In celebration of **Asian Pacific American Heritage Month,** the **Department of Electrical and Computer Engineering** is spotlighting our faculty, scientists, post docs and Advisory Board members. We celebrate their contributions and achievements in the department, as well as their guidance and leadership in academia and industry.

David Chen, *Advisory Board Member*

Mr. David Chen co-founded AngelVest Group (angelvestgroup.com), an investment platform comprising of individual angel investors to curate and invest in early-stage companies. AngelVest Group has grown to be one of the largest branded angel groups in Greater China comprised of mostly American expats based in Shanghai, Hong Kong, and Singapore. Mr. Chen is an avid supporter of disruptive innovation and entrepreneurs who have great vision and high levels of consciousness for making large-scale positive social impact. His areas of investment focus in recent years include robotics, AI, blockchain, and other Internet businesses.

Mr. Chen is also a Board member of the Harvard Business School Alumni Angels – with the mission to provide an educational and networking forum for individuals interested in angel investing. Previously, he worked in a variety of corporate finance and product development roles at companies including Salomon Brothers, Advanced Micro Devices, and Honda Motor.

Mr. Chen earned his BS in Electrical Engineering from the University of Rochester and MBA from Harvard Business School. Originally from New York, Mr. Chen recently lived in Shanghai, China for over 12 years and currently spends his time between the USA and Asia.

Tanzeem Choudhury, *Advisory Board Member*

Tanzeem Choudhury is a Professor of Computing and Information Sciences at Cornell Tech where she holds the Roger and Joelle Burnell Chair in Integrated Health and Technology and a co-founder of HealthRhythms Inc, a company whose mission is to add the layer of behavioral health into all of healthcare. At Cornell, she directs the People-Aware Computing group, which works on creating the future of technology-assisted well-being. Tanzeem received her PhD from the Media Laboratory at MIT. She has been awarded the MIT Technology Review TR35 award, NSF CAREER award, TED Fellowship, Kavli Fellowship, ACM Distinguished Membership, and Ubiquitous Computing 10-year Impact Award.

Zhiyao Duan, *Associate Professor*
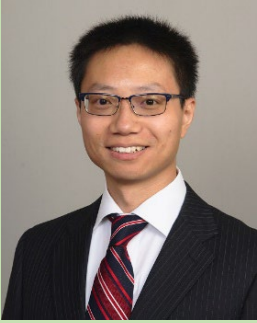
Zhiyao Duan received his BS in Automation and MS in Control Science and Engineering from Tsinghua University, China, in 2004 and 2008, respectively, and PhD in Computer Science from Northwestern University in 2013. He joined the faculty of the Electrical and Computer Engineering Department as an assistant professor in 2013, and is currently an associate professor in Electrical and Computer Engineering, Computer Science, and Data Science. His research interest is in computer audition and its connections with computer vision, natural language processing, and augmented and virtual reality. He received a best paper award at the SMC 2017, a best paper nomination at ISMIR 2017, and a CAREER award from the National Science Foundation (NSF). His research is funded by NSF, NIH, New York State Center of Excellence in Data Science, and University of Rochester internal awards on AR/VR, health analytics, and data science. He served as a Scientific Program Co-Chair of ISMIR 2021, and is serving as an associate editor for IEEE Open Journal of Signal Processing, a guest editor for Transactions of the International Society for Music Information Retrieval, and a guest editor for Frontiers in Signal Processing. He is the President-Elect of the International Society for Music Information Retrieval (ISMIR).

Van Tuan Dinh, *Research Scientist*

Dr. Van Tuan Dinh received his PhD with a summa cum laude honor from the Autonomous University of Barcelona, Spain in 2014. His PhD thesis, under the supervision of ICREA Professor Stephan Roche at Catalan Institute of Nanoscience and Nanotechnology, has been selected by Springer as an outstanding PhD research and published at https://www.springer.com/us/book/9783319255699. Dr. Dinh has been actively involved in several important research projects including the Graphene Flagship. His research has been published in highly cited journals such as Nature Physics, Nature Communications, Physical Review X, Physical Review Letters, etc.

