

# Piya Pal

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## PROFESSIONAL APPOINTMENTS

- **University of California, San Diego** July 2024 - Present  
*Professor of Electrical and Computer Engineering*
- **University of California, San Diego** July 2020 - June 2024  
*Associate Professor of Electrical and Computer Engineering*
- **University of California, San Diego** July 2016 - June 2020  
*Assistant Professor of Electrical and Computer Engineering*
- **University of Maryland, College Park** Jan. 2014 - July 2016  
*Assistant Professor of Electrical and Computer Engineering*  
*Affiliate Faculty: Institute for Systems Research*
- **California Institute of Technology** July 2013 - Nov. 2013  
*Postdoctoral Scholar in Electrical Engineering*  
*Advisor: Prof. P. P. Vaidyanathan*
- **Microsoft Research, Redmond, USA** June - Oct. 2012  
*Research Intern, Mentor: Dr. Henrique Malvar*

## EDUCATION

- **California Institute of Technology** Sep. 2007 - June 2013  
*Ph.D. in Electrical Engineering*  
*Advisor: Prof. P. P. Vaidyanathan*
- **California Institute of Technology** 2007 - 2008  
*M.S. in Electrical Engineering*
- **Indian Institute of Technology - Kharagpur** 2003 - 2007  
*B. Tech in Electronics and Electrical Communication Engineering*

## HONORS AND AWARDS

- **2020 IEEE Signal Processing Society Pierre-Simon Laplace Early Career Technical Achievement Award** Awarded in 2021  
“for innovative contributions to sparse array design, and fundamental performance limits of sparse inverse problems”.  
*This major award honors an individual who, over a period of years in his/her early career, has made significant technical contributions to theory and/or practice in technical areas within the scope of the Society, as demonstrated by publications, patents, or recognized impact on the field, including but not limited to, a standard, a product, or a technology trend.*
- **2019 Presidential Early Career Award for Scientists and Engineers (PECASE)** 2019  
*This is the highest honor bestowed by the United States Government to outstanding scientists and engineers who are beginning their independent research careers and who show exceptional promise for leadership in science and technology*
- **2019 Director of Research Early Career Grant** 2019  
Office of Naval Research (ONR), USA  
*This award is bestowed by ONR recognizing (i) innovative research at the frontiers of science and*

technology that is relevant to the mission of ONR, and (ii) community service demonstrated through scientific leadership and community outreach.

- **2019 ONR Young Investigator Program (YIP) Award** 2019
- **NSF Faculty Early Career Development (CAREER) Award** 2016  
National Science Foundation (NSF)
- **2014 Charles and Ellen Wilts Prize, Caltech** 2014  
Awarded to outstanding Ph.D Thesis in Electrical Engineering.
- **2022 Outstanding Article in Signal Processing** Frontiers in Signal Processing, 2022  
for the journal article “Beamspace ESPRIT for mmWave Channel Sensing: Performance Analysis and Beamformer Design”. *Also highlighted within Frontiers in Signal Processing Editors’ Choice 2022.*
- **Best Student Paper Award (First Position)** December 2019  
IEEE CAMSAP 2019 Guadeloupe, West Indies.
- **Shannon Graduate Fellowship** 2018  
For my Ph.D student Heng Qiao
- **Qualcomm Fellow-Mentor-Advisor Fellowship** August 2018  
Student Fellow: Heng Qiao
- **Outstanding Graduate Mentor Award** 2022  
Electrical and Computer Engineering, UC San Diego
- **Graduate Teaching Award** 2017 and 2018  
Electrical and Computer Engineering, UC San Diego
- **Best Student Paper Award (First Position)** March 2017  
IEEE ICASSP 2017 New Orleans, Louisiana.
- **Best Student Paper Award** January 2011  
IEEE DSP Workshop Sedona, Az.
- **Atwood Fellowship** 2007-2008  
Caltech
- **Sarat Memorial Prize** 2007  
Indian Institute of Technology, Kharagpur

#### RESEARCH INTERESTS

- Theory of signal representation and sampling techniques for high-dimensional signal/data processing
- Computational Sensing and super-resolution with Sparse Sensor arrays
- Biomedical Signal Processing, including MRI and neural signal processing.
- Physical layer massive MIMO and Millimeter-wave communication.
- Sensing, Optimization and Machine Learning for Ill-Posed Inverse Problems.
- Online decision making and adaptive sensing.

