

### 2013 Proposed Changes to OSA-RS Bylaws to Allow Electronic Voting

*Joe Vornehm, OSA-RS Councilor*

Voting at the Annual Dinner Meetings of the Optical Society of America, Rochester Section, has been lively but somewhat informal. The Council feels that electronic voting will be simpler and more secure (not to mention easier to administer).

Under the present Bylaws, elections for the Council were required to be held at the Annual Dinner Meeting, and any other votes by members had to be held at a meeting of some kind. [Proxy votes were allowed, but we still had to formally hold the meeting.] The proposed changes to the Bylaws will let us conduct elections and other votes entirely online, without needing to hold a separate meeting. Online elections for the incoming officers will be completed in advance of the Annual Dinner Meeting. Everyone will still be guaranteed the opportunity to vote and to make nominations, and the requirement for the Council to notify members about the election ahead of time is still in effect. Members without e-mail addresses on file will be sent paper ballots.

*continued on p. 4*

### M. Parker Givens, Inspirational Educator and Optical Scientist, Dies at 96



M. Parker Givens, former acting director and professor emeritus of the University of Rochester's Institute of Optics and a renowned teacher to generations of students, died peacefully on January 11<sup>th</sup> at age 96. Givens was a professor at the University since 1947.

Although Givens "officially" retired in 1981 at the

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*Editor's note: This article is excerpted from an [article](#) written by Leonor Sierra and published by the University of Rochester Office of Communications on their website. We thank Leonor and the University for their permission.*

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### Optical Society of America Rochester Section

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*The purpose of the Rochester Section of the Optical Society of America is to promote and disseminate knowledge of optics and closely related sciences in both its local community and throughout the world by (i) bringing together scientists, engineers, business leaders, educators and students, (ii) providing professionals and students with educational resources for the purpose of improving and developing their abilities, (iii) encouraging the sharing of knowledge and innovation, and (iv) encouraging students to study optics and other sciences.*

◆ ◆ ◆ ◆ ◆ Upcoming Events ◆ ◆ ◆ ◆ ◆

◆ OSA-RS Program ◆

Tuesday, February 12<sup>th</sup>, 2013

“The Design and Integration of a Custom Broadband 15x Zoom Lens for NIR Fluorescence-Guide Surgery”

**Julie Bentley**

University of Rochester

Tuesday, February 26<sup>th</sup>, 2013

“What's up at Semrock? Complex Thin-Film Coatings for Spectral Transmission and Dispersion Control, and Who is IDEX/Semrock?”

**Turan Erdogan**

IDEX / Semrock

Tuesday, March 12<sup>th</sup>, 2013

“Lens Design for Low Sensitivity to Thermally Induced Stress Birefringence”

**Andy Kurtz and Joe Bietry**

Eastman Kodak Company

All three talks are open to the public and will start at 7:00 pm at the Coliseum at the University of Rochester's Laboratory for Laser Energetics (LLE), 240 East River Road, Rochester, New York, 14623.

click [here](#) for a map

**Mark Your Calendars!  
Optics Events in 2013**

Photonics West

February 2-7, 2013

San Francisco, California

<http://spie.org/x2584.xml>

OFC/NFOEC

March 17-21, 2013

Anaheim, California

<http://www.ofcnfoec.org/>

OSA, Rochester Section  
Annual Dinner Meeting

May 7, 2013

Rochester, New York

[http://www.osarochester.org/  
AnnualDinner.html](http://www.osarochester.org/AnnualDinner.html)

CLEO

June 9-14, 2013

San Jose, California

<http://cleoconference.org>

Photonics North

June 3-5, 2013

Ottawa, Ontario, Canada

<http://www.photonicsnorth.com>

SPIE Annual Meeting

August 25-29, 2013

San Diego, California

<http://spie.org/x30491.xml>

OSA Annual Meeting

October 5-9, 2013

Orlando, Florida

[http://www.frontiersinoptics.com/  
home/fio-2013/](http://www.frontiersinoptics.com/home/fio-2013/)

Optifab

October 15-17, 2013

Rochester, New York

<http://spie.org/x6567.xml>

◆ Vignettes ◆

**Luis A. Martínez**, the father of Monroe Community College optical technology student **Brad Martinez**, wrote a [piece](#) entitled “Optics Under the Lens” for the *Democrat & Chronicle*.

**Mehul Malik**, a PhD candidate with the **Robert Boyd's** Quantum Photonics Research Group at the University of Rochester, was highlighted in an on-line [article](#) in the MIT Technology Review about his research using the quantum properties of photons to create unjammable aircraft detection systems.

**Duncan Moore**, professor of optical engineering at the University of Rochester, co-wrote an article for the *Democrat & Chronicle* about the role of **Robert Hopkins**, former director of The Institute of Optics, in pioneering entrepreneurship.