Dr. Dinh's research interests include optical properties of 2D materials, few-body systems, electron-phonon interaction, and many-body effects. He also develops new methodologies to study charge and spin transport in 2D materials.

Michael Huang, *Professor*

Michael Huang received the BS degree in computer science and engineering from Tsinghua University, Beijing, in 1994, the MS and the PhD degree in computer science from University of Illinois at Urbana-Champaign in 1999 and 2002, respectively. From 1994 to 1997, he was a lead architect in building a 32-processor hierarchical shared-memory multiprocessor. He joined the faculty of the Electrical and Computer Engineering department in 2002. His research interests include various aspects of high-performance computer architecture such as processor microarchitecture, communication and memory substrate, reliability, and energy-efficient and complexity-effective design. His research focuses on addressing emerging issues and exploring new technologies in the underlying device, circuit, and manufacturing technology. He is a recipient of the NSF CAREER award and a member of the IEEE and the ACM.

T.S. Khuranan, *Advisory Board Member*

T.S. Khurana is Vice President of global sourcing and operations engineering at Facebook and is based in the Menlo Park campus. His team manages the complete ecosystem of source through delivery functions spanning compute, storage, network, data center infrastructure and connectivity. During his 9 -year tenure at Facebook, T.S. led the company's transition from mainstream data center equipment channels to custom designed and manufactured infrastructure saving the company over $2B in capital expenditures.

Prior to Facebook, T.S. worked at Cisco for 12 years, where he held several domestic and international leadership positions in operations. T.S. began his career at KLA -Tencor where over the course of 11 years he held several roles in manufacturing, engineering and international sales management.

T.S. attended the United States Air Force Academy and holds a bachelor's degree in electrical engineering from the University of Rochester and an MBA from Santa Clara University.

Sanghamithra Korukonda, *Advisory Board*

Mithra Korukonda specializes in the area of medical image analysis, creating computational tools for diagnosis and treatment. Currently, she is a senior scientist at Nanostring Technologies, working to decode gene expression from fluorescent microscopy data. Prior to that, she held research staff positions at GE Global Research and Philips Research North America developing algorithms and technologies for diverse imaging modalities. She obtained an undergraduate degree in Electrical Engineering from the Indian Institute of Technology at Bombay, India and holds a PhD in biomedical ultrasound from the ECE Dept at the University of Rochester. While not working, she loves to travel and hike, a pursuit she honed-in the Adirondacks while at graduate school."

Ming-Lun Lee, *Associate Professor*

Ming-Lun Lee received his PhD in historical musicology and music theory from the University at Buffalo, as well as master's degrees in electrical engineering and musicology from National Taiwan University. Lee has completed several studies on the analysis and aesthetics of classical recordings, including his PhD dissertation Britten Conducting Britten: A Study of the Recordings Produced with John Culshaw. He has presented papers or offered workshops at the Audio Engineering Society Convention, American Musicology Society Annual Meeting, Buffalo Graduate Symposium on Music, and University of Toronto Music Graduate Student Association Conference.

With teaching and research experience in both electrical engineering and musicology, Lee is well fitted to the interdisciplinary nature of the Audio and Music Engineering program. He is devoted to audio programming using various programming languages, including C/C++, Objective-C, ChucK, Csound, Faust, Max/MSP, Pure Data, SuperCollider, and Swift. He is particularly interested in programming for interactive multi-media performance. His AME/ECE courses include AME262/ECE475 Audio Software Design I, AME264/ECE476 Audio Software Design II, AME196 Interactive Music Programming, ECE114 Intro to C/C++ Programming, and AME240/MUSC240/ECE478 Revolutions in Sound: Artistic and Technical Evolution of Sound Recording. He has received the 2015 Wadsworth C. Sykes Engineering Faculty Award for developing the Interactive Music Programming course.

