Cybersecurity

This group develops tools and techniques to protect sensitive data and infrastructure against malicious attacks. They study problems that arise as a result of computation and storage in hostile environments. Work includes adversarial threat modeling, design of novel protection mechanisms, and analysis of their guarantees.

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Expertise: Design, control and verification of cyber-physical systems
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Expertise: Secure systems; trustworthy computing; vulnerability discovery and analysis; developing exploit primitives; jailbreaking; side-channel attack; autonomous cyber attack and defense; malware
Notable: Winner of DEF CON 26 and DEF CON 23
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Expertise: Cryptography; secure multi-party computation
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Notable: Certified Information Systems Security Professional; certified forensics technician
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Data Science and Engineering

The Data Science and Engineering group works to develop technology, processes, and software to enable effective access to and utilization of overwhelming amounts of information. The group studies the fundamental problems that arise throughout the DSE pipeline, which leads from the original noisy data measurements to decisions and visualizations enabled by the data.

Thomas G. Dietterich
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Expertise: Machine learning; safe and robust AI systems; sensor networks; intelligent user interfaces

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**Margaret Burnett**  
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*Expertise:* Human issues of programming & software engineering; end-user programming; end-user software engineering; information foraging theory as applied to programming; how gender issues relate to software engineering: end-user programming, end-user software engineering  
*Notable:* NSF Young Investigator; ACM CHI Academy; CRA Undergrad Research Faculty Mentoring Award; NCWIT Undergrad Research Mentoring Award; IBM International Faculty Awards; 2 patents; IEEE VL/HCC Most Influential Paper Award Over the Last 20 Years  
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*Notable:* Associate editor, *Journal of Visual Languages and Computing*  
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Artificial Intelligence and Robotics

The AIR group studies theory, algorithms, and systems for making intelligent decisions in complex and uncertain environments. The research covers most aspects of AIR including perception and interpretation of sensor data, learning about environments, learning to make decisions, automated planning and reasoning, and interaction of AIR systems with each other and with humans.

Notable:
- NSF CAREER Award
- Human Factors & Ergonomics Society Pioneer award; British Video Music Award, OK Go, This Too Shall Pass: Rube Goldberg Machine
- ACM Fellow; AAAI Fellow; AAAS Fellow; past associate editor, IEEE Transactions on Human-Machine Systems; editorial board, J. Cognitive Engineering and Decision Making; past editor, J. Intelligent and Robotic Systems
- NSF CAREER Award; action editor, Machine Learning
- Forbes List for 30 under 30 in Science; TED Robot Comedy talk; Human-Robot Interaction Pioneer award; British Video Music Award, OK Go, This Too Shall Pass: Rube Goldberg Machine

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Notable: 4 publications in “Faculty of 1000 Biology”
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Notable: AlMiner Most Influential Scholars List in Artificial Intelligence; Best Paper Award (and most cited paper), ACL 2008; two Google Faculty Research Awards; best-selling author
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Expertise: Visualization; GPU programming; high performance computer graphics; stereographics
Notable: ACM SIGGRAPH Outstanding Service Award; OSU Beaver Champion Award
mjba@oregonstate.edu

Yue Zhang
Associate Professor
PhD North Carolina State University
Expertise: Modeling and simulation of biological and physical problems; mathematical optimization; visualization
Notable: Associate editor, Computational and Mathematical Organization
Yue.Zhang@oregonstate.edu

Weng-Keen Wong
Professor
PhD Carnegie Mellon University
Expertise: Data mining; machine learning; anomaly detection; human-in-the-loop learning; ecosystem informatics
Notable: NSF program director
Weng-Keen.Wong@oregonstate.edu

Huazheng Wang
Assistant Professor
PhD Huazheng Wang
Expertise: Machine learning; reinforcement learning; information retrieval; data mining
wanghuaz@oregonstate.edu

Raffaele de Amicis
Associate Professor
PhD University of Bologna
Expertise: Virtual and augmented reality; virtual engineering; GeoVisualization; geometric modelling; sketch- and gesture-based interaction; digital heritage
Notable: Associate editor, International Journal on Interactive Design and Manufacturing
raffaele.deamicis@oregonstate.edu

