Jamie Phillips

Associate Dean for Academic Affairs, College of Engineering
Professor, Department of Electrical and Computer Engineering
University of Delaware

Executive Profile

Engineering academic leader, IEEE Fellow, and Optica Fellow with experience advancing education, research, faculty affairs, and institutional strategy in a major public R1 university setting. Leadership roles include service as Department Chair, Interim Dean, and Associate Dean for Academic Affairs, with college-level experience in an engineering college comprising 178 faculty, more than 3,500 students, a $75M operating budget, and $126M in annual research expenditures. Record of supporting faculty success, strengthening academic operations, developing mentoring and promotion processes, and advancing interdisciplinary programs in areas including cybersecurity, artificial intelligence, semiconductors, and engineering education. Experienced in shared governance, faculty development, student success initiatives, industry-connected partnerships, and cross-campus collaboration. Committed to inclusive excellence, transparent decision-making, and academic innovation that expands opportunity, strengthens research impact, and connects engineering education to societal and workforce needs.

Education

1998	**Ph. D. Electrical Engineering**, **University of Michigan**, Ann Arbor Dissertation: Self-Assembled In(Al,Ga)As/Ga(Al)As Quantum Dots For Intersubband Detectors. Advisor: Pallab Bhattacharya
1996	**M.S., Electrical Engineering**, **University of Michigan**, Ann Arbor
1994	**B.S., Electrical Engineering**, **University of Michigan**, Ann Arbor

Professional Experience

2025-Present	**Assoc. Dean for Academic Affairs,** College of Engin., Univ. of Delaware (July 2025-)
2025	**Department Chair,** ECE Department, University of Delaware (March-June 2025)
2024-2025	**Interim Dean,** College of Engineering, University of Delaware (Aug 2024-Feb 2025)
2020-2024	**Department Chair,** ECE Department, University of Delaware
2020-Present	**Professor,** ECE Department, University of Delaware
2014-2020	**Arthur F. Thurnau Professor**, EECS Department, University of Michigan, Ann Arbor
2019-2020	**Director, Lurie Nanofabrication Facility,** University of Michigan, Ann Arbor
2013-2019	**Associate Chair of Undergraduate Affairs, ECE,** University of Michigan, Ann Arbor
2013-2014	**Professor, EECS Department,** University of Michigan, Ann Arbor
2008-2013	**Associate Professor, EECS Department,** University of Michigan, Ann Arbor
2002-2008	**Assistant Professor, EECS Department,** University of Michigan, Ann Arbor
1999-2001	**Research Scientist,** Rockwell Science Center, Thousand Oaks, California
1998-1999	**Postdoctoral Researcher,** Sandia National Laboratories, Albuquerque, NM

Curriculum Vitae from Jamie Phillips

Honors and Awards

2025	**Fellow**, IEEE
2024	**Fellow,** Optica
2021	**ACM MobiCom Best Paper Award,** ACM SIGMOBILE
2020	**Monroe-Brown Foundation Service Excellence Award**, CoE, Univ. of Michigan
2019	**Staff-Faculty Partnership Award**, College of Engineering, University of Michigan
2017	**Theodore E. Batchman Best Paper Award**, IEEE Education Society
2014	**Arthur F. Thurnau Professorship**, University of Michigan
2011	**University Undergraduate Teaching Award**, University of Michigan
2007	**Young Faculty Award**, DARPA/MTO
2007	**Outstanding Achievement Award,** EECS Department, University of Michigan
2003	**CAREER Award**, National Science Foundation
2001	**Best Paper Award**, Military Sensing Symposium Specialty Group on Materials
1999	**Paul Rappaport Award**, IEEE Electron Devices Society (Best paper award)
1997	**Best Student Paper**, 16th North American Conference on Molecular Beam Epitaxy

Leadership Contributions

2025-present **Associate Dean for Academic Affairs,** College of Engineering, University of Delaware, Newark, Delaware

