, "Support Recovery from Noisy Random Measurements via Weighted ℓ_1 Minimization", *IEEE Transactions on Signal Processing*, vol. 66, no. 17, pp. 4527-4540, Sept. 2018, doi: 10.1109/TSP.2018.2838553

Year 2016

J-15) N. Michelusi, P. Popovski, M. Zorzi, "Optimal Cognitive Access and Packet Selection Under a Primary ARQ Process via Chain Decoding", *IEEE Transactions on Information Theory*, vol. 62, no. 12, pp. 7324-7357, Dec. 2016, doi: 10.1109/TIT.2016.2615182

J-16) D. Del Testa, N. Michelusi, M. Zorzi, "Optimal transmission policies for two-user Energy Harvesting Device networks with limited state-of-charge knowledge", *IEEE Transactions on Wireless Communications*, vol. 15, no. 2, pp. 1393-1405, Feb. 2016, doi: 10.1109/TWC.2015.2489642

Year 2015

J-17) N. Michelusi, M. Zorzi, "Optimal Adaptive Random Multiaccess in Energy Harvesting Wireless Sensor Networks", *IEEE Transactions on Communications*, vol. 63, no. 4, pp. 1355-1372, April 2015, doi: 10.1109/TCOMM.2015.2402662

J-18) N. Michelusi, U. Mitra, "Capacity of electron-based communication over bacterial cables: the full-CSI case", *IEEE Transactions on Molecular, Biological and Multi-Scale Communications*, vol. 1, no. 1, pp. 62-75, March 2015

J-19) N. Michelusi, U. Mitra, "Cross-Layer Design of Distributed Sensing-Estimation With Quality Feedback, Part I: Optimal Schemes", *IEEE Transactions on Signal Processing*, vol. 63, no. 5, pp. 1228-1243, March 2015, doi: 10.1109/TSP.2014.2388438

J-20) N. Michelusi, U. Mitra, "Cross-Layer Design of Distributed Sensing-Estimation With Quality Feedback, Part II: Myopic schemes", *IEEE Transactions on Signal Processing*, vol. 63, no. 5, pp. 1244-1258, March 2015, doi: 10.1109/TSP.2014.2388440

Year 2014

J-21) N. Michelusi, S. Pirbadian, M.Y. El-Naggar, U. Mitra, "A Stochastic Model for Electron Transfer in Bacterial Cables", *IEEE Journal on Selected Areas in Communications*, vol. 32, no. 12, pp. 2402-2416, Dec. 2014, doi: 10.1109/JSAC.2014.2367666

J-22) N. Michelusi, L. Badia, M. Zorzi, "Optimal transmission policies for Energy Harvesting Devices with Limited State-of-Charge Knowledge", *IEEE Transactions on Communications*, vol. 62, no. 11, pp. 3969-3982, Nov. 2014, doi: 10.1109/TCOMM.2014.2359009

J-23) D. Gunduz, K. Stamatiou, N. Michelusi, M. Zorzi, "Designing Intelligent Energy Harvesting Communication Systems", *IEEE Communications Magazine*, vol. 52, no. 1, pp. 210-216, January 2014, doi: 10.1109/MCOM.2014.6710085

Year 2013

J-24) N. Michelusi, L. Badia, R. Carli, L. Corradini, M. Zorzi, "Energy Management Policies for Harvesting-based Wireless Sensor Devices with Battery Degradation", *IEEE Transactions on Communications*, vol. 61, no. 12, pp. 4934-4947, December 2013, doi: 10.1109/TCOMM.2013.111113.130022

J-25) N. Michelusi, P. Popovski, O. Simeone, M. Levorato, M. Zorzi, "Cognitive Access Policies under a Primary ARQ process via Forward-Backward Interference Cancellation", *IEEE Journal on Selected Areas in Communications*, vol. 31, no. 11, pp. 2374-2386, Nov. 2013, doi: 10.1109/JSAC.2013.131112

J-26) N. Michelusi, K. Stamatiou, M. Zorzi, "Transmission policies for energy harvesting sensors with time-correlated energy supply", *IEEE Transactions on Communications*, vol. 61, no. 7, pp. 2988-3001, July 2013, doi: 10.1109/TCOMM.2013.052013.120565

Year 2012

J-27) N. Michelusi, U. Mitra, A.F. Molisch, M. Zorzi, "UWB Sparse/Diffuse Channels, Part I: Channel Models and Bayesian Estimators", *IEEE Transactions on Signal Processing*, vol. 60, no. 10, pp. 5307-5319, Oct. 2012, doi: 10.1109/TSP.2012.2205681