Eugene Zhang
Professor
PhD Georgia Institute of Technology
Expertise: Computer graphics; visualization; geometry processing; computational topology
eugene.zhang@oregonstate.edu

Artificial Intelligence and Robotics

The Computer Graphics and Visualization group consists of researchers in image processing, computer graphics, visualization, visual analytics, GPU programming, simulation, and geometry processing. The primary goals of this group are the analysis, synthesis, understanding, and manipulation of visual data such as images, video sequences, and 3D geometric content.

Computer Graphics and Visualization

Martin Erwig
Stretch Professor of Computer Science
PhD University of Hagen
Expertise: Language design and domain-specific languages; functional programming; visual languages; end-user software engineering
Notable: Associate editor, Journal of Visual Languages and Computing; author of three books; one patent; American Book Fest Best Book Award for Education/Academic Category; Association of American Publishers PROSE Award Honorable Mention - Computer and Information Sciences
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Mike Bailey
Professor
PhD Purdue University
Expertise: Visualization; GPU programming; high performance computer graphics; stereographics
Notable: ACM SIGGRAPH Outstanding Service Award; OSU Beaver Champion Award
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The Computer Graphics and Visualization group consists of researchers in image processing, computer graphics, visualization, visual analytics, GPU programming, simulation, and geometry processing. The primary goals of this group are the analysis, synthesis, understanding, and manipulation of visual data such as images, video sequences, and 3D geometric content.

Programming Languages

The Programming Languages group studies the design, implementation, and formalization of programming languages. The group’s research includes work on language design, type systems, functional programming, and visual languages.

Programming Languages

Martin Erwig
Stretch Professor of Computer Science
PhD University of Hagen
Expertise: Language design and domain-specific languages; functional programming; visual languages; end-user software engineering
Notable: Associate editor, Journal of Visual Languages and Computing; author of three books; one patent; American Book Fest Best Book Award for Education/Academic Category; Association of American Publishers PROSE Award Honorable Mention - Computer and Information Sciences
erwig@oregonstate.edu
The Theoretical Computer Science group explores the limits of computation in developing algorithms and protocols that provide provable performance guarantees such as correctness and privacy. The group has strengths in developing algorithms that take advantage of geometric and topological properties to solve classic problems.

Houssam Abbas  
Assistant Professor  
PhD Arizona State University  
Expertise: Design, control and verification of cyber-physical systems  
Notable: NSF CAREER AWARD  
houssam.abbas@oregonstate.edu

Amir Nayyeri  
Assistant Professor  
PhD University of Illinois at Urbana-Champaign  
Expertise: Computational geometry; computational topology  
nayyeria@oregonstate.edu

Mike Rosulek  
Associate Professor  
PhD University of Illinois at Urbana-Champaign  
Expertise: Cryptography, secure multi-party computation  
Notable: NSF CAREER Award; Google Faculty Research Award  
mike.rosulek@oregonstate.edu

Jiayu Xu  
Assistant Professor  
PhD University of California, Irvine  
Expertise: Theoretical and practical aspects of cryptography, applications to network security  
Notable: Password authentication protocol OPAQUE recommended by the Crypto Forum Research Group for usage in IETF protocols  
xujia@oregonstate.edu

Communications and Signal Processing

Research focuses on addressing challenges related to the modeling, design, and analysis of next-generation networking and computer systems. They solve a variety of real-world problems that encompasses parallel and high-performance computing, coding and information theory, computer networking, stochastic modeling and reasoning, cloud computing, computer architecture, and wireless communication.