- Provide leadership for faculty affairs across the college, including recruitment, hiring, mentorship, promotion and tenure, retention, and awards
- Lead college's campus culture and engagement activities to support diversity and inclusion
- Launched college-wide new faculty mentoring (Launch) program to support early-career faculty success and retention
- Led revision of college promotion and tenure criteria to recognize contributions to entrepreneurship, research translation, and innovation
- Established faculty development initiatives (e.g., Lunch & Learn teaching series focused on AI) to strengthen teaching excellence and community building
- Leading development of industry/entrepreneurial faculty leave pathways and industry-engaged faculty recognitions
- Leading development of university-wide process for promotion and tenure evaluations for faculty with joint appointments across departments/colleges

2024-2025 **Interim Dean, College of Engineering**, University of Delaware, Newark, Delaware

- Led college with 178 faculty, >3,500 students, $75M annual operating budget, and $126M annual research expenditures with nationally recognized programs and strong upward trajectory in research and enrollment
- Served as the college's primary academic partner for advancement and donor engagement, helping secure approximately $4M in philanthropic support during

Curriculum Vitae from Jamie Phillips

the first half of FY25 aligned with college priorities in student success, faculty excellence, research, and strategic growth.

- Developed and implemented a new college budget model to improve transparency, empower departments, and enable interdisciplinary collaboration
- Initiated college-wide strategy planning to expand industry engagement and partnerships, identifying pathways to develop supporting research and collaboration infrastructure
- Partnered with department chairs and central administration to support strategic planning, faculty hiring, and research growth
- Ensured successful completion of hiring, appointment, and onboarding for 13 faculty hires, maintaining continuity during leadership transition
- Established Staff Advisory Council to strengthen organizational culture, communication, and professional development

2020-2025 **Chair, Electrical and Computer Engineering Department**,
University of Delaware, Newark, Delaware

- Led department with 30 faculty, 317 undergraduate students, 250 graduate students, 7 staff, $9M annual operating budget, and $7M annual research expenditures
- Developed and executed a departmental strategic plan aligned with college and university priorities, strengthening enrollment, research, faculty hiring, external engagement, and academic program growth
- Achieved 24% growth in undergraduate enrollment, including a 70% increase in first-time first-year students, reversing prior decline while increasing representation of women and students from underrepresented groups
- Led creation of new academic programs, including B.S. in Cybersecurity Engineering and B.S. in Artificial Intelligence Engineering along with graduate certificates, stackable certificate model as pathway to M.S. degree, and 3+2 programs with Delaware State University
- Partnered with advancement, alumni, donors, and departmental stakeholders to help secure philanthropic support for a named professorship, two named Ph.D. student fellowships, optical MEMS research, undergraduate research projects, and WECE and GECE student groups
- Established two interdisciplinary research centers in the department: Center for Cybersecurity, Assurance, and Privacy and Wireless Intelligence Systems Center
- Led faculty hiring and growth, including recruitment of four tenure-track and one instructional faculty, strengthening departmental capacity and expertise
- Implemented faculty mentoring program, and facilitated successful promotion of four faculty to Associate Professor with tenure and four faculty to Full Professor
- Led successful External Academic Program Review and ABET re-accreditation

Curriculum Vitae from Jamie Phillips

- Established initiatives to strengthen department culture, climate, and student pipeline, including Graduate ECE (GECE), Women in ECE (WECE), and an NSF REU site aligned with NAE Grand Challenges
- Advanced departmental and institutional visibility through national leadership and external engagement, including hosting the Mid-Atlantic ECEDHA meeting and contributing to ERVA visioning initiatives
- Navigated department through COVID-era disruptions and institutional budget constraints, maintaining research and teaching continuity

2019-2020 **Director, Lurie Nanofabrication Facility,** University of Michigan, Ann Arbor

- Directed major shared research facility with 400+ users, $5M annual budget, and 20 staff, serving academic and industry users
- Partnered with faculty and external users to guide strategic investment in new capabilities and infrastructure
- Led development of new financial and cost-recovery model to ensure long-term sustainability and align with institutional core facilities
- Managed facility operations through COVID-related shutdown and recovery, ensuring continuity of critical research activities