J-28) N. Michelusi, U. Mitra, A.F. Molisch, M. Zorzi, "UWB Sparse/Diffuse Channels, Part II: Estimator Analysis and Practical Channels", *IEEE Transactions on Signal Processing*, vol. 60, no. 10, pp. 5320-5333, Oct. 2012, doi: 10.1109/TSP.2012.2205682

Invited Journal Publications (IJ):

IJ-1) Y. Zhang, S. Jyoti, C. R. Anderson, N. Michelusi, D. J. Love, A. Sprintson, J. V. Krogmeier, "Improving millimeter-wave channel models for suburban environments with site-specific geometric features," *Applied Computational Electromagnetics Society Journal*, vol. 34, No. 2, Feb. 2019, p. 375-378; available at https://aces-society.org/includes/downloadpaper.php?of=ACES_Journal_February_2019_Paper_46&nf=19-2-46

IJ-2) N. Michelusi, J. Boedicker, M.Y. El-Naggar, U. Mitra, "Queuing models for abstracting interactions in Bacterial communities", *IEEE Journal on Selected Areas in Communications*, vol. 34, no. 3, pp. 584-599, March 2016, doi: 10.1109/JSAC.2016.2525558

Before tenure-track Assistant Professor position

IJ-3) N. Michelusi, U. Mitra, "Cross-layer estimation and control for Cognitive Radio: Exploiting Sparse Network Dynamics", *IEEE Transactions on Cognitive Communications and Networking*, vol. 1, no. 1, pp. 128-145, March 2015, doi: 10.1109/TCCN.2015.2503287

Journal Manuscripts Submitted (JS):

JS-1) S. Hosseinalipour, S. Wang, N. Michelusi, V. Aggarwal, C. G. Brinton, D. J. Love, and M. Chang, "Parallel Successive Learning for Dynamic Distributed Model Training over Heterogeneous Wireless Networks," *submitted to the IEEE/ACM Transactions on Networking (Major revision)*

JS-2) **B. Keshavamurthy**, **M. Bliss**, N. Michelusi, "MAESTRO-X: Distributed Orchestration of Rotary-Wing UAV Relay Swarms", *submitted to the IEEE Transactions on Cognitive Communications and Networking (Major revision)*

JS-3) **T.H. Chou**, N. Michelusi, D. J. Love, J. V. Krogmeier, "Compressed Training for Dual-Wideband Time-Varying Sub-Terahertz Massive MIMO", *submitted to the IEEE Transactions on Communications in August 2022 (Major revision)*

JS-4) N. Michelusi, "Non-coherent over-the-air decentralized stochastic gradient descent," *submitted to the IEEE Transactions on Signal Processing in November 2022*

Journal Manuscripts in Preparation (P):

P-1) **F.P.C. Lin**, S. Hosseinalipour, C. G. Brinton, N. Michelusi, "Delay-Aware Federated Learning: Intelligent Aggregation in Large-scale Wireless Edge Networks," *to be submitted to the IEEE Journal on Selected Areas in Communications, tentative submission date: December 2022*

Peer-reviewed Conference Papers (C):

Year 2022

- N. Michelusi, "Decentralized Federated Learning via Non-Coherent Over-the-Air Consensus," submitted to IEEE ICC 2023;

- **B. Keshavamurthy**, Y. Zhang, C. R. Anderson, N. Michelusi, D. J. Love, J. V. Krogmeier, "Propagation Measurements and Analyses at 28 GHz via an Autonomous Beam-Steering Platform," submitted to IEEE ICC 2023;

C-1) ~**B. Keshavamurthy**, N. Michelusi, "Multiscale Adaptive Scheduling and Path-Planning for Power-Constrained UAV-Relays via SMDPs," *56th Asilomar conference on Signals, Systems and Computers*, Pacific Grove, CA, USA, 2022 (accepted, to appear);

C-2) ~D. Nickel, **F.P.C. Lin**, S. Hosseinalipour, N. Michelusi and C. G. Brinton, "Resource-Efficient and Delay-Aware Federated Learning Design under Edge Heterogeneity," IEEE International Conference on Communications Workshops (ICC Workshops), 2022, pp. 43-48, doi: 10.1109/ICCWork-shops53468.2022.9814610.

C-3) ~**B. Keshavamurthy**, Y. Zhang, C. R. Anderson, N. Michelusi, J. V. Krogmeier and D. J. Love, "A Robotic Antenna Alignment and Tracking System for Millimeter Wave Propagation Modeling," United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM), 2022, pp. 145-146, doi: 10.23919/USNC-URSINRSM57467.2022.9881448.