Houssam Abbas  
Assistant Professor  
PhD Arizona State University  
Expertise: Design, control and verification of cyber-physical systems  
Notable: NSF CAREER AWARD  
houssam.abbas@oregonstate.edu

Xiao Fu  
Assistant Professor  
PhD The Chinese University of Hong Kong  
Expertise: Topic modeling; large-scale structured matrix/tensor factorization algorithms; multiview analysis; canonical correlation analysis; hyperspectral imaging  
xiao.fu@oregonstate.edu

Bechir Hamdaoui, Professor  
PhD University of Wisconsin at Madison  
Expertise: Wireless communication networks; computer networking; mobile computing; resource optimization; network management; network privacy and security  
hamdaoui@oregonstate.edu

Jinsub Kim  
Assistant Professor  
PhD Cornell University  
Expertise: Statistical signal processing; statistical learning theory; power systems state estimation; security of cyber physical system  
jinsub.kim@oregonstate.edu

Huaping Liu  
Professor  
PhD New Jersey Institute of Technology  
Expertise: Wireless systems; signal processing for communications  
Notable: Associate editor, IEEE Transactions on Vehicular Technology; associate editor, IEEE Communications Letters; associate editor, Journal of Communications and Networks  
lihu@oregonstate.edu

V John Mathews  
Professor  
PhD University of Iowa  
Expertise: Adaptation and learning; nonlinear signal processing; application of signal and information processing to neural engineering and biomedical applications, structural health monitoring, audio and communication systems  
mathews@oregonstate.edu

Thinh Nguyen  
Professor  
PhD University of California at Berkeley  
Expertise: Wireless communication; networking; signal processing; machine learning; information theory; coding; stochastic processes  
thinhq@oregonstate.edu

Raviv Raich  
Associate Professor  
PhD Georgia Institute of Technology  
Expertise: Statistical signal processing; sparse signal processing; dictionary learning; machine learning  
Notable: NSF CAREER Award; associate editor, IEEE Transactions on Signal Processing  
raich@oregonstate.edu
Networking and Computer Systems

This group's research deals with various aspects of information representation, transmission, processing, and understanding. Collectively, they develop novel theories, tools, algorithms, and systems for solving real-world problems including parallel computing, cognitive networks, coding theory, and eco-informatics.

Bella Bose
Professor
PhD
Southern Methodist University
Expertise: Error control codes; parallel processing; fault tolerant computing; computer networks
Notable: IEEE Fellow; ACM Fellow; past associate editor, IEEE Transactions on Computers; Southern Methodist University CSE Academic Accomplishment Award
bose@oregonstate.edu

Ben Lee
Professor
Associate Head for Undergraduate Programs
PhD
The Pennsylvania State University
Expertise: Computer architecture, computer networks; multimedia systems; parallel architectures
Notable: TCP Speaker, 2014 ACM Int'l Conference on Ubiquitous Information Management and Communications; HKN Innovation Teaching Award; COE Alumni Professor Award; Loyd Carter Award
beni@oregonstate.edu

Sibin Mohan
Associate Professor
PhD North Carolina State University
Expertise: Systems; security; networking; autonomous systems
sibin.mohan@oregonstate.edu

Lizhong Chen
Associate Professor
PhD
University of Southern California
Expertise: CPU and GPU architecture; high-performance computing (HPC) systems; data centers; interconnection networks; deep learning accelerators
Notable: NSF CAREER Award; associate editor, IEEE Transactions on Computers (2020)
Lizhong.Chen@oregonstate.edu

Houssam Abbas
Assistant Professor
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Arizona State University
Expertise: Design, control and verification of cyber-physical systems
Notable: NSF CAREER AWARD
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Thinh Nguyen
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University of California at Berkeley
Expertise: Wireless communication; networking; signal processing; machine learning; information theory; coding; stochastic processes
thinhq@oregonstate.edu

Radha Venkatagiri
Assistant Professor
PhD
University of Illinois at Urbana-Champaign
Expertise: Computer architecture and systems
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Energy Systems

The Energy Systems group conducts research related to renewable energy, motors, generators, adjustable speed drives, power electronics, power supplies, power quality, electrical systems resiliency, and industrial process equipment and controllers.