2013-2019 **Associate Chair of Undergraduate Affairs, ECE,** University of Michigan, Ann Arbor

- Led undergraduate programs serving 500+ students, including curriculum development, assessment, recruiting, and student success initiatives
- Directed major curriculum redesign for the BS EE program including the incorporation of a sophomore and junior lab/design course sequence and led the design and construction of the laboratory instructional infrastructure
- Developed and scaled student recruitment and outreach programs, including the launch of the “Camp Electrify” experiential summer program
- Expanded Camp Electrify to off-site location in the City of Detroit to connect with schools with predominantly underrepresented student populations
- Led the ABET accreditation process resulting in successful program review

2006-present **Electronic Materials Conference**

- Sustained national leadership in premier annual conference (400+ participants) advancing research in electronic materials
- Serve in progressive leadership roles culminating as President and General Chair, overseeing conference strategy, program development, and operations
- Led proposal and hosting of 2019 conference at University of Michigan
- Contributed to long-term direction of conference through roles including Vice President, Technical Program Chair, and Member at Large

External Professional Service

2019-present	**ABET Program Evaluator**
2020-present	**IEEE Transactions on Electron Devices,** Associate Editor
2020-present	**Electronic Materials Conference,** Member at Large
2023-present	**Tufts ECE Department External Advisory Board,** Member
2026-present	**ASEE Workforce Development Council**, Faculty Recruitment and Retention Committee, Chair
2024	**IEEE Research and Applications of Photonics in Defense Conf.**, Committee
2024	**International Electron Devices Meeting (IEDM),** ODI Subcommittee Member
2023	**IEEE Research and Applications of Photonics in Defense Conf.**, Committee
2023	**International Electron Devices Meeting (IEDM),** ODI Subcommittee Member
2022-2023	**IEEE-EDS Optoelectronic Devices Technical Committee**, Chair
2020-2021	**IEEE-EDS Optoelectronic Devices Technical Committee**, Member
2011-2020	**Journal of Electronic Materials**, Associate Editor
2018-2019	**Electronic Materials Conference,** Past Chair
2016-2017	**Electronic Materials Conference,** General Chair
2015-2020	**International Consortium of Nanotechnologies,** Program Management Board
2014-2015	**Electronic Materials Conference,** Program Chair
2014	**International Workshop on ZnO and Related Materials,** Program Chair
2011-2013	**Electronic Materials Conference,** Secretary
2011-2013	**Device Research Conference,** Program Committee
2011	**MRS Fall Meeting**, Co-organizer of Symposium on ZnO and Related Materials
2010-2012	**AVS Michigan Chapter**, Executive Committee
2008	**International Workshop on ZnO and Related Materials,** Program Committee
2007-2008	**American Vacuum Society EMPD,** Executive Committee
2006-2010	**Electronic Materials Conference,** Program Committee
2005-2010	**J. Electronic Materials,** Associate Editor of special issue on III-N, SiC, and ZnO

University Service (major assignments)

University of Delaware

2025-pres	**Associate Dean for Academic Affairs,** College of Engineering
2026-Present	**Lead,** Ad-Hoc Provost Committee for Joint Faculty Appointments
2021-Present	**Member,** AI Center of Excellence, Executive Committee
2025	**Chair,** Department of Electrical and Computer Engineering (March-June)
2024-2025	**Interim Dean,** College of Engineering (August 2024-February 2025)
2020-2024	**Chair,** Department of Electrical and Computer Engineering
2023-2024	**Co-Chair,** College of Engineering Dean Search Advisory Committee
2022-2024	**Member,** Chair's Caucus representative for College of Engineering

University of Michigan

2019-2020	**Director**, Lurie Nanofabrication Facility
2019-2020	**Chair/Convener,** New Faculty Launch Committee
2018-2019	**Member,** Center for Research on Learning and Teaching Advisory Board
2018-2019	**Chair/Convener,** New Faculty Launch Committee
2015-2019	**ABET Coordinator**, EE program
2013-2019	**Associate Chair of Undergraduate Affairs**, ECE division