Year 2021

C-4) ~**M. Hussain**, N. Michelusi, "Adaptive Beam Alignment in Mm-Wave Networks: A Deep Variational Autoencoder Architecture," IEEE Global Communications Conference (GLOBECOM), 2021, pp. 1-6, doi: 10.1109/GLOBECOM46510.2021.9685969

C-5) ~**F.P.C. Lin**, S. Hosseinalipour, S.S. Azam, C. G. Brinton, N. Michelusi, "Federated Learning Beyond the Star: Local D2D Model Consensus with Global Cluster Sampling," IEEE GLOBECOM 2021, pp. 1-6, doi: 10.1109/GLOBECOM46510.2021.9685456

C-6) ~**T.H. Chou**, N. Michelusi, D. J. Love, J. V. Krogmeier, "Wideband Millimeter-Wave Massive MIMO Channel Training via Compressed Sensing," IEEE GLOBECOM 2021, pp. 1-6, doi: 10.1109/GLOBE-COM46510.2021.9685901

C-7) ~**B. Keshavamurthy**, N. Michelusi, "Learning-based Cognitive Radio Access via Randomized Point-Based Approximate POMDPs", IEEE International Conference on Communications, 2021, pp. 1-6, doi: 10.1109/ICC42927.2021.9500752

Year 2020

C-8) ∼**F.P.C. Lin**, C. G. Brinton, N. Michelusi, "Federated Learning with Communication Delay in Edge Networks," IEEE GLOBECOM 2020, pp. 1-6, doi: 10.1109/GLOBECOM42002.2020.9322592

C-9) ∼**M. Hussain**, (∞)M. Scalabrin, M. Rossi, N. Michelusi, "Adaptive Millimeter-Wave Communications Exploiting Mobility and Blockage Dynamics", ICC 2020, Dublin, Ireland, 2020, pp. 1-6

C-10) ∼**M. Bliss**, N. Michelusi, "Power-Constrained Trajectory Optimization for Wireless UAV Relays with Random Requests", ICC 2020, Dublin, Ireland, 2020, pp. 1-6

C-11) ∼**T.H. Chou**, N. Michelusi, D. J. Love, J. V. Krogmeier, "Millimeter Wave Beam Recommendation via Tensor Completion", ICC 2020, Dublin, Ireland, 2020, pp. 1-6

<u>Year 2019</u>

C-12) ∼**M. Bliss**, N. Michelusi, "Trajectory Optimization for Rotary-Wing UAVs in Wireless Networks with Random Requests", IEEE GLOBECOM, Waikoloa, HI, USA, 2019, pp. 1-6

C-13) ∼**M. Hussain**, N. Michelusi, "Second-best Beam-Alignment via Bayesian Multi-Armed Bandits", IEEE GLOBECOM, Waikoloa, HI, USA, 2019, pp. 1-6

<u>Year 2018</u>

C-14) ∼**M. Hussain**, N. Michelusi, "Coded Energy-Efficient Beam-Alignment for Millimeter-Wave Networks", *56th Annual Allerton Conference on Communication, Control, and Computing*, Monticello, IL, USA, 2018, pp. 407-412

C-15) ∼(∞)M. Scalabrin, N. Michelusi, M. Rossi, "Beam Training and Data Transmission Optimization in Millimeter-Wave Vehicular Networks", *IEEE GLOBECOM 2018*

C-16) **M. Hussain**, ∼N. Michelusi, "Optimal Interactive Energy Efficient Beam-Alignment for Millimeter-Wave Networks", *52nd Asilomar conference on Signals, Systems and Computers*, Pacific Grove, CA, USA, 2018, pp. 577-581

C-17) ∼**C.S. Lee**, N. Michelusi, G. Scutari, "Distributed Quantized Weight-Balancing and Average Consensus Over Digraphs", *IEEE CDC 2018*

C-18) ∼Y. Zhang, D. J. Love, N. Michelusi, J. V. Krogmeier, S. Jyoti, A. Sprintson, C. Anderson, "Improving Millimeter-Wave Channel Models for Suburban Environments with Site-Specific Geometric Features," *International Applied Computational Electromagnetics Society Symposium*, Denver, CO, 2018, pp. 1-2

C-19) ∼N. Michelusi, **M. Hussain**, "Optimal Beam Sweeping and Communication in Mobile Millimeter-Wave Networks," *IEEE ICC 2018*, Kansas City, MO, USA, 2018, pp. 1-6

C-20) ∼Y. Zhang, S.J. Behera, C. Anderson, D. J. Love, N. Michelusi, A. Sprintson, J. V. Krogmeier, "28-GHz Channel Measurements and Modeling for Suburban Environments", *IEEE ICC 2018*, Kansas City, MO, USA, 2018, pp. 1-6

