

University of Arizona professors conducting research involving Optics

Potential research opportunities for graduate and undergraduate students (March 2021)

Professors with Primary Appointment in Wyant College of Optical Sciences (OSC)

Name	UA Title	OSC Core Area	Optics Research Specialties	Faculty Webpage
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Image Science

Ashok, Amit	Associate Professor, Optical Sciences	Image Science	computational sensing, image processing algorithms, inverse problems, information theory, signal and image processing	https://www.optics.arizona.edu/research/faculty/profile/amit-ashok
Brady, David	Professor, Optical Sciences	Image Science	computational optical imaging, artificial intelligence in image data capture and formation, compressive holography	https://www.optics.arizona.edu/research/faculty/profile/david-brady-0
Chipman, Russell	Professor, Optical Sciences	Image Science	polarization engineering, polarimetry, polarization optical design software development	https://www.optics.arizona.edu/research/faculty/profile/russell-chipman
Furenlid, Lars	Professor, Optical Sciences	Image Science	gamma-ray detectors and imaging systems for biomedical applications, image science and image quality analysis	https://www.optics.arizona.edu/research/faculty/profile/lars-r-furenlid
Kang, Dongkyun (DK)	Assistant Professor, Optical Sciences	Image Science	novel optical microscopy technologies	https://www.optics.arizona.edu/research/faculty/profile/dongkyun-dk-kang
Kupinski, Matthew	Professor, Optical Sciences	Image Science	theoretical image science, medical imaging, modeling and image quality metrics	https://www.optics.arizona.edu/research/faculty/profile/matthew-kupinski
Peng, Lellei	Associate Professor, Optical Sciences	Image Science	biomedical spectroscopy and interferometry, fluorescence imaging, biosensing and molecular imaging	https://www.optics.arizona.edu/research/faculty/profile/lellei-peng
Sawyer, Travis	Assistant Professor beginning Fall	Image Science	multispectral and polarization sensitive imaging for endoscopes and medical devices, AI methods for imaging	no web page yet

Optical Engineering

Challifoux, Brandon	Assistant Professor, Optical Sciences	Optical Engineering	optical and optomechanical engineering for next-generation space telescopes	https://www.optics.arizona.edu/research/faculty/profile/brandon-challifoux
Driggers, Ronald	Professor, Optical Sciences	Optical Engineering	electro-optical and infrared imaging systems	https://www.optics.arizona.edu/research/faculty/profile/ronald-driggers-0
Greivenkamp, John	Professor, Optical Sciences	Optical Engineering	ophthalmic and visual optics and instrumentation, optical systems	https://www.optics.arizona.edu/research/faculty/profile/john-e-greivenkamp
Hart, Michael	Associate Professor, Optical Sciences	Optical Engineering	adaptive optics	https://www.optics.arizona.edu/research/faculty/profile/michael-hart
Hua, Hong	Professor, Optical Sciences	Optical Engineering	3D visualization and imaging systems, AR/VR	https://www.optics.arizona.edu/research/faculty/profile/hong-hua
Kim, Dae Wook	Assistant Professor, Optical Sciences	Optical Engineering	Large precision optical fabrication, optical testing for large optical components	https://www.optics.arizona.edu/research/faculty/profile/daewook-kim
Koshel, R. John	Professor & Associate Dean for Undergraduate Academic Affairs	Optical Engineering	optical system engineering, illumination optical system design, freeform optics, optical metrology, novel imaging techniques	https://www.optics.arizona.edu/research/faculty/profile/r-john-koshel
Liang, Rongguang (Ron)	Professor	Optical Engineering	hyper-numerical aperture imaging, microscopy, computer generated holography, lithography	https://www.optics.arizona.edu/research/faculty/profile/rongguang-liang
Milster, Thomas	Professor, Optical Sciences	Optical Engineering	optics education, curriculum development, design and fabrication of student laboratory experiments	https://www.optics.arizona.edu/research/faculty/profile/tom-d-milster
Nofziger, Michael	Professor, Optical Sciences	Optical Engineering	lens design, aberration correction, illumination optics, aspherics, optical testing	https://www.optics.arizona.edu/research/faculty/profile/michael-nofziger
Sasian, Jose	Professor, Optical Sciences	Optical Engineering	ophthalmic instrument design, wavefront sensing and corrections for human vision	https://www.optics.arizona.edu/research/faculty/profile/jim-schwiegerling
Schwiegerling, James	Professor, Optical Sciences	Optical Engineering	design and fabrication of nanophotonic devices, micro-optics, beam steering, LIDAR	https://www.optics.arizona.edu/research/faculty/profile/yuzuru-takashima
Takashima, Yuzuru	Associate Professor, Optical Sciences	Optical Engineering		