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2016-2018 **Member,** Engineering Education Research Graduate Program Committee
2016-2018 **Committee Chair,** ECE Undergraduate Curriculum Innovation Committee
2011-2018 **Committee Chair,** ECE Undergraduate Academics Committee
2013-2017 **Member,** College of Engineering Curriculum Committee
2011-2017 **Member,** Lurie Nanofabrication Facility Council
2015-2016 **Member,** Engineering Education Research Faculty Steering Committee
2015-2016 **Member,** University Digital Innovations Advisory Group
2015-2016 **Member,** Course Evaluation Instrument Review Committee
2013-2016 **Committee Chair,** ECE Undergraduate Recruiting and Activities Committee
2011-2013 **Executive Committee Member,** ECE Division
2008-2011 **President,** EECS Alumni Society
2006-2011 **Member,** ECE Graduate Committee
2003-2011 **Member**, College of Engineering Manufacturing Council
2002-2007 **Academic Advisor**, EECS Undergraduate Advising Office
2002-2007 **Committee Member**, Michigan Nanofabrication Facility Operations Committee

Professional Membership

American Society for Engineering Education (ASEE)
Institute for Electrical and Electronics Engineers (IEEE), Fellow
Materials Research Society (MRS)
Optica, Fellow
Eta Kappa Nu (Electrical and computer engineering honor society of the IEEE)
Phi Kappa Phi (Collegiate honor society)
Tau Beta Pi (Engineering honor society), Eminent Engineer

Courses Taught

University of Delaware
ELEG 205, Analog Circuits
ELEG 340, Solid State Electronics
ELEG 422/622, Semiconductor Materials Processing

University of Michigan
ENGR 100, Introduction to Engineering
EECS 200, Electrical Engineering Systems Design
EECS 215, Introduction to Circuits
EECS 320, Introduction to Semiconductor Devices
EECS 421, Properties of Transistors
EECS 429, Semiconductor Optoelectronic Devices
EECS 529, Semiconductor Lasers and LEDs
EECS 598, Solar Cell Device Physics
ECE Camp Electrify, Sense It (Week-long high school summer camp)

Postdoctoral Researchers Advised

2022-2025 **Abhilasha Kamboj**

2021-2025 **Nuha Ahmed-Babikir**

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2021-2022 **Yi Sun**

2020-2021 **Eun Seong Moon**

2013 **Jinyoung Hwang**

2009 **Weiming Wang**

Doctoral Graduates Advised (primary advisor, dissertation committee chair)

2021 **Hannah Masten,** (Co-Advised with R. Peterson) Investigation of Dielectric Reliability with β –Gallium Oxide for Future Power Devices

2021 **Michael Barrow,** Microscale Infrared Technologies for Spectral Filtering and Wireless Neural Dust

2020 **Minhyung Ahn,** Ultrafast Laser-Material Interactions with Wide Bandgap Semiconductors and High Entropy Oxide Based Memristors

2020 **Eun Seong Moon**, Photovoltaic Energy Harvesting for Millimeter-Scale Systems

2019 **Justin Easley**, Carrier Transport in Auger-Suppressed Infrared Detector Materials

2015 **Alan Teran**, Spectrum-Dependent Photovoltaic Energy Harvesting

2014 **Chihyu Chen**, ZnTeO and Oxygen Doped II-VI Ternary Alloys for Intermediate Band Solar Cells

2014 **Justin Foley**, Subwavelength Dielectric Grating-based Broadband Reflectors and Narrowband Transmission Filters

2013 **Jinyoung Hwang**, Engineered Type-II Heterostructure for High E*ffi*ciency Solar Cell Application

2012 **Jeff Siddiqui**, Investigation of Electrical Instabilities and Interface Change in ZnO Thin Film Transistors

2012 **Anne Itsuno**, Bandgap-Engineered HgCdTe Infrared Detector Structures for Reduced Cooling Requirement

2010 **Willie Bowen,** Thin Film Electronics Based on ZnO and ZnO/MgZnO Heterojunctions