<u>Year 2017</u>

C-21) **M. Hussain**, D.J. Love, ∼N. Michelusi, "Neyman-Pearson Codebook Design for Beam Alignment in Millimeter-Wave Networks", *ACM mmNets 2017 (Mobicom)*, Oct. 2017, USA

C-22) ∼N. Michelusi, M. Nokleby, U. Mitra, R. Calderbank, "Multi-scale Spectrum Sensing in Mm-Wave Cognitive Networks", *51st Asilomar conference on Signals, Systems and Computers*, Nov. 2017, USA

C-23) **M. Hussain**, ∼N. Michelusi, "Energy Efficient Beam Alignment in Millimeter Wave Networks", *51st Asilomar conference on Signals, Systems and Computers*, Nov. 2017, USA

C-24) ∼N. Michelusi, M. Levorato, "Energy-Based Adaptive Multiple Access in LoRaWAN IoT Systems with Energy Harvesting", *IEEE International Symposium on Information Theory (ISIT), 2017*

C-25) ∼N. Michelusi, "Optimal Secondary Access Policies in ARQ based Primary Systems via Chain Decoding", *IEEE International Symposium on Information Theory (ISIT), 2017*

C-26) ∼N. Michelusi, M. Nokleby, U. Mitra, Robert Calderbank, "Multi-scale Spectrum Sensing in Small-Cell mm-Wave Cognitive Wireless Networks", *IEEE ICC 2017*

<u>Year 2016</u>

C-27) ∼J. Zhang, U. Mitra, K.W. Huang, N. Michelusi, "Support Recovery from Noisy Random Measurements via Weighted L1 Minimization", *IEEE International Symposium on Information Theory (ISIT), 2016*

Year 2015

C-28) ∼N. Michelusi, Matthew Nokleby, U. Mitra, Robert Calderbank, "Dynamic Spectrum Estimation with Minimal Overhead via Multiscale Information Exchange", *IEEE GLOBECOM, 2015*

C-29) ∼N. Michelusi, U. Mitra, "Capacity of bacterial cables via Electron-transfer under full-CSI", *IEEE International Symposium on Information Theory (ISIT), 2015*

C-30) ∼N. Michelusi, U. Mitra, "Capacity of electron-based communication over bacterial cables: the full-CSI case with binary inputs", *IEEE International Conference on Communications (ICC), 2015*

Year 2014

C-31) ∼N. Michelusi, U. Mitra, "A Cross-Layer Framework for Joint Control and Distributed Sensing in Agile Wireless Networks", *IEEE International Symposium on Information Theory (ISIT)*, June 2014

C-32) ∼N. Michelusi, U. Mitra, "Adaptive Distributed Compressed Sensing for Dynamic High-Dimensional Hypothesis testing", *ICASSP 2014*, May 2014

C-33) ∼N. Michelusi, S. Pirbadian, M.Y. El-Naggar, U. Mitra, "A model for electron transfer and cell energetics in bacterial cables", *IEEE CISS 2014*, March 2014

Year 2013

C-34) ∼N. Michelusi, U. Mitra, "Distributed estimation in sensor networks with quality feedback: A general framework", *IEEE GlobalSIP Symposium on New Sensing and Statistical Inference Methods*, Dec. 2013

C-35) ∼N. Michelusi, U. Mitra, "Fusion Center Feedback for Quasi-Decentralized Estimation in Sensor Networks", *51th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, Sept. 2013, Monticello, USA

C-36) ∼D. Del Testa, N. Michelusi, M. Zorzi, "On Optimal Transmission Policies for Energy Harvesting Devices: the case of two users", *10th International Symposium on Wireless Communication Systems (ISWCS)*, 27-30 Aug. 2013, Ilmenau, Germany

C-37) N. Michelusi, ∼M. Zorzi, "Optimal Random Multiaccess in Energy Harvesting Wireless Sensor Networks", *IEEE ICC Workshops 2013*

C-38) N. Michelusi, L. Badia, R. Carli, L. Corradini, ∼M. Zorzi, "Impact of Battery Degradation on Optimal Management Policies of Harvesting-Based Wireless Sensor Devices", *Proceedings of IEEE INFOCOM*, pp. 590-594, 14-19 April 2013

Year 2012

C-39) ∼N. Michelusi, K. Stamatiou, M. Zorzi, "Performance Analysis of Energy Harvesting Sensors with Time-Correlated Energy Supply", *50th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, 1-5 October 2012, Monticello, USA

C-40) N. Michelusi, L. Badia, R. Carli, K. Stamatiou, ∼M. Zorzi, "Correlated Energy Generation and Imperfect State-of-Charge Knowledge in Energy Harvesting Devices", *8th International Wireless Communications and Mobile Computing Conference (IWCMC)*, 27-31 August 2012, Cyprus