Optical Physics

Anderson, Brian	Professor & Associate Dean for Graduate Academic Affairs	Optical Physics	Bose-Einstein condensation, quantum vortices, quantum turbulence, superfluidity in atomic gases	https://www.optics.arizona.edu/research/faculty/profile/brian-p-anderson
Binder, Rudolf (Rolf)	Professor, Optical Sciences	Optical Physics	theoretical investigations of the optical properties of semiconductor structures, quantum many-body theories	https://www.optics.arizona.edu/research/faculty/profile/rolf-binder
Jessen, Poul	Professor, Optical Sciences	Optical Physics	quantum state preparation, quantum control, quantum information, laser cooling and atom manipulation	https://www.optics.arizona.edu/research/faculty/profile/poul-jessen
Jones, R. Jason	Associate Professor, Optical Sciences	Optical Physics	ultrafast laser science, femtosecond frequency combs, optical frequency metrology, spectroscopy	https://www.optics.arizona.edu/research/faculty/profile/r-jason-jones
Kolesik, Miroslav	Associate Professor, Optical Sciences	Optical Physics	theoretical nonlinear optics, semiconductor laser simulation, light-matter interaction	https://www.optics.arizona.edu/research/faculty/profile/miroslav-kolesik
Mansuripur, Masud	Professor, Optical Sciences	Optical Physics	theoretical electrodynamics, radiation pressure, photon momentum, light-matter interaction	https://www.optics.arizona.edu/research/faculty/profile/masud-mansuripur
Moloney, Jerome	Professor, Optical Sciences	Optical Physics	modeling and simulation of photonics systems, theory of semiconductor lasers, large-scale computation	https://www.optics.arizona.edu/research/faculty/profile/jerome-moloney
Wilson, Dalziel (Dal)	Assistant Professor, Optical Sciences	Optical Physics	ultra-high-Q opto-mechanical resonators, quantum measurement and control, radiation pressure and cooling	https://www.optics.arizona.edu/research/faculty/profile/dalziel-wilson
Wright, Ewan	Professor, Optical Sciences	Optical Physics	theory and simulation of ultrashort laser pulses, light-matter interaction, nonlinear optics, ultracold atomic gases	https://www.optics.arizona.edu/research/faculty/profile/ewan-m-wright

Photonics

Fallahi, Mahmoud	Professor, Optical Sciences	Photonics	high-power semiconductor lasers, VECSELs, DFB/DBR lasers, tunable sources, filters, and switches	https://www.optics.arizona.edu/research/faculty/profile/mahmoud-fallahi
Fan, Linran	Assistant Professor, Optical Sciences	Photonics	nanophotonics, quantum photonics, nonlinear optics, on-chip photon control technologies and devices	https://www.optics.arizona.edu/research/faculty/profile/linran-fan
Guha, Saikat	Associate Professor, Optical Sciences	Photonics	quantum information theory, optical communications, quantum key distribution, quantum computing	https://www.optics.arizona.edu/research/faculty/profile/saikat-guha
Kieu, Khanh	Associate Professor, Optical Sciences	Photonics	ultrafast fiber lasers, nonlinear fiber optics, nonlinear spectroscopy and frequency combs, microresonators, imaging	https://www.optics.arizona.edu/research/faculty/profile/khanh-kieu
Koch, Thomas	Professor & Dean, Wyant College of Optical Sciences	Photonics	semiconductor optoelectronics, optical fiber communications, photonic integrated circuits, silicon photonics	https://www.optics.arizona.edu/research/faculty/profile/thomas-koch
McLeod, Euan	Assistant Professor, Optical Sciences	Photonics	nano-photonics, surface science, optical tweezers, holographic microscopy, computational imaging, self-assembly	https://www.optics.arizona.edu/research/faculty/profile/euan-mcleod
Norwood, Robert	Professor, Optical Sciences	Photonics	photonic materials and devices, photonic crystals, photonic designer materials for next generation networks	https://www.optics.arizona.edu/research/faculty/profile/robert-norwood
Pau, Stanley	Professor, Optical Sciences	Photonics	micro-optics, MEMS/NEMS for imaging and sensing, optical lithography for nanofabrication, microfluidics	https://www.optics.arizona.edu/research/faculty/profile/stanley-pau
Peyghambarian, Nasser	Professor, Optical Sciences	Photonics	optical networks and optical communication, fiber optics, lasers, and amplifiers, organic photonics, nonlinear photonics	https://www.optics.arizona.edu/research/faculty/profile/nasser-peyghambarian
Su, Tsu-Te Judith (Ludy)	Assistant Professor, Optical Sciences	Photonics	biosensing and imaging, microfabrication, optical instruments for biological and medical applications, molecule detection	https://www.optics.arizona.edu/research/faculty/profile/tsu-te-judith-su