2010 **Albert Shihchun Lin**, Modeling of Solar Cell E*ffi*ciency Improvement Using Optical Gratings and Intermediate Absorption Band

2009 **Emine Çağin**, Integration of Functional Oxides With the Semiconductor Zinc Oxide

2009 **Weiming Wang**, Intermediate Band Solar Cells Based on ZnTe:O

2009 **Pierre Emelie**, HgCdTe Auger-suppressed infrared detectors under non-equilibrium operation

2006 **Ding-Yuan Chen**, Ferroelectric thin films for microwave and photonics applications

2006 **Kaveh Moazzami**, Characterization of optoelectronic properties of HgCdTe and ZnO II-VI semiconductors for infrared and ultraviolet detector applications

Current Doctoral Students (primary research advisor)

2023-present **Alimur Razi**, Narrow bandgap Materials for IR Detection and Thermoradiative Cells

2022-present **Md Toriqul Islam**, Materials and Devices for Advanced SWIR Detectors

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2022-present **Bhavika Mani**, Optoelectronic Devices for Bio-Implantable Sensors

Masters Students (serving as research advisor)

2015-2018 **Martin Scherr**, Infrared Spectral Filters Based on Subwavelength Dielectric Gratings

2012-2014 **Connor Field**, Quantum Dots for Next Generation Solar Cells

2010-2012 **Adrian Bayraktaroglu**, Ferroelectric and semiconducting oxide thin films

2010-2012 **Bor-Chau Juang**, Electronic Structure and Optical Properties of Type-II Quantum Dots

2002-2005 **Tim Murphy**, Epitaxial Growth and Doping of ZnO by Molecular Beam Epitaxy

Undergraduate Students (serving as research advisor)

2026 **Nolan McGrane-Moffitt**, Thermoradiative Energy Conversion, Grinnell Internship

2025 **Nolan McGrane-Moffitt**, Thermoradiative Energy Conversion, UR-ECE REU prog.

2024 **Marina Nascimento**, Thermoradiative materials, Colombian summer program

2024 **Nicole Miletti**, Microscale PV Energy Harvesting, UR-ECE REU program

2023 **Maya Rigor**, Characterization of InGaBiAs for eSWIR Detectors, ARO AEOP program

2023 **Logan Suchanec**, Microscale PV Energy Harvesting, UR-ECE REU program

2022 **Peter Cauchy**, Simulation and Characterization of eSWIR Detectors, ARO URAP program

2022 **Ethan Mensch**, Simulation and Characterization of Micro-LEDs, UD Summer Scholars

2019-2020 **Sarah Puzycki**, Selective Dry Etching of GaAs/AlGaAs, ECE

2019 **Arynn Gallegos,** Infrared Optoelectronics for Biosensing, SROP program

2015 **Cristina Guillen,** Parylene Infiltration in GaAs Nanowires, NNIN REU program

2015 **Marshall Versteeg,** Femtosecond Laser-Induced Doping of SiC, UM Energy Institute UROP program

2015 **Nick Folz,** Infrared Absorption in Glucose

2015 **Ian Raber,** Indoor Photovoltaic Characterization, RISE program

2014-2015 **Joeson Wong**, Photovoltaic Energy Harvesting from Indoor Lighting

2013 **Arthur Bowman,** Infrared Filtering Via Sub-Wavelength Gratings for Hyperspectral Imaging, NNIN REU program

2013 **Jiazhen Zheng,** Photoluminescence of ZnTeO

2013 **Kevin Nguy,** Photoluminescence of Wide Bandgap II-VI Materials

2012 **Amy Chiang,** Admittance Spectroscopy of Solar Cell Materials

2012 **Katherine Nygren,** Infrared Sub-Wavelength Gratings for Infrared Detectors, NNIN REU program