C-41) N. Michelusi, K. Stamatiou, L. Badia, ∼M. Zorzi, "Operation Policies for Energy Harvesting Devices with Imperfect State-of-Charge Knowledge", *1st IEEE International Workshop on Energy Harvesting for Communications*, 10-15 June 2012, Ottawa, Canada

Year 2011

C-42) N. Michelusi, P. Popovski, M. Levorato, O. Simeone, ∼M. Zorzi, "Cognitive transmissions under a primary ARQ process via backward interference cancellation", *49th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, pp.727-735, 28-30 Sept. 2011, Monticello, USA

C-43) N. Michelusi, ∼B. Tomasi, U. Mitra, J. Preisig, M. Zorzi, "An evaluation of the hybrid sparse/diffuse algorithm for underwater acoustic channel estimation", *OCEANS 2011*, pp.1-10, 19-22 Sept. 2011, Hawaii, USA

C-44) ∼N. Michelusi, U. Mitra, M. Zorzi, "Hybrid sparse/diffuse UWB channel estimation", *IEEE 12th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, pp.201-205, 26-29 June 2011, San Francisco, USA

Invited Presentations (Conference/Workshop) (IP):

IP-1) ∼N. Michelusi, "Learning and Adaptation for Millimeter-Wave Beam Tracking and Training: a Dual Timescale Variational Framework," Information Theory and Applications (ITA) Workshop, May 2022, San Diego, USA (presentation only)

IP-2) ∼N. Michelusi, "Energy Efficient Adaptive Beam Alignment & Beam Design for 5G Mm-wave Networks," Information Theory and Applications (ITA) Workshop, Feb. 2020, San Diego, USA (presentation only)

IP-3) ∼N. Michelusi, "Robust Energy-Efficient Beam-Alignment through Error Correction Coding," Information Theory and Applications (ITA) Workshop, Feb. 2019, San Diego, USA (presentation only)

IP-4) **C.S. Lee**, ∼N. Michelusi, G. Scutari, "Finite Rate Quantized Distributed Optimization with Geometric Convergence", *52nd Asilomar conference on Signals, Systems and Computers*, Nov. 2018, USA (presentation and paper in Asilomar conference proceedings, pp. 1876-1880, doi: 10.1109/ACSSC.2018.8645345).

IP-5) **R. Hassan**, ∼N. Michelusi, "Multi-user beam alignment for millimeter-wave networks", Information Theory and Applications (ITA) Workshop, Feb. 2018, San Diego, USA (presentation and paper in ITA workshop proceedings, pp. 1-7, doi: 10.1109/ITA.2018.8503247).

IP-6) **C.S. Lee**, ∼N. Michelusi, G. Scutari, "Topology-Agnostic Average Consensus in Sensor Networks with Limited Data Rate", *51st Asilomar conference on Signals, Systems and Computers*, Nov. 2017, USA (presentation and paper in Asilomar conference proceedings, pp. 553-557, doi: 10.1109/ACSSC.2017.8335401).

IP-7) ∼N. Michelusi, "On Population Density Estimation via Quorum Sensing", Canadian Workshop on Information Theory (*CWIT*), June 2017, Canada (presentation and paper in CWIT workshop proceedings, pp. 1-5, doi: 10.1109/CWIT.2017.7994827).

IP-8) **M. Hussain**, ∼N. Michelusi, "Throughput Optimal Beam Alignment in Millimeter Wave Networks", Information Theory and Applications (ITA) Workshop, Feb. 2017, San Diego, USA (presentation and paper in ITA workshop proceedings, pp. 1-6, doi: 10.1109/ITA.2017.8023460).

IP-9) ∼N. Michelusi, U. Mitra, "Model and Analysis of Population Density Estimation via Quorum Sensing", *50th Asilomar conference on Signals, Systems and Computers*, Nov. 2016, USA (presentation and paper in Asilomar conference proceedings, pp. 961-965, doi: 10.1109/ACSSC.2016.7869192).

IP-10) ∼N. Michelusi, "Bacterial Population Density Estimation vis a vis Quorum Sensing", *Communication Theory Workshop*, May 18th, 2016 (presentation only)

IP-11) ∼N. Michelusi, U. Mitra, "Sparsity Aware Dynamic Distributed Compressive Spectrum Sensing and Scheduling", *49th Asilomar conference on Signals, Systems and Computers*, Nov. 2015, USA (presentation and paper in Asilomar conference proceedings, pp. 1109-1113, doi: 10.1109/ACSSC.2015.7421312).

