

**Iwona Palusinski, Ph.D.**  
**Director**



**The Aerospace Corporation**

Iwona A. Palusinski is the Director of the Integrated Sensor Design and Analysis Department at The Aerospace Corporation. This is a multi-discipline engineering team that develops new concepts and analyzes existing designs for electro-optical sensor payloads in a concurrent engineering environment. The team uses an integrated set of engineering software tools that enables prediction of the effects of the space environment on satellite sensors with higher fidelity than is generally achieved with individual analyses, including thermal and structural changes on optical performance. Previously, Dr. Palusinski was the Associate Director of Integration and Testing for several national space assets. She is an expert on space qualification of new optical materials with an emphasis on silicon carbide. She is a principal investigator on the Materials on International Space Station Experiment (MISSE 6–8) and collaborates with scientists in industry and at national laboratories. She has chaired sessions at international conferences and given invited papers. She received her B.S. degree in optical engineering from the University of Arizona and her M.S. and Ph.D. degrees from the University of Arizona's College of Optical Sciences. As an undergraduate and graduate student, she participated in outreach programs. and in 2002 was a co-founder of Girls Learning Academic and Science skills (GLASS) at OSC.

**Joanna Schmit, Ph.D.**  
**Senior Staff Optical Engineer**



**Bruker Inc.**

Dr. Joanna Schmit earned an M.S. at Warsaw University of Technology and a Ph.D. at the University of Arizona. She is currently a Senior Staff Optical Engineer at Bruker Inc. Joanna works on white light and phase shifting interferometry, interferometric methods for shape, film thickness and deformation measurements. She is an SPIE Nakajima scholarship recipient and an SPIE Fellow. Two of her papers were among 20 selected for an editor's pick of the most influential papers in Nondestructive Testing from 50 years of *Applied Optics* articles. She has served as a conference chair for *SPIE Interferometry Techniques and Analysis*, is an editor of *Optics Encyclopedia*, and authored multiple book chapters and patents. She is involved in Hands on Optics and elementary school outreach, and is active in leadership for the Polish Community in Tucson promoting Polish culture.

**Goldie Goldstein, Ph.D.**  
**Optical Engineer**



**4D Technology**

As a Ph.D. student at the University of Arizona, Goldie Goldstein's research was focused on designing and building a quantitative phase microscope for imaging living biological samples, and developing new phase unwrapping and image processing algorithms for that application. Currently at 4D Technology, Goldie works on prototyping and designing new metrology products. She volunteers in the Tucson area as a musician and also in the religious community. As a graduate student, she was involved with SOCK and served on the WiO board. In August 2012, she won 2nd place in the Fringe Art Competition.

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**Galina Khitrova, Ph.D.**  
**Professor**



**College of Optical Sciences**  
**The University of Arizona**

Dr. Galina Khitrova is a Professor of Optical Sciences at the University of Arizona. She studied physics at Yerevan State University in Armenia from 1976-1979 and at City University of New York, Brooklyn College from 1979-1981 before earning her Ph.D. in Physics from New York University in 1986. After graduation, she became an Assistant Research Scientist at the University of Arizona from 1986-1989, an Assistant Research Professor from 1989-1992, an Associate Research Professor from 1997 to 2002, and Professor from 2002 to the present. She also served as an Assistant Professor of Physics at University of Toronto from 1991-1992. Her current research interests include: quantum metaphotonics; Purcell effect; photon on demand; quantum nano-optics of semiconductors; cavity QED with a single quantum dot and a photonic crystal cavity; nonlinear optical switching; quantum information science; MBE growth of quantum dots, quantum wells, photonic crystal slab samples, and patterned quantum dots; and metamaterials with gain. Her research group is actively involved in the Center for Integrated Access Networks (CIAN), a multi-university research effort whose vision is to create transformative technologies for optical access networks. She has published over 165 papers in refereed journals including *23 Physical Review Letters*, *1 Nature*, *1 Nature Physics*, *1 Nature Materials*, and *1 Reviews of Modern Physics*. She has also made over 190 presentations at scientific meetings. She co-authored a book titled *Nonlinear Photonics* with Nasser Peyghambarian, Ph.D. and H.M. Gibbs, Ph.D. in 1990. She was named a Fellow of the Optical Society of America in 2007 and a Fellow of the American Physical Society in 2012.

**Katie Schwertz, M.S.**  
**Design Engineer**



**Edmund Optics**

Katie Schwertz earned a B.S. Optics in 2008 at the University of Rochester Institute of Optics and a M.S. in Optical Sciences in 2010 at University of Arizona's College of Optical Sciences. While doing her graduate work at UA, she became interested in the field of optomechanics. After she graduated, she found that the work done at Edmund Optics was well aligned with her research goals and interests. Now at Edmund Optics' Design Services Center in Tucson, she performs optical and optomechanical design for both catalog and custom components and assemblies. She also attends trade shows, writes technical content for Edmund Optics' website and mailings, and is involved with a variety of activities through the College of Optical Sciences, SPIE, and OSA. In August of 2012, the *SPIE Field Guide to Optomechanical Design and Analysis* was published, which she co-authored with Jim Burge. It was a lot of work and she is always excited to hear when people use it! As an undergraduate at UR, she participated in the student OSA chapter and student outreach events where she used demos from the 'Optics Suitcase'. As a graduate student at UA, she served on the WiO board and helped facilitate a variety of outreach events. Since joining Edmund Optics, she has participated in a variety of SPIE and OSA activities, including being a Program Chair for OSA OF&T and a member of the SPIE Education Committee.

**Hong Hua, Ph.D.**  
**Associate Professor**



**College of Optical Sciences**  
**The University of Arizona**

Dr. Hong Hua received her Ph.D. degree in Optical Engineering from Beijing Institute of Technology (BIT) in Beijing, China, in 1999, with the dissertation titled "Techniques of Immersion Enhancement and Interaction for Virtual Reality" (with honor). She received her B.S. in Optical Engineering and Minor B.S. degree in Computer Science from BIT in 1994. She is currently an Assistant Professor with the College of Optical Sciences (OSC) and joint faculty with the Departments of Electrical and Computer Engineering and Computer Science. Before she joined the faculty at OSC, she was an Assistant Professor with the Department of Information and Computer Sciences at the University of Hawaii at Manoa from December 2002 - 2003, a Beckman Fellow affiliated with the Beckman Institute for Advanced Science and Technology at University of Illinois at Urbana-Champaign (UIUC) from December 1999-2002, and a postdoctoral research associate at the Optical Diagnosis and Application Lab (ODA Lab) at the School of Optics/CREOL at University of Central Florida (UCF) from February-December in 1999. Her current research interests include stereoscopic displays, collaborative virtual and augmented environments, human-computer intelligent interface, computer vision/graphics, optical system design and imaging system, etc. She has received four grants awards as Principal Investigator by the National Science Foundation since 2000, including the prestigious NSF CAREER award in January 2007, and three-year grants in 2005, 2003, and 2000. She has been serving on various proposal review panels and conference committees, as well as being a regular reviewer for a wide range of scientific journals. She received an Honorable Mention Best Paper Award by IEEE Virtual Reality 2003.