Ted Brekken
Professor
PhD
University of Minnesota
Expertise: Modeling and control; electrical system resilience; renewable energy and energy storage systems
Notable: NSF CAREER Award; IEEE Power and Energy Society Outstanding Young Engineer Award; Fulbright Scholar; associate editor, IEEE Transactions on Sustainable Energy
Ted.Brekken@oregonstate.edu

J. Eduardo Cotilla-Sanchez
Associate Professor
PhD
University of Vermont
Expertise: Cascading outages in power grids; power system protection, resilience, and cybersecurity; smart grids and microgrids; wide-area power system data
ecs@oregonstate.edu

Yue Cao
Assistant Professor
PhD
University of Illinois, Urbana-Champaign
Expertise: Power electronics, motor drives, energy storage; electric aircraft, EV, UAV, microgrids, energy efficient buildings; electric thermal integrated systems
Notable: NSF CAREER Award; associate editor, IEEE Transactions on Transportation Electrification; IEEE Industry Applications Society Myron Zucker Student Award
yue.ca@oregonstate.edu

Radha Venkatagiri
Assistant Professor
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University of Illinois at Urbana-Champaign
Expertise: Computer architecture and systems
venkat@oregonstate.edu
The health engineering group conducts research on systems, devices, and data analysis for a variety of health related applications. The group develops new bio-sensors, imaging techniques, wireless medical devices, and bio-materials via state-of-the-art research in advanced fabrication, nanomaterials, electronics, and magnetics.
Integrated Electronics

The Integrated Electronics research cluster emphasizes cooperation and innovation amongst faculty members whose research focuses on various aspects of integrated circuits and systems, microelectronic components and sensors, and advanced communication systems.

David Allstot
Professor
PhD University of California, Berkeley
Expertise: Analog, mixed-signal, and radio frequency integrated circuits and systems
Notable: IEEE Fellow; IEEE CASS Meritorious Service Award; IEEE CASS Darlington Award; IEEE Circuits and Systems Society John Choma Education Award; IEEE CASS Charles A. Desoer Technical Achievement Award; SRC Aristotle Award; Semiconductor Industries Assoc. University Research Award; IEEE CASS Mac Van Valkenburg Award
allstot@oregonstate.edu

Matthew Johnston
Associate Professor
PhD Columbia University
Expertise: Biosensor and bioelectronic platforms; massively-parallel sensing; lab-on-chip technologies for medical monitoring and point-of-care diagnostics
Notable: SRC Young Faculty Award; associate editor, IEEE Transactions on Biomedical Circuits and Systems; co-founder of Helixis, startup company developing low-cost, real-time PCR systems
matthew.johnston@oregonstate.edu

Arun Natarajan
Associate Professor
PhD California Institute of Technology
Expertise: mm-wave and sub-mmwave integrated circuits and systems for high-speed wireless communication and imaging
Notable: NSF CAREER Award; Oregon State Engelbrecht Young Faculty Award; IBM Research Fellowship; associate editor, Transactions on VLSI Systems; associate editor, Transactions on Microwave Theory and Techniques
Arun.Natarajan@oregonstate.edu

Huaping Liu
Professor
PhD New Jersey Institute of Technology
Expertise: Wireless systems; signal processing for communications
Notable: Associate editor, IEEE Transactions on Vehicular Technology; associate editor, IEEE Communications Letters; associate editor, Journal of Communications and Networks
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Gabor C. Temes
Professor
PhD University of Ottawa
Expertise: Data converters, switched-capacitor circuits; analog and mixed-mode integrated circuits
Notable: Member of the National Academy of Engineering; IEEE Life Fellow; National Academy of Inventors Fellow; Semiconductor Industry Association University Researcher Award; IEEE CAS Mac Van Valkenburg Award; IEEE Kirchhoff Award; IEEE CAS Golden Jubilee Medal; IEEE Millennium Medal; IEEE CAS Technical Achievement Award; IEEE CAS Education Award; IEEE Instrumentation and Measurement Society Andrew Chi Prize; IEEE Centennial Medal; IEEE CAS Darlington Award; co-author of five books; Wiley-IEEE Press Professional Book Award; honorary doctorate, Technical University of Budapest; past associate editor, Journal of The Franklin Institute; past editor, IEEE Transactions on Circuit Theory; former vice president, IEEE Circuits & Systems Society; OSU College of Engineering Research Award
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Tejasvi Anand
Assistant Professor
PhD University of Illinois, Urbana-Champaign
Expertise: Wireless communication systems; PLLs; regulators and sensors with emphasis on energy efficiency
Notable: IEEE Solid State Circuit Society Pre-Doctoral Achievement Award
anand@oregonstate.edu