Research Professors with Primary Appointment in OSC (may or may not directly take students)

Name	UA Title	OSC group affiliation	Optics Research Specialty	Faculty Webpage
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Image Science

Kupinski, Meredith	Associate Research Professor	Chipman	Image Science	https://www.optics.arizona.edu/research/faculty/profile/meredith-k-kupinski
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Optical Engineering

Dubin, Matthew	Associate Research Professor, Optical Sciences		Optical Engineering	https://www.optics.arizona.edu/research/faculty/profile/matthew-dubin
Kim, Young Sik	Assistant Research Professor, Optical Sciences	Milster	Optical Engineering	https://www.optics.arizona.edu/research/faculty/profile/youngsik-kim
Lee, Sang Yoon	Assistant Research Professor, Optical Sciences	Hua	Optical Engineering	https://www.optics.arizona.edu/research/faculty/profile/sang-yoon-lee
Oh, Chang Jin	Technical Director, Opt. Fab. / Eng. Facility		Optical Engineering, Optical Fabrication	https://www.optics.arizona.edu/about/staff/profile/chang-jin-oh
Smith, Gregory	Assistant Research Professor, Optical Sciences	Kim	Optical Engineering	https://www.optics.arizona.edu/research/faculty/profile/greg-smith
Song, Bofan	Assistant Research Professor, Optical Sciences	Liang	Optical Engineering	https://www.optics.arizona.edu/research/faculty/profile/bofan-song

Optical Physics

Hader, Jorg	Associate Research Professor, Optical Sciences	Moloney	Optical Physics	https://www.optics.arizona.edu/research/faculty/profile/j%C3%B6rg-hader
Kwong, Nai-Hang	Research Professor, Optical Sciences	Binder	Optical Physics	https://www.optics.arizona.edu/research/faculty/profile/nai-hang-kwong
Phillips, Mark	Associate Research Professor, Optical Sciences	Jones	Optical Physics	https://www.optics.arizona.edu/research/faculty/profile/mark-phillips
Polynkin, Pavel	Associate Research Professor, Optical Sciences		Optical Physics	https://www.optics.arizona.edu/research/faculty/profile/pavel-polynkin

Photonics

Blanche, Pierre	Research Professor, Optical Sciences	Norwood	Photonics, Image Science	https://www.optics.arizona.edu/research/faculty/profile/pierre-alexandre-blanche
Chavez-Pirson, Arturo	Research Professor, Optical Sciences	Peyghambarian	Photonics	https://www.optics.arizona.edu/research/faculty/profile/arturo-chavez-pirson
Hessenius, Chris	Assistant Research Professor, Optical Sciences	Fallahi	Photonics	https://www.optics.arizona.edu/research/faculty/profile/chris-hessenius
Jiang, Linan	Associate Research Professor, Optical Sciences	Pau	Photonics	https://www.optics.arizona.edu/research/faculty/profile/linan-jiang
Kost, Alan	Research Professor, Optical Sciences		Photonics	https://www.optics.arizona.edu/research/faculty/profile/alan-kost
Kaneda, Yushi	Research Professor, Optical Sciences		Photonics	https://www.optics.arizona.edu/research/faculty/profile/yushi-kaneda
LaComb, Lloyd	Research Professor, Optical Sciences	Peyghambarian	Photonics	https://www.optics.arizona.edu/research/faculty/profile/lloyd-l-comb-jr
Zhu, Xiushan	Research Professor, Optical Sciences	Peyghambarian	Photonics	https://www.optics.arizona.edu/research/faculty/profile/xiushan-zhu