IP-12) ∼N. Michelusi, J. Boedicker, M.Y. El-Naggar, U. Mitra, "A Stochastic Queuing Model of Quorum Sensing in Microbial Communities", *49th Asilomar conference on Signals, Systems and Computers*, Nov. 2015, USA (presentation and paper in Asilomar conference proceedings, pp. 133-138, doi: 10.1109/ACSSC.2015.7421098).

IP-13) E. Pavez, ∼N. Michelusi, A. Anis, U. Mitra, A. Ortega, "Markov Chain Sparsification with Independent Sets for Approximate Value Iteration", *53rd Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, Oct. 2015, Monticello, USA (presentation and paper in Allerton conference proceedings, pp. 1399-1405, doi: 10.1109/ALLERTON.2015.7447172).

IP-14) ∼N. Michelusi, U. Mitra, "Controlled spectrum sensing and scheduling under resource constraints",

24th International Conference on Computer Communications and Networks (ICCCN), Aug. 2015, Las Vegas, USA (presentation and paper in ICCCN conference proceedings, pp. 1-6, doi: 10.1109/IC-CCN.2015.7288389).

IP-15) ∼U. Mitra, N. Michelusi, S. Pirbadian, H. Koorehdavoudi, M.Y. El-Naggar, P. Bogdan, "Queueing theory as a modeling tool for Bacterial Interaction: Implications for Microbial Fuel Cells", *International Conference on Computing, Networking and Communications (ICNC), 2015* (presentation and paper in ICNC conference proceedings, 658-662, doi: 10.1109/ICCNC.2015.7069423).

IP-16) ∼N. Michelusi, U. Mitra, "Joint Control and Compressed Sensing for Dynamic Spectrum Access in Agile Wireless Networks", *52nd Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, Monticello, USA, October 2nd 2014 (presentation and paper in Allerton conference proceedings, pp. 1156-1162, doi: 10.1109/ALLERTON.2014.7028585).

IP-17) ∼N. Michelusi, "Electron transfer & cell energetics in bacterial cables: modeling & information theoretic aspects", BIRS Workshop on Biological and Bio-Inspired Information Theory, Banff, Alberta, Canada, October 27th 2014 (presentation only).

IP-18) ∼N. Michelusi, "Electron transfer & cell energetics in bacterial cables: modeling & information theoretic aspects", Information Theory and Applications Workshop, San Diego, CA, USA, February 14th 2014 (presentation only).

IP-19) ∼N. Michelusi, U. Mitra, "Dynamic Spectrum Sensing-Scheduling in Agile Networks with Compressed Belief Information", *IEEE Global Conference on Signal and Information Processing (GlobalSIP) 2014* (presentation and paper in IEEE GlobalSIP conference proceedings, pp. 808-812, doi: 10.1109/GlobalSIP.2014.7032231).

IP-20) ∼N. Michelusi, P. Popovski, M. Zorzi, "Cognitive access policies under a primary ARQ process via chain decoding", Information Theory and Applications (ITA) Workshop, pp.1-8, 10-15 Feb. 2013, San Diego, USA (presentation and paper in ITA workshop proceedings, pp. 1-8, doi: 10.1109/ITA.2013.6502994).

IP-21) N. Michelusi, K. Stamatiou, ∼M. Zorzi, "On optimal transmission policies for energy harvesting devices", Information Theory and Applications (ITA) Workshop, pp.249-254, 5-10 Feb. 2012, San Diego, USA (presentation and paper in ITA workshop proceedings, pp. 249-254, doi: 10.1109/ITA.2012.6181793

IP-22) N. Michelusi, U. Mitra, A.F. Molisch, ∼M. Zorzi, "Hybrid sparse/diffuse channels: A new model and estimators for wideband channels", *49th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, pp.477-484, 28-30 Sept. 2011, Monticello, USA (presentation and paper in Allerton conference proceedings, pp. 477-484, doi: 10.1109/Allerton.2011.6120205).

IP-23) N. Michelusi, O. Simeone, M. Levorato, P. Popovski, ∼M. Zorzi, "Optimal cognitive transmission exploiting redundancy in the primary ARQ process", Information Theory and Applications (ITA) Workshop, pp.1-10, 6-11 Feb. 2011, San Diego, USA (presentation and paper in ITA workshop proceedings, pp. 1-10, doi: 10.1109/ITA.2011.5743628).