Karti Mayaram
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Un-Ku Moon
Professor
PhD University of Illinois, Urbana-Champaign
Expertise: Low-voltage and high-performance analog CMOS integrated circuits; data converters; filters; PLLs; timing recovery
Notable: IEEE Fellow; NSF CAREER Award; past editor-in-chief, IEEE Transactions on Circuits and Systems II; VLSI Symposia Executive Committee; OSU Excellence in Graduate Mentoring Award
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Vincent Immler
Assistant Professor
PhD Technical University of Munich
Expertise: Next-generation attacks and defenses in hardware security
Notable: 2018 Best Paper, IEEE International Symposium on Hardware Oriented Security and Trust
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Huaping Liu
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PhD New Jersey Institute of Technology
Expertise: Wireless systems; signal processing for communications
Notable: Associate editor, IEEE Transactions on Vehicular Technology; associate editor, IEEE Communications Letters; associate editor, Journal of Communications and Networks
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Notable: Member of the National Academy of Engineering; IEEE Life Fellow; National Academy of Inventors Fellow; Semiconductor Industry Association University Researcher Award; IEEE CAS Mac Van Valkenburg Award; IEEE Kirchhoff Award; IEEE CAS Golden Jubilee Medal; IEEE Millennium Medal; IEEE CAS Technical Achievement Award; IEEE CAS Education Award; IEEE Instrumentation and Measurement Society Andrew Chi Prize; IEEE Centennial Medal; IEEE CAS Darlington Award; co-author of five books; Wiley-IEEE Press Professional Book Award; honorary doctorate, Technical University of Budapest; past associate editor, Journal of The Franklin Institute; past editor, IEEE Transactions on Circuit Theory; former vice president, IEEE Circuits & Systems Society; OSU College of Engineering Research Award
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Notable: 2018 Best Paper, IEEE International Symposium on Hardware Oriented Security and Trust
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Huaping Liu
Professor
PhD New Jersey Institute of Technology
Expertise: Wireless systems; signal processing for communications
Notable: Associate editor, IEEE Transactions on Vehicular Technology; associate editor, IEEE Communications Letters; associate editor, Journal of Communications and Networks
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PhD University of Ottawa
Expertise: Data converters, switched-capacitor circuits; analog and mixed-mode integrated circuits
Notable: Member of the National Academy of Engineering; IEEE Life Fellow; National Academy of Inventors Fellow; Semiconductor Industry Association University Researcher Award; IEEE CAS Mac Van Valkenburg Award; IEEE Kirchhoff Award; IEEE CAS Golden Jubilee Medal; IEEE Millennium Medal; IEEE CAS Technical Achievement Award; IEEE CAS Education Award; IEEE Instrumentation and Measurement Society Andrew Chi Prize; IEEE Centennial Medal; IEEE CAS Darlington Award; co-author of five books; Wiley-IEEE Press Professional Book Award; honorary doctorate, Technical University of Budapest; past associate editor, Journal of The Franklin Institute; past editor, IEEE Transactions on Circuit Theory; former vice president, IEEE Circuits & Systems Society; OSU College of Engineering Research Award
 temas@oregonstate.edu
Electronic Materials and Devices

Research includes amorphous oxide semiconductors, photovoltaics, advanced materials for beyond CMOS, novel devices, thin films, nanomaterials and nanolaminates, applied magnetics (spintronics, biosensing and advanced magnetic materials), atomic layer deposition, internal photoemission, MIM diodes, nanophotonic devices, fiber sensors, pulsed diode lasers, and optical properties of materials.