Remote Sensing

Biggar, Stuart	Research Professor, Optical Sciences		Remote Sensing	https://www.optics.arizona.edu/research/faculty/profile/stuart-biggar
Czapla-Myers, Jeffrey	Associate Research Professor, Optical Sciences		Remote Sensing	https://www.optics.arizona.edu/research/faculty/profile/jeffrey-s-czapla-myers

Primary appointments outside OSC

Name	UA Title	Department Affiliations	Research area	Faculty Webpage
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Astronomical Imaging & Instrumentation

Angel, Roger	Regents Professor/Professor	Astronomy/OSC	Astronomical Imaging & Instrumentation	https://www.as.arizona.edu/people/faculty/r-angel
Close, Laird	Professor	Astronomy	Astronomical Imaging & Instrumentation	https://www.as.arizona.edu/people/faculty/laird-close
Douglas, Ewan	Assistant Professor	Astronomy	Astronomical Imaging & Instrumentation	https://www.as.arizona.edu/people/faculty/ewan-douglas
Guyon, Olivier	Associate Professor	Steward Obs./OSC	Astronomical Imaging & Instrumentation	https://www.optics.arizona.edu/research/faculty/profile/olivier-guyon
Hamden, Erika	Assistant Professor	Astronomy	Astronomical Imaging & Instrumentation	https://www.as.arizona.edu/people/faculty/erika-hamden
Harris, Walter	Professor	Lunar and Planetary Laboratory	Astronomical Imaging & Instrumentation	https://www.lpl.arizona.edu/faculty/harris
Lesser, Michael	Sr. Res. Sd/Research Professor	Steward Obs./OSC	Astronomical Imaging & Instrumentation	https://www.as.arizona.edu/people/faculty/michael-lesser
Males, Jared	Assistant Astronomer	Steward Observatory	Astronomical Imaging & Instrumentation	https://www.as.arizona.edu/people/faculty/jared-males
Martin, Hubert (Buddy)	Project Scientist/Assoc. Research Professor	Steward Obs./OSC	Astronomical Imaging & Instrumentation	https://www.optics.arizona.edu/research/faculty/profile/hubert-m-buddy-martin
Morzinski, Kathleen	Associate Astronomer	Steward Observatory	Astronomical Imaging & Instrumentation	https://www.as.arizona.edu/people/faculty/katie-morzinski
Walker, Chris	Professor/Astronomer/Associate Professor	Astronomy/Steward Observatory/OSC/ECE	Astronomical Imaging & Instrumentation	https://www.optics.arizona.edu/research/faculty/profile/christopher-k-walker

Biomedical Optics and Imaging

Banerjee, Bhaskar	Professor	Medicine/BIOMED/OSC	Biomedical Optics and Imaging	https://depts.medicine.arizona.edu/profile/bhaskar-banerjee-md
Barton, Jennifer	Professor	Biomed. Engr./ECE/OSC	Biomedical Optics and Imaging	https://bme.engineering.arizona.edu/faculty-staff/faculty/jennifer-barton
Caucci, Luca	Assistant Research Professor	Medical Imaging/OSC	Biomedical Optics and Imaging	https://medicine.arizona.edu/person/luca-caucci
Gmitro, Art	Professor	Radiology-Med Imaging/OSC Image	Biomedical Optics and Imaging	https://www.optics.arizona.edu/research/faculty/profile/arthur-gmitro
Rouse, Andrew	Associate Research Professor	Medicine/OSC	Biomedical Optics and Imaging	https://medicine.arizona.edu/person/andrew-r-rouse-phd
Trouard, Theodore	Professor	Biomedical Engineering	Biomedical Optics and Imaging	https://bme.engineering.arizona.edu/faculty-staff/faculty/ted-trouard
Utzinger, Urs	Associate Professor	Biomed/OBGYN/OSC	Biomedical Optics and Imaging	https://bme.engineering.arizona.edu/faculty-staff/faculty/urs-utzinger
Witte, Russell	Professor	Radiology-Medical Imaging/OSC	Biomedical Optics and Imaging	https://bme.engineering.arizona.edu/faculty-staff/faculty/russell-witte