2011 **Connor Field,** Chemical Bath Deposition of ZnS Thin Films

2010-2011	**Tanya Das,** Modeling of HgCdTe Infrared Detectors and Integrated Optical Elements
2010	**Scott Bakkila,** Ferroelectric thin films for reconfigurable RF Electronics in Next Generation Wireless Communications, NNIN REU program
2010	**Michael Tulman,** Modeling of Integrated Optical Elements for Infrared Imaging
2009	**Du Nguyen,** Atomic Layer Deposition of High-k dielectrics for Thin Film Transistors, NNIN REU program
2008	**Michael McCormick,** Modeling of Wire Grid Polarizers and Fabry-Perot Cavities for Infrared Detection
2007	**David Maxwell,** Pulsed Laser Deposition of Vanadium Oxide Thin Films
2005-2006	**Pak-Yuen Chan,** Pulsed Laser Deposition of ZnO
2006	**George Cramer,** ZnO Thin Film Transistors, NNIN REU program
2005	**Vinay Alexander,** Pulsed Laser Deposition of Thin Film Ferroelectrics
2005	**Song Liang Chua,** Electronic Characterization of ZnO Thin Films
2004-2005	**William Luong,** Pulsed Laser Deposition of Ferroelectric Thin Films for Tunable Microwave Capacitors
2004	**Nicole Staszkiewicz,** ZnO Nanowires, NNIN REU program
2003-2004	**Jeremy Tolbert,** Capacitance-Voltage Measurements for Material Characterization
2003	**Nafisa Muzzafar,** Thin Film Mach-Zehnder Interferometers
2003-2004	**Jeremy Tolbert,** Epitaxial Growth Simulations
2002	**DaHan Liao,** Optical Properties of HgCdTe

Sponsored Projects (as PI co-PI)

6/26-5/27	**SEMI Foundation subcontract from NY-Creates,** PI, U.S. National Science Foundation National Network for Microelectronics Education (NNME)
1/26-7/27	**ARPA-H subcontract from Lacristat,** PI, COSMIC: Closed-loop Sensing and Microdosing for Dry Eye and Systemic Disease Management
10/23-9/27	**NSF,** PI, Thermoradiative Energy Harvesting Based on Narrow Bandgap Antimonide Semiconductors
9/22-8/26	**NSF,** PI, REU Site: Solving Societal Grand Challenges with Electrical and Computer Engineering
10/24-3/25	**NASA subcontract from Princeton Infrared Technologies,** PI, High Dynamic Range SWIR Imaging Arrays using DROICs and Wafer Level Hybridization
10/24-4/25	**Air Force subcontract from Princeton Infrared Technologies,** PI, Ultra-Broadband High-Definition High Frame Rate NIR-MWIR Imager
9/22-8/25	**Space Force subcontract from Advanced Cooling Technologies,** PI, Thermoradiative Energy Harvesting
8/22-7/25	**NIH**, co-PI, IR Powered and Hermetically-Sealed Single-Unit Neural Recording Wireless Motes for Large Scale Implantation Into Nonhuman Primate Cortex