Larry Cheng
Associate Professor
PhD University of Michigan
Expertise: Micro-/ nano-fluidics; biomedical devices; electronic devices; functional materials; nanofabrication
Email: chengl@oregonstate.edu

John F. Conley, Jr.
Professor
PhD The Pennsylvania State University
Expertise: Thin film materials and devices; atomic layer deposition; MIM devices; TFTs; reliability; structure of electrically active point defects; directed assembly and device applications of nanomaterials
Notable: IEEE Fellow; American Vacuum Society Fellow; ONAMI Signature Faculty Fellow; guest editor, IEEE Trans on Device and Materials Reliability; Chair, 2017 AVS Intl Conference on Atomic Layer Deposition
Email: jconley@oregonstate.edu

Pallavi Dhagat
Professor
PhD Washington University, St. Louis
Expertise: 3D printed magnetic materials and devices; biomedical imaging and sensing using magnetic nanoparticles; novel data storage and signal processing devices based on interactions between acoustic waves and spin waves; advanced measurements techniques for magnetic materials
Notable: NSF CAREER Award; IEEE Magnetics Society president (2019-2020)
Email: dhagat@oregonstate.edu

Vincent Immler
Assistant Professor
PhD Technical University of Munich
Expertise: Next-generation attacks and defenses in hardware security
Notable: 2018 Best Paper, IEEE International Symposium on Hardware Oriented Security and Trust
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Matthew Johnston
Associate Professor
PhD Columbia University
Expertise: Biosensor and bioelectronic platforms; massively-parallel sensing; lab-on-chip technologies for medical monitoring and point-of-care diagnostics
Notable: SRC Young Faculty Award; associate editor, IEEE Transactions on Biomedical Circuits and Systems; associate editor, IEEE Open Journal of Circuits and Systems; co-founder of Helixis, startup company developing low-cost, real-time PCR systems
Email: matthew.johnston@oregonstate.edu

Albrecht Jander
Associate Professor
PhD Washington University, St. Louis
Expertise: Magneto- resistive magnetic sensors and applications; semiconducctor spintronics; magnetic resonance force microscopy; magnetic MEMS
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Thomas K. Plant
Associate Professor Emeritus
PhD University of Illinois (Champaign-Urbana)
Expertise: Optoelectronic devices; fiber optic sensors; optical properties of materials; nanofabricated thin-film optical materials and devices
Email: tkp@oregonstate.edu

John F. Wager
Professor Emeritus
PhD Colorado State University
Expertise: Solid state materials and devices (thin film synthesis, device characterization, and modeling)
Notable: IEEE Fellow; National Academy of Inventors Fellow; Society for Information Display Fellow; co-inventor of the first transparent transistor; lead author of Transparent Electronics (Springer 2008); co-founder of Inpria Corporation; OSU Sigma Xi Researcher of the Year
Email: jfw@oregonstate.edu

Tom Weller
Professor and School Head
PhD University of Michigan
Expertise: Reconfigurable microwave circuits; microwave applications of additive manufacturing and 3D printing; electromagnetic sensors; microwave circuit and antenna design; equivalent circuit modeling
Notable: NSF CAREER Award; National Academy of Inventors Fellow; IEEE MTT Society Outstanding Young Engineer Award; IEEE MTT Society Microwave Prize; two IBM Faculty Partnership Awards
Email: tom.weller@oregonstate.edu

Alan Wang
Associate Professor
PhD University of Texas at Austin
Expertise: Nano-photonic devices — photonic crystals and surface plasmons; energy-efficient photonic devices for optical interconnects; optical sensors including surface-enhanced Raman scattering and infrared absorption
Notable: Three patents; program committee member and session chair, SPIE Photonics West; conference chair, SPIE/COS Photonics Asia
Email: Alan.Wang@oregonstate.edu

Matthew Johnston
Associate Professor
PhD Columbia University
Expertise: Biosensor and bioelectronic platforms; massively-parallel sensing; lab-on-chip technologies for medical monitoring and point-of-care diagnostics
Notable: SRC Young Faculty Award; associate editor, IEEE Transactions on Biomedical Circuits and Systems; associate editor, IEEE Open Journal of Circuits and Systems; co-founder of Helixis, startup company developing low-cost, real-time PCR systems
Email: matthew.johnston@oregonstate.edu