Information Theory

Bash, Boulat	Assistant Professor	Engineering/OSC	Information Theory	https://ece.engineering.arizona.edu/faculty-staff/faculty/boulat-bash
Marcellin, Michael	Professor	ECE/OSC	Information Theory, Image Science, Communications	https://ece.engineering.arizona.edu/faculty-staff/faculty/michael-w-marcellin

Materials Science, Chemistry, Energy Science, Devices

Armstrong, Neal	Professor	Chemistry/OSC	Analytical Chemistry, Energy Science	https://cbc.arizona.edu/faculty/neal-r-armstrong
Lucas, Pierre	Professor	Mat. Sci/OSC	Materials Science, Photonics	https://mse.engineering.arizona.edu/faculty-staff/faculty/pierre-lucas
Potter, Barrett G. (B.G.)	Professor	Materials Science & Eng./OSC	Materials Science, Photonics	https://mse.engineering.arizona.edu/faculty-staff/faculty/barrett-g-potter
Potter, Kelly	Associate Professor	ECE/OSC	Optical Materials	https://ece.engineering.arizona.edu/faculty-staff/faculty/kelly-potter
Shadman, Farhang	Regents Professor	Chemical & Environ. Engr./OSC	Chemical Engineering	https://chee.engineering.arizona.edu/faculty-staff/faculty/farhang-shadman
Saavedra, Scott	Professor	Chemistry Biochem/OSC	Spectroscopy, Sensors, Energy Science	https://cbc.arizona.edu/faculty/scott-saavedra

Optical Physics

Hassan, Mohammed	Assistant Professor	Physics/OSC	Optical Physics, Ultrafast sciences	http://www.optics.arizona.edu/research/faculty/profile/mohammed-tharwat-hassan
Huxter, Vanessa	Assistant Professor	Chemistry and Biochemistry	Optical Physics, Spectroscopy	https://cbc.arizona.edu/faculty/vanessa-huxter
Mazumdar, Sumit	Professor	Physics/OSC	Optical Physics, Condensed Matter theory	https://w3.physics.arizona.edu/people/sumit-mazumdar
Monti, Oliver	Professor	Chemistry and Biochemistry	Optical Physics, Quantum Materials	https://cbc.arizona.edu/faculty/oliver-monti
Sandhu, Arvinder	Professor	Physics/OSC	Optical Physics	https://w3.physics.arizona.edu/people/arvinder-sandhu
Schaibley, John	Assistant Professor	Physics	Optical Physics, Condensed Matter	https://w3.physics.arizona.edu/people/john-schaibley
Visscher, Koen	Associate Professor	PAS/OSC	Optical Physics, Biophysics	https://w3.physics.arizona.edu/people/koen-visscher

Quantum Information, Photonics, Communication

Djordjevic, Ivan	Professor	ECE/OSC	Quantum Information, Optical Communication	https://ece.engineering.arizona.edu/faculty-staff/faculty/ivan-djordjevic
Zhang, Zheshen	Assistant Professor	MSE/OSC	Quantum Information, Photonics	https://www.optics.arizona.edu/research/faculty/profile/zheshen-zhang
Zhuang, Quntao	Assistant Professor	ECE/OSC	Quantum Information, Photonics	https://ece.engineering.arizona.edu/faculty-staff/faculty/quntao-zhuang

Remote Sensing

Smith, William Kolby	Assistant Professor	Land - Water - Climate / Geospatial Analysis	Remote Sensing, Climatology	https://snrc.arizona.edu/people/william-smith
Sorooshian, Armin	Professor	Chemical Engineering/OSC	Remote Sensing, Chemical Engineering	https://chee.engineering.arizona.edu/faculty-staff/faculty/armin-sorooshian