Lee's current research interests focus on spatial audio and AR/VR. After receiving the AR/VR Pilot Funding Award with Mathew Brown and Zhiyao Duan in 2017, he has recorded over 50 concerts with binaural/Ambisonic microphones and 360/3D VR cameras at the Eastman School of Music and several other concert venues. His other research interests include audio preservation, classical recording production, and the computational analysis of musical performances and recordings.

In addition to his academic research and teaching, Lee is an active choral conductor and baritone singer. He is currently the music director of the Chinese Choral Society of Rochester and vocal coach of the Taiwanese Choral Society of Rochester. Lee studied choral conducting with Chia-fen Weng and voice with Chung-kung Lin and Chi-ling Hong. He has also participated in many choral conducting masterclasses with distinguished mentors, including Dirk DuHei, Gábor Hollerung, Edward Maclary, Robert Page, Oimer Suitner, and William Weinert. Lee has appeared as a guest conductor with the Chin-Yun Chorus and the National Defense Medical Center Choir and as a baritone soloist with the Chin-Yun Chorus, the National Taiwan Normal University Music Department Chorus, and the University at Buffalo Choir.

Qiang Lin, *Professor*

Qiang Lin received his BS and MS in applied physics from Tsinghua University, China, in 1996 and 1999, respectively, and received his PhD from Institute of Optics, University of Rochester, in 2006. He was a postdoctoral scholar in the Department of Applied Physics at Caltech from 2007 to 2010. In 2011, he joined the faculty of electrical & computer engineering and the faculty of optics.

Qiang Lin's general research interests focus on understanding the fundamental physics of novel nonlinear optical, quantum optical, and optomechanical phenomena in micro-/nanoscopic photonic structures, and on finding their potential applications towards chip-scale photonic signal processing in both classical and quantum regimes.

Nikhila Nyayapathi, *Postdoctoral Associate*

Nikhila Nyayapathi received her PhD in Electrical Engineering from the University at Buffalo in 2020. She also received her MS in Electrical Engineering from University at Buffalo (2016), and Bachelors in Electronics and Instrumentation Engineering from Birla Institute of Technology and Science (2011). From 2020 - 2021, she worked as a Postdoctoral Associate with University at Buffalo, in the Department of Biomedical Engineering. In 2021, she joined University of Rochester as a Postdoctoral Associate in the Department of Electrical and Computer Engineering, working under the guidance of Prof. Marvin Doyley.

Nikhila's research is focused on studying and utilizing optics and ultrasound technology for biomedical imaging applications. During her PhD, she has designed and developed a photoacoustic and ultrasound based dual modality system for imaging breast cancer patients. Her current research focusses on study and design of a hybrid shear wave elastography and photoacoustic imaging system to analyze the pancreatic tumor microenvironment.

Gaurav Sharma, *Professor*

Gaurav Sharma is with the University of Rochester, where he is a Professor in the Department of Electrical and Computer Engineering , Department of Computer Science , and Department of Biostatistics and Computational Biology. He is also a Distinguished Researcher in Center of Excellence in Data Science (CoE) at the Goergen Institute for Data Science. From 2008-2010, he served as the Director for the Center for Emerging and Innovative Sciences (CEIS), a New York state supported center for promoting joint university-industry research and technology development, which is housed at the University of Rochester. From 1996 through 2003, he was with Xerox Research and Technology in Webster, NY first as a member of research and technology staff and then as a Principal Scientist and Project Leader. He received the Ph.D. in Electrical and Computer Engineering from North Carolina State University, Raleigh, NC, and masters degrees in Applied Mathematics from NCSU and in Electrical Communication Engineering from the Indian Institute of Science, Bangalore, India. He received his bachelor of engineering degree in Electronics and Communication Engineering from Indian Institute of Technology, Roorkee (formerly, Univ. of Roorkee).