Electronic Materials and Devices

Research includes amorphous oxide semiconductors, photovoltaics, advanced materials for beyond CMOS, novel devices, thin films, nanomaterials and nanolaminates, applied magnetics (spintronics, biosensing and advanced magnetic materials), atomic layer deposition, internal photoemission, MIM diodes, nanophotonic devices, fiber sensors, pulsed diode lasers, and optical properties of materials.

Larry Cheng
Associate Professor
PhD University of Michigan
Expertise: Micro-/ nano-fluidics; biomedical devices; electronic devices; functional materials; nanofabrication
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John F. Conley, Jr.
Professor
PhD The Pennsylvania State University
Expertise: Thin film materials and devices; atomic layer deposition; MIM devices; TFFs; reliability; structure of electrically active point defects; directed assembly and device applications of nanomaterials
Notable: IEEE Fellow; American Vacuum Society Fellow; ONAMI Signature Faculty Fellow; guest editor, IEEE Trans on Device and Materials Reliability; Chair, 2017 AVS Intl Conference on Atomic Layer Deposition
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Pallavi Dhagat
Professor
PhD Washington University, St. Louis
Expertise: 3D printed magnetic materials and devices; biomedical imaging and sensing using magnetic nanoparticles; novel data storage and signal processing devices based on interactions between acoustic waves and spin waves; advanced measurements techniques for magnetic materials
Notable: NSF CAREER Award; IEEE Magnetics Society president (2019-2020)
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Vincent Immler
Assistant Professor
PhD Technical University of Munich
Expertise: Next-generation attacks and defenses in hardware security
Notable: 2018 Best Paper, IEEE International Symposium on Hardware Oriented Security and Trust
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Matthew Johnston
Associate Professor
PhD Columbia University
Expertise: Biosensor and bioelectronic platforms; massively-parallel sensing; lab-on-chip technologies for medical monitoring and point-of-care diagnostics
Notable: SRC Young Faculty Award; associate editor, IEEE Transactions on Biomedical Circuits and Systems; associate editor, IEEE Open Journal of Circuits and Systems; co-founder of Helixis, startup company developing low-cost, real-time PCR systems
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Albrecht Jander
Associate Professor
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Expertise: Magneto- resistive magnetic sensors and applications; semiconducctor spintronics; magnetic resonance force microscopy; magnetic MEMS
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Thomas K. Plant
Associate Professor Emeritus
PhD University of Illinois (Champaign-Urbana)
Expertise: Optoelectronic devices; fiber optic sensors; optical properties of materials; nanofabricated thin-film optical materials and devices
Email: tkp@oregonstate.edu

John F. Wager
Professor Emeritus
PhD Colorado State University
Expertise: Solid state materials and devices (thin film synthesis, device characterization, and modeling)
Notable: IEEE Fellow; National Academy of Inventors Fellow; Society for Information Display Fellow; co-inventor of the first transparent transistor; lead author of Transparent Electronics (Springer 2008); co-founder of Inpria Corporation; OSU Sigma Xi Researcher of the Year
Email: jfw@oregonstate.edu

Tom Weller
Professor and School Head
PhD University of Michigan
Expertise: Reconfigurable microwave circuits; microwave applications of additive manufacturing and 3D printing; electromagnetic sensors; microwave circuit and antenna design; equivalent circuit modeling
Notable: NSF CAREER Award; National Academy of Inventors Fellow; IEEE MTT Society Outstanding Young Engineer Award; IEEE MTT Society Microwave Prize; two IBM Faculty Partnership Awards
Email: tom.weller@oregonstate.edu