#### PH.D STUDENTS AND POSTDOCTORAL SCHOLARS

- Dr. Robin Rajamaki, postdoctoral scholar (2022-2024). Currently Assistant Professor at Tampere University, Finland.
- Heng Qiao, Ph.D 2019. Currently Assistant Professor at the University of Michigan Ann Arbor-Shanghai Jiao Tong University Joint Institute.
- Ali Koochakzadeh, Ph.D 2020. Currently employed at Google.
- Pulak Sarangi, Ph.D 2023. Currently employed at Apple.
- Mehmet Can Hucumenoglu, Ph.D 2024. Currently employed at Qualcomm.
- Jiawen Chen (co-advised with Prof. Eric Ahrens, Department of Radiology, UC San Diego), Ph.D 2024. Currently employed at Philips Research.

- Sina Shahsavari, Ph.D 2024. Currently employed at Apple.
- Yinyan Bu (2022-present)
- Parthasarathi Khirwadkar (2023-present)
- Mohamed Hamdy (2024-present)

## PROFESSIONAL SERVICE

### *Membership in Professional Societies*

- Senior Member, IEEE.
- Elected Member of Nominations and Appointments Committee, IEEE Signal Processing Society, 2022-2023 (Two-Year term).
- Elected Member of the EURASIP Signal Processing for Multisensor Systems Technical Committee (SPMuS TAC), 2020 onwards (re-elected).
- Elected Member of the IEEE Signal Processing Society's Sensor Array and Multichannel (SAM) Technical Committee (2016-2018, Re-elected for second term in 2019). Both terms ended.
- Elected Member of the IEEE Signal Processing Society's Signal Processing Theory and Methods (SPTM) Technical Committee (2019-present, re-elected).
- Faculty Mentor (AI Champion), Eric and Wendy Schmidt AI in Science Postdoctoral Fellowship at UC San Diego, 2022-current.

### *Editorship*

- Associate Editor, IEEE Transactions on Signal Processing, 2024-present.
- Associate Editor, IEEE Signal Processing Magazine, 2020-May 2024.
- Invited Member of Editorial Board, Foundations and Trends in Signal Processing, 2023-present.
- Elected Board member of Asilomar Conference, 2024/2025.
- Lead Editor for special issue on "Sensing: Fundamental Limits and Modern Applications", Journal on Selected Areas in Information Theory (to appear).
- Guest Editor for special issue on "Deep Learning Methods for Inverse Problems", Journal on Selected Areas in Information Theory, 2022.
- Guest Editor, Digital Signal Processing (Elsevier), Special Issue on "Coprime Sampling and Arrays", 2016.

### *Conference Organizer and Chair*

- Technical Co-Chair, Sampling Theory and Applications (SampTA) 2025, Vienna, Austria.
- Workshops Co-Chair, 2025 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Hyderabad, India.
- Technical Chair, 2024 IEEE Sensor Array and Multichannel Signal Processing Workshop.
- Special Sessions Chair, IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP), 2023.
- Track Chair for Array Signal Processing, Asilomar Conference on Signals, Systems and Computers, 2017, 2021.
- Student Program and Travel Grants Chair, IEEE International Workshop on Signal Processing Advances in Wireless Communication (SPAWC) 2018.
- Publicity Chair, IEEE Global Conference on Signal and Information Processing (GlobalSIP), 2016.
- Co-Chair, IEEE GlobalSIP Symposium on Compressed Sensing, Deep Learning, 2016.
- Judge for Best Student Paper Award at multiple conferences. (Asilomar)

- Organized several special sessions at IEEE ICASSP, IEEE SAM, IEEE CAMSAP, GlobalSIP, Asilomar Conference on Signals, Systems and Computers: 2014-present.

### *Reviewing*

- Panel Reviewer for National Science Foundation (NSF), CISE, ENG and CPS, 2015-present.
- Proposal Reviewer for Technology Foundation STW, Netherlands' Research Council for the Engineering and Applied Sciences, 2016.
- Proposal Reviewer for Army Research Office (ARO) and Department of Energy (DOE) (Early Career Award proposals).
- Proposal Reviewer for Israeli Ministry of Innovation, Science and Technology
- **Peer-Reviewed Journals:** IEEE Transactions on Signal Processing; IEEE Transactions on Information Theory; IEEE Signal Processing Magazine; IEEE Journal of Selected Topics in Signal Processing; IEEE Journal on Selected Areas in Information Theory; IEEE Transactions on Communications; IEEE Journal on Selected Topics in Signal Processing; Proceedings of the IEEE; IEEE Signal Processing Letters; IEEE Transactions on Circuits and Systems; IEEE Transactions on Aerospace and Electronic Systems; EURASIP Journal on Advances in Signal Processing; Signal Processing (Elsevier).
- **Peer-Reviewed Conferences:** IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP); IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM); European Signal Processing Conference (EUSIPCO); IEEE Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP); IEEE International Symposium on Information Theory (ISIT), IEEE Global Conference on Signal and Information Processing (GlobalSIP)