INVITED TALKS & SEMINARS (S):

- *Learning in Wireless Networks: From Federated to Decentralized Learning Architectures*
  S1 - Summer School of Information Engineering (SSIE PhD Summer School), Bressanone (Italy), July 15th, 2022
- *Learning and Adaptation in Millimeter-Wave Networks: a Dual Timescale approach*
  S2 - LIONS Seminar Series, Arizona State University, April 23rd, 2021
- *Adaptive Communication-Efficient Beam-Alignment for Millimeter-Wave Wireless Network*
  S3 - Arizona State University, March 27th, 2020
- *Second-best Beam-Alignment via Bayesian Multi-Armed Bandits*
  S4 - University of Padova, Padova, Italy, June 20th 2018
  S5 - NYU Wireless, New York City, April 16th 2018
  S6 - Blue Danube Systems, Santa Clara, CA, October 27th 2017
  S7 - Institute for Telecommunication Sciences (NTIA) and University of Colorado Boulder, Boulder, CO, August 14th 2017
- *Optimal Secondary Access in Retransmission based Primary Networks via Chain Decoding*
  S8 - University of Padova, Padova, Italy, July 11th 2017
- *Energy Harvesting for Wireless Sensor Networks*
  S9 - ReNEWW, West Lafayette, IN, USA, talk delivered for Regal Beloit Corporation, May 12, 2017
- *Cross layer Sensing, Estimation & Control in Wireless Networks*
  S10 - University of Padova, Padova, Italy, June 10th 2016
  S11 - EURECOM, Biot, France, June 2nd 2016
- *Cross layer Sensing, Estimation & Control in Wireless Networks*
  S12 - University of California, Santa Barbara, CA, July 6th 2015
  S13 - National Chiao Tung University, Hsinchu City, Taiwan, April 22nd 2015
  S14 - National Institute of Informatics, Tokyo, Japan, April 17th 2015
  S15 - Ohio State University, Columbus, OH, USA, April 9th 2015
  S16 - Purdue University, West Lafayette, IN, USA, April 6th 2015
  S17 - John Hopkins University, Baltimore, MD, USA, 27th February 2015
- *Electron transfer & cell energetics in bacterial cables: modeling & information theoretic aspects*
  S18 - University of California, Los Angeles, CA, USA, May 20th 2015
  S19 - Georgia Institute of Technology, Atlanta, GA, USA, December 2nd 2014
- *Joint Control and Compressed Sensing for Dynamic Spectrum Access in Agile Wireless Networks*
  S20 - University of Southern California, Los Angeles, CA, USA, September 10th 2014
- *Cross-layer design of distributed sensing-estimation strategies with quality feedback*
  S21 - Stanford University, CA, USA, 4th April 2014
  S22 - University of Southern California, Los Angeles, CA, USA, 16th October 2013
- *Energy Harvesting for Wireless Sensor Networks*
  S23 - Purdue University, West Lafayette, IN, USA, October 1st 2013
- *Optimal Secondary Access in Retransmission based Primary Networks via Chain Decoding*
  S24 - University of Southern California, Los Angeles, CA, USA, April 3rd 2013
- *Hybrid Sparse/Diffuse UWB Channel Estimation*
  S25 - New Jersey Institute of Technology (NJIT), Newark, NJ, USA, August 22nd 2011
  S26 - WINLAB, Rutgers University, NJ, USA, August 18th 2011
  S27 - Woods Hole Oceanographic Institution (WHOI), Woods Hole, MA, USA, April 20th 2011

INVITED PANELS (IP):

IP-1) "5G/mmWave Capacity Improvements: A Systems Perspective", 2017 International Symposium on Advance Radio Technologies, August 15-17, Boulder, CO.

PROFESSIONAL ACTIVITIES & SERVICE

Professional society activities:

- *Associate Editor* for the IEEE Transactions on Wireless Communications (2016-2021)
- Served on two NSF panels as a reviewer, in 2021 and in 2022
- Symposium Chair for the "Wireless Communications Symposium" at IEEE GLOBECOM 2020
- Chair for the "IoT, M2M, Sensor Networks, and Ad-Hoc Networking" track in the IEEE Vehicular Technology Conference 2020
- Chair for the First International INFOCOM Workshop on Distributed Machine Learning and Fog Networks (FOGML) 2021
- Symposium Chair for "Cognitive Computing and Networking" at ICNC 2018
- Organized an invited session on "Dynamic Control in Wireless Networks" at Asilomar Conference on Signals, Systems, and Computers 2017 (sponsored by the IEEE Signal Processing Society)
- Organized an invited session on "Biological Communications" at Asilomar Conference on Signals, Systems, and Computers 2016 (sponsored by the IEEE Signal Processing Society)
- Technical Program Committee member for: IEEE ICNC (2015,2018-2020), ACM NanoCom 2015, European Wireless (2015,2018), MILCOM 2016, IEEE ICC (2016-2019,2021-2022), IEEE WCNC 2017, IEEE GLOBECOM (2015-2019), ACM MSWiM'17, ACM NANOCOM 2015
- *Reviewer for several IEEE Journals,* including: IEEE Transactions on Communications, IEEE Transactions on Wireless Communications, IEEE Transactions on Signal Processing, IEEE Transactions on Information Theory, IEEE Communications Letters, IEEE Transactions on Mobile Computing, IEEE Journal on Selected Areas in Communications, IEEE Transactions on Molecular, Biological and Multi-Scale Communications, IEEE Journal of Selected Topics in Signal Processing, IEEE Transactions on Cognitive Communications and Networking, IEEE Signal Processing Letters, IEEE/ACM Transactions on Networking, IEEE Wireless Communications Letters, IEEE Transactions on Vehicular Technology.