Alan Wang
Associate Professor
PhD University of Texas at Austin
Expertise: Nano-photonic devices — photonic crystals and surface plasmons; energy-efficient photonic devices for optical interconnects; optical sensors including surface-enhanced Raman scattering and infrared absorption
Notable: Three patents; program committee member and session chair, SPIE Photonics West; conference chair, SPIE/COS Photonics Asia
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Matthew Johnston
Associate Professor
PhD Columbia University
Expertise: Biosensor and bioelectronic platforms; massively-parallel sensing; lab-on-chip technologies for medical monitoring and point-of-care diagnostics
Notable: SRC Young Faculty Award; associate editor, IEEE Transactions on Biomedical Circuits and Systems; associate editor, IEEE Open Journal of Circuits and Systems; co-founder of Helixis, startup company developing low-cost, real-time PCR systems
Email: matthew.johnston@oregonstate.edu
Computer Science Education

This group studies theories, frameworks, pedagogical methods, and data related to educating students at all levels in areas related to computer science and, more generally, computational thinking. Their research aims to address critical deficiencies in CS education within K–12 and higher education, as well as address the well-documented lack of diversity in the computing field.

Mike Bailey
Professor
PhD Purdue University
Expertise: Visualization; GPU programming; high performance computer graphics; stereographics
Notable: ACM SIGGRAPH Outstanding Service Award; OSU Beaver Champion Award
mjb@oregonstate.edu

Jennifer Parham-Mocello
Assistant Professor, Kearney Faculty Scholar
PhD Clemson University
Expertise: Computer science education; cognitive development; problem solving; scientific computing; parallel processing; high-performance computing; virtual classroom environments; access grid node technology; computational science outreach
Notable: Vice Provost’s Award for Excellence in Innovation-Online Teaching
Jennifer.Parham-Mocello@oregonstate.edu

Margaret Burnett, Distinguished Professor
PhD University of Kansas
Expertise: Human issues of programming & software engineering: end-user programming, end-user software engineering, information foraging theory as applied to programming, how gender issues relate to software
Notable: NSF Young Investigator; ACM CHI Academy; CRA Undergrad Research Faculty Mentoring Award; NCWIT Undergrad Research Mentoring Award; IBM International Faculty Awards; 2 patents; IEEE VL/HCC Most Influential Paper Award Over the Last 20 Years
burnett@oregonstate.edu

Prasad Tadepalli
Professor
PhD Rutgers University
Expertise: Artificial intelligence; machine learning; automated planning; natural language processing
Notable: Action editor, Machine Learning; associate editor, Journal of Artificial Intelligence Research
prasad.tadepalli@oregonstate.edu

Martin Erwig
Stretch Professor of Computer Science
PhD University of Hagen
Expertise: Language design and domain-specific languages; functional programming; visual languages; explainable computing
Notable: Associate editor, Journal of Visual Languages and Computing; author of three books; one patent; American Book Fest Best Book Award for Education/Academic Category; Association of American Publishers PROSE Award Honorable Mention - Computer and Information Sciences
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OREGON STATE UNIVERSITY

As Oregon’s leading public research university, Oregon State’s impact reaches across the state and beyond. With campuses in Corvallis and Bend, the OSU Portland Center, the Hatfield Marine Science Center in Newport, 11 academic colleges, and research and extension centers across the state, Oregon State has a presence in every one of Oregon’s 36 counties.

THE NUMBERS

4,258
UNDERGRADUATE STUDENTS

204
DOCTORAL STUDENTS

104
MASTER’S STUDENTS

261
ACADEMIC FACULTY

28
NATIONAL ACADEMY OF ENGINEERING MEMBERS

2
EARLY CAREER AWARDS

$16M
RESEARCH EXPENDITURES

COLLEGE OF ENGINEERING

Our college endeavors to create solutions that promote strong economies, healthy people, and a sustainable natural environment. Our program has a long history of producing world-class engineering graduates who make major impacts on society through significant contributions in science and technology. Alumni achievements include breakthrough innovations such as a revolutionary artificial heart valve, the computer mouse, and the concept of email.

By emphasizing practical, experiential engineering within our curriculum, we equip students with the knowledge, skills, and passion to advance innovative solutions to today’s most complex engineering challenges in an inclusive environment.