Dr. Sharma is a fellow of the IEEE, a fellow of SPIE -- the international society for optics and photonics, and a fellow of the Society for Imaging Science and Technology (IS&T). He is also an elected member of Sigma Xi, the scientific research society and the Phi Kappa Phi and Pi Mu Epsilon honor societies. Dr. Sharma was a 2020-21 Distinguished Lecturer of the IEEE Signal Processing Society and has previously served as an SPIE Visiting Lecturer. Dr. Sharma served as the Editor-in-Chief for the IEEE Transactions on Image Processing from 2018-2020 and as the Editor-in-Chief for the Journal of Electronic Imaging from 2011 through 2015. Dr. Sharma is a member of the Editorial Board of the Proceedings of the IEEE and has previously served and as an associate editor for the Journal of Electronic Imaging, for the IEEE Transactions on Information Forensics and Security and for the IEEE Transactions on Image Processing. He is the editor of the "Digital Color Imaging Handbook" published by CRC press. Dr. Sharma served as the 2010-2011 chair for the Image, Video, and Multi-dimensional Signal Processing Technical Committee, of the IEEE Signal Processing Society and as the 2007 Chair of the IEEE Rochester Section. He is also a past member of the IEEE Spectrum Editorial Advisory Board, the Information Forensics and Security Technical Committee, the Multimedia-Signal Processing Technical Committee of the IEEE SPS, and of the Industry DSP Technology Standing Committee, of the IEEE Signal Processing Society. He was the Chair and Co-Chair, respectively, for the 2013 and 2012 IS&T/SPIE Electronic Imaging (EI) Symposia and Technical Program Co-Chair for the 2012 and 2016 editions of the IEEE International Conference on Image Processing (ICIP). Dr. Sharma is a member of the IEEE Signal Processing and Communications Societies of the IEEE. He serves on the IEEE Publication Services Product Board (PSPB) and is the current chair of the IEEE PSPB Strategic Planning Committee. From 2015 through 2017 he served as the Treasurer for the IEEE PSPB and in 2017 and 2018 he served as the Chair of the IEEE Conference Publications Committee (CPC). In 2015 and 2016, he served on the IEEE Signal Processing Society's Conferences Board and its Executive subcommittee.

Hui Wu, *Professor*

Hui Wu received the BSc degree in electrical engineering and MSc degree in microelectronics from Tsinghua University, Beijing, in 1996 and 1998, and the PhD degree in electrical engineering from California Institute of Technology, Pasadena, CA, in June 2003, respectively. His PhD thesis work focused on high-speed signal generation using CMOS RF integrated circuits, embodied in the development of integrated distributed voltage-controlled oscillators and injection locked frequency dividers. He was a co-op researcher at IBM T. J. Watson Research Center during the summer of 2001, investigating integrated equalizers for 10-Gbps fiber optic systems.

In 2002-2003, he was with Axiom Microdevices, Orange, CA, developing the world's first fully-integrated CMOS power amplifiers for cellular wireless communications.

In 2003, Dr. Wu joined the faculty of the University of Rochester, where he is an associate professor of electrical and computer engineering, and director of Laboratory for Advanced Integrated Circuits and Systems. His current research interests are in inter- and intra-chip optical/electrical interconnects, silicone photonics, electronic-photonic integrated circuits (EPIC), wideband RF and high-speed integrated circuits, high performance clocking, and nanoelectronics using emerging technologies. Dr. Wu has authored and co-authored over fifty peer-reviewed papers in leading technical journals and conferences, and holds several patents.

Stephen Wu, *Assistant Professor*

Stephen Wu received his B.S. in Electrical Engineering and Computer Science and B.A. in Physics from the University of California, Berkeley in 2006. He then went on to complete both his M.A. and Ph.D. in Physics also at the University of California, Berkeley in 2009 and 2012, respectively. Stephen was appointed as a postdoctoral scholar at Argonne National Laboratory in the Materials Science Division before he joined as an assistant professor at the University of Rochester in the Department of Electrical and Computer Engineering in 2017.

Stephen's research interests involve merging the world of quantum materials science with nanoscale electronic device engineering for the advancement of electronics technology beyond Moore's law. This multifaceted and developing field lies at the intersection between traditional Electrical Engineering, Materials Science and Experimental Condensed Matter Physics.

May 27, 2022

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