Committee Activities:

- Data Science, Analytics and Engineering (DSAE) Graduate Admission Committee (ASU, January 2022 - current)
- Graduate Committee (Purdue University, August 2017 - Dec. 2020)
- Graduate Admissions (Purdue University, January 2017 - Dec. 2020)

Ph.D. and M.Sc. Committees:

- Chair in the Ph.D. committee of the following students: Muddassar Hussain (Purdue), Chang-Shen Lee (Purdue), Bharath Keshavamurthy (ASU)
- co-Chair in the Ph.D. committee of the following students: Major Matthew Booth (Purdue), Tzu-Hsuan Chou (Purdue), Frank Po-Chen Lin (Purdue)
- Member in the Ph.D. committee of the following students: Jacob Holtom (ASU), Nurullah Karakoc (ASU), Yaguang Zhang (Purdue), Cho-Hsin Tsai (Purdue)
- Chair in the M.Sc. committee of the following students: Bharath Keshavamurthy (Purdue)
- Member in the M.Sc. committee of the following students: Nadia Mercedes Coleman (Purdue)

Other Activities:

- Organized two talks for the "*Learning, Information, Optimization, Networks, Statistics*" (LIONS) seminar series at ASU: Gesualdo Scutari on February 25th, 2022, and Marco Mondelli on March 18th, 2022.

RESEARCH SUPPORT

Active research support (since employment at ASU):

- *NSF grant CNS-2129015*   (2021-2026)
  - single PI Michelusi
  - Title: "CAREER: Adaptive Communications and Trajectory Design for UAV-assisted Wireless

Networks: a Multi-Scale Decision Framework"
- Intended Award Amount / Dr. Michelusi's share: $487,688 / $487,688
- Awarded Amount to Date: $189,893
- Funding agency: National Science Foundation

Concluded research support (since employment at Purdue University):

- *NSF grant CNS-1642982 extension*   (2021)
  - PI Michelusi, co-PIs Love and Krogmeier
  - Title: "Real-time Control of Dense, Mobile, Millimeter Wave Networks Using a Programmable Architecture"
  - Total Amount / Dr. Michelusi's share: $50,000 / $16,666
  - Funding agency: National Science Foundation
- *NSF grant CNS-1642982*   (2016-2021)
  - PI Michelusi, co-PIs Love and Krogmeier
  - Title: "Real-time Control of Dense, Mobile, Millimeter Wave Networks Using a Programmable Architecture"
  - Total Amount / Dr. Michelusi's share: $941,197 / $313,732
  - Funding agency: National Science Foundation
- *DARPA Spectrum Collaboration challenge (SC2) award*, PI El-Gamal, co-PIs Michelusi, Peleato, Love and Krogmeier   (2019-)
  - Title: "Adaptive Wireless Networks for Spectrally Efficient Communications"
  - Total Amount / Dr. Michelusi's share: $375,000 / $75,000
  - Awarded to top 5 placed teams at the second preliminary event of SC2, held in January 2019
  - Funding agency: Defense Advanced Research Projects Agency (DARPA)
- *DARPA contract award* to compete in the Spectrum Collaboration challenge (SC2)   (2018)
  - PI El-Gamal, co-PIs Michelusi, Peleato, Love and Krogmeier
  - Title: "Adaptive Wireless Networks for Spectrally Efficient Communications"
  - Total Amount / Dr. Michelusi's share: $750,000 / $150,000
  - Awarded to top 10 placed teams at the first preliminary event of SC2, held in December 2017
  - Funding agency: DARPA
- *DARPA contract award* to compete in the Spectrum Collaboration challenge (SC2)   (2017)
  - PI El-Gamal, co-PIs Michelusi, Peleato, Love and Krogmeier
  - Title: "Adaptive Wireless Networks for Spectrally Efficient Communications"
  - Total Amount / Dr. Michelusi's share: $500,000 / $100,000
  - Funding agency: DARPA