8/22-8/23	**Air Force subcontract from Princeton Infrared Technologies**, PI, Extended Wavelength Material for Multispectral Imaging on Unmanned Systems
8/22-1/23	**NASA subcontract from Advanced Cooling Technologies**, PI, Novel Photovoltaic Technology to Simultaneously Harvest Incoming Solar and Outgoing Thermal Radiation
6/22-8/23	**Air Force subcontract from Princeton Infrared Technologies**, PI, Multi Quantum Well Avalanche Photodiodes for 2.04 um Detection
5/21-4/24	**Army Research Office**, PI, Lattice-Matched InGaBiAs on InP for Extended Wavelength SWIR Detection
9/21-8/23	**NSF,** co-PI, StiMote: An Ultrasmall, Modular Neurophotonic Stimulator
5/21-11/22	**Office of the Secretary of Defense subcontract from Princeton Infrared Technologies**, PI, High Resolutions SWIR E-O Seeker
4/19-1/21	**Air Force subcontract from Princeton Infrared Technologies**, PI, Modeling and Development of Optimized 2.1um Detection MQW Material
6/18-5/22	**NSF**, co-PI, Design and growth of high entropy oxides with tailored ionic dynamics for memory and computing applications
1/21-5/21	**Air Force subcontract from Princeton Infrared Technologies**, PI, Extended Wavelength Material for Multispectral Imaging on Unmanned Systems
7/20-1/21	**NASA subcontract from Advanced Cooling Technologies**, PI, Dark Photovoltaic Cells for Space Power Generation
1/20-12/21	**Air Force subcontract from Princeton Infrared Technologies**, PI, Advanced Flash III-V LADAR Camera
9/18-8/20	**DSTL/MoD**, co-PI, Ultra-Miniature Imager Technical Demonstrator
6/18-8/20	**NIH**, co-PI, A 100um Scale Single Unit Neural Recording Probe Using IR-Based Powering and Communication
1/19-5/19	**Air Force subcontract from Princeton Infrared Technologies**,PI,Multi-Quantum Well Avalanche Photodiodes for 2.04um Detection
3/19-9/19	**OSD subcontract from Princeton Infrared Technologies**, PI, High Resolution SWIR E-O Seeker
1/19-5/19	**MDA subcontract from Princeton Infrared Technologies**, PI, Avalanche Photodiode Design for Low Earth Orbit LADAR System
9/16-8/19	**Lloyd's Register Foundation**, PI, Ultrafast Nanostructuring of Wide Bandgap SiC for Electronics in Harsh Environments
10/16-3/18	**DSTL/MoD**, co-PI, Highly Size Constrained Logging Sensor Development
9/16-8/18	**NSF subcontract from Cubeworks**, PI, Millimeter-Scale Wireless Sensor Node for Intracranial Pressure Monitoring
11/15-10/18	**MDA**, PI, Narrow-Band Spectral Filtering via Silicon Subwavelength Dielectric Gratings.

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6/14-5/18	**NSF, NIH**, co-PI, SCH: INT: Wireless Implantable Electronic Biosensors for Tumor Monitoring.
11/17-4/18	**Air Force subcontract from Princeton Infrared Technologies**, PI, Focal Plane Array for Coherent LADAR.
4/14-3/16	**DSTL/MoD**, co-PI, Architectural design Study for M3 MM Scale Computing GPS Logger
2/12-1/13	**Toyota**, PI, Highly Mismatched Alloys with Intermediate Band for High-E*ffi*ciency Solar Energy Conversion
8/10-7/15	**NSF**, PI, Materials World Network: Intermediate Band Semiconductor Materials for High E*ffi*ciency Solar Energy Conversion
2/11-12/11	**ARO subcontract from EPIR Technologies**, PI, High Operating Temperature Detectors and Subwavelength Gratings
2/11-12/11	**ARO subcontract from EPIR Technologies**, PI, Sub-Wavelength Gratings for Infrared Spectroscopy
7/10-6/12	**KAUST**, co-PI, Energy E*ffi*cient Photonic and Spintronic Devices
1/10-6/10	**NASA subcontract from EPIR Technologies**, PI, Passively-Cooled Hyperspectral Infrared Detectors
9/09-8/12	**NSF**, co-PI, Novel RF/Microwave Switchable Filters Based on Electrostrictive Resonance in Ferroelectric Thin Films
8/09-7/14	**DOE**, co-PI, EFRC: Center for Solar and Thermal Energy Conversion (CSTEC)
3/08-8/11	**ACS-PRF**, PI, Intermediate-band optoelectronic transitions in ZnTeO for high e*ffi*ciency solar energy
10/08-9/10	**ARO, subcontract from EPIR Technologies**, PI, Advanced High Operating Temperature Midwave Infrared Detectors
1/08-12/08	**EPIR Technologies**, PI, Approaches for high-performance LWIR detectors based on HgCdTe/Si
1/08-6/08	**MDA, subcontract from EPIR Technologies**, PI, High Operating Temperature HgCdTe Detectors for Interceptor Seekers
7/07-6/08	**DARPA**, PI, Oxide Electronics for Integrated Microsystems and Displays
1/06-4/06	**ARO, subcontract from EPIR Technologies**, PI, Development of low stress ohmic contacts to HgCdTe
9/05-7/06	**DARPA, subcontract from EPIR Technologies**, PI, Modeling of Infrared Detectors for High-Speed Room Temperature Imaging
4/04-3/08	**DARPA**, co-PI, Center for Optoelectronic Nanostructured Semiconductor Technologies (CONSRT)
9/04-8/07	**AFOSR**, co-PI, Ultraviolet Electrically Injected Light Sources With Epitaxial ZnO Based Heterojunctions
2/03-1/08	**NSF**, PI, CAREER: Ferroelectric Heterostructure Integration With GaAs Optoelectronic Devices

5/02-1/05 **ONR**, PI, Infrared Focal Plane Array Material Science Project - Optical Properties of HgCdTe

Books

[1] W. H. Hayt, J. E. Kemmerly, J. D. Phillips, and S. M. Durbin. Engineering Circuit Analysis, 10th Edition (McGraw-Hill, 2023).

[2] W. H. Hayt, J. E. Kemmerly, J. D. Phillips, and S. M. Durbin. Engineering Circuit Analysis, 9th Edition (McGraw-Hill, 2019).

Book Chapters

[1] J. Phillips, E. Moon, and A. Teran, “Indoor Photovoltaics Based on AlGaAs”, Indoor Photovoltaics, edited by M. Freunek Muller (Scrivener Publishing, 2020).

[2] J. Phillips, W. Bowen, E. Cagin, and W. Wang. “Electronic and Optoelectronic Devices Based on Semiconducting Zinc Oxide”, Comprehensive Semiconductor Science and Technology, edited by P. Bhattacharya, R. Fornari, and H. Kamimura, volume 6, 101–127 (Elsevier, 2011).

[3] J. Phillips, A. Stiff-Roberts, and P. Bhattacharya. “Quantum Dot Infrared Detectors”. Handbook of Semiconductor Nanostructures and Nanodevices, edited by A. A. Balandin and K. L. Wang, volume 4, 195–215 (American Scientific Publishers, 2006).

[4] J. Phillips, A. Stiff-Roberts, and P. Bhattacharya. “Quantum Dot Infrared Photodetector”. Encyclopedia of Nanoscience and Nanotechnology, edited by H. Nalwa, 131–141 (American Scientific Publishers, 2004).

Patents

[1] D. Blaauw, J. Phillips, C. Chestek, T. Jang, H. Kim, D. Sylvester, J. Lim, . Moon, M. Barrow, S. Nason, J. Richie, and P. Patel, Wireless Neural Recording Devices And System With Two Stage RF And NIR Power Delivery And Programming, US Patent 11,911,128.

[2] J. Foley, J.D. Phillips, and S. Young, Narrowband transmission filter, US Patent 9,945,666.

Journal Articles (peer-reviewed archival journals)

[1] G. Atzeni, J. Lim, J. Liao, J. Lee, J. Letner, G. Mazzarella, A. Fanti, H-S Kim, C. Chestek, J. D. Phillips, D. Blaauw, and T. Jang, "A Miniaturized Neural Recording Microprobe Using an On-Chip Antenna for RF Uplink Communication," IEEE Transactions on Microwave Theory and Techniques, doi: 10.1109/TMTT.2026.3718769, (2026).

[2] JG Letner, JLW Lam, MG Copenhaver, M Barrow, PR Patel, JM Richie, J Lee, H-S Kim, D Cai, JD Weiland, J Phillips, D Blaauw and CA Chestek, “A method for efficient, rapid, and minimally invasive implantation of individual non-functional motes with penetrating subcellular-diameter carbon fiber electrodes into rat cortex”, Frontiers in Neuroscience, 20:1848862. doi: 10.3389/fnins.2026.1848862, (2026).

[3] N. Ahmed-Babikir, M. H. Ettenberg, Y. Xu, M. Peart and J. D. Phillips, "InGaAlAs/InAlAs Avalanche Photodiodes on InP for Near-Infrared Detection," IEEE Transactions on Electron Devices, vol. 72, no. 12, pp. 6860-6865, Dec. 2025, doi: 10.1109/TED.2025.3623621

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