Past OSA-RS secretary and University of Rochester PhD candidate **Cristina Canavesi** won the Bill Price and Warren Smith Optical Design and Engineering Scholarship, awarded by SPIE.

An article entitled “**Adolph Lomb**: Patronage, Industry and Optics in Early 20th-Century America”, by Victoria N. Meyer of East Tennessee State University, appeared in the January 2013 issue of *Optics & Photonics News*.

*Did You Know ...*

that the Genesee-Charlotte Lighthouse had a fourth-order Fresnel lens installed in 1853?

### Did You Know ...

that three Rochester-area optics leaders were [interviewed on video](#) in 2012 by *Laser Focus World*?

#### **Christopher Cotton**

General Manager  
ASE Optics, Inc.

#### **Turan Erdogan**

Chief Technology Officer  
Semrock Inc.

#### **Barry Silverstein**

Optics and Photonics  
Technology Manager  
Eastman Kodak Company

Do you have news of interest to the OSA-RS membership?

Contact Chris Palmer at [president\(at\)osarochester.org](mailto:president(at)osarochester.org)

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## IONS-NYC – A Student-Run Conference

[Alexandra Artusio-Glimpse](#),  
House Co-Chair

This past October, while the Rochester optics community was busily preparing for *Frontiers in Optics*, 125 students representing twenty-five countries around the world were in New York City at the first ever International OSA Network of Students NYC (IONS-NYC) jointly hosted by the City College of New York and Columbia University.

This purely student-run conference, lasting three days from October 10<sup>th</sup> to 12<sup>th</sup>, hosted a number of inspirational and informative talks given by distinguished guest speakers including Prof Robert Alfano from City College, Marlan Scully from Texas A&M, Dr William Green from IBM, and other

renowned physicists in the field of optics and photonics. Several student talks, two poster sessions, an optics and photonics entrepreneurship panel discussion and an enjoyable spread of social activities filled the days with ample of opportunity to network and mingle. For many of the attendees, this was their first experience in the United States, which gave the event a wonderful cultural influence. At the end of the week, awards were presented for best student talk and best poster.

IONS is an OSA-supported program that provides an opportunity for student OSA chapters to attract young scientists from around the world for networking and focus discussions on topics important to students as they prepare for their first steps in the professional world. The program was initiated in 2006, and has

since been successfully bringing together hundreds of students from around the world.

IONS-NYC was a great success. In just three days, students connected with each other on personal and professional levels, leaving lasting connections across the seas. The event ended just in time for *Frontiers in Optics*, when many of the students were bussed up to Rochester for another week of networking and exposure to global research in optics and photonics.

**IONS**  
**NEW YORK**  
**NA4**

October 10-12, 2012



## **Bond Schoeneck & King Joins as Newest Corporate Member**

The Optical Society of America, Rochester Section, is pleased to announce that [Bond Schoeneck & King](#) has recently joined as a corporate member.

Founded in 1897, the firm has over 200 attorneys with offices in Rochester, Albany, Buffalo, Garden City, Ithaca, New York City, Oswego, Syracuse and Utica, as well as Kansas and Florida. Bond's Intellectual Property Practice includes nineteen members of whom eleven are Patent Attorneys. Bond's IP Practice has experience across the broad range of innovation, with particular expertise in optical matters.

Last month, in a survey of the Top 500 Companies, Bond was recognized nationally as one of the 2013 Go-To Law Firms in the area of Patent Prosecution as recommended by a major US high-tech client. Bond's IP practice members are also included in *Best Lawyers of America* and *Super Lawyers*.

Bond partner Bill Greener was featured in the December OSA-RS newsletter's "Interview with a Luminary."

**BOND** SCHOENECK  
& KING

## **Electronic Voting**

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One other small change: the deadline for holding the Annual Dinner is moved from May 1<sup>st</sup> to May 15<sup>th</sup>.

### **So how will elections work?**

The President-Elect nominates people to serve on the Council for next year, and the Secretary sends all members the "Slate Notice" containing the list of nominees. All members then have the opportunity to send additional candidates for nomination to the Secretary (at [secretary@osarochester.org](mailto:secretary@osarochester.org)) within ten business days. If no additional nominations are received, then the slate is declared elected. If there are additional nominations, all members will be sent the full list of candidates and will have at least one week to vote. The vote will be finished in time for the Annual Dinner Meeting.

### **How will we conduct the online voting?**

We are planning to use SurveyMonkey. We have tested the process and feel they are the most cost-effective provider that meets our needs.

### **Who gets to vote?**

All individual members (regular members, student members, and honorary members) of the OSA-

RS are entitled to vote. That isn't changing.

The Council recently created a corporate membership. We are grateful to our corporate members! Your contributions are invaluable. Corporate membership currently includes four free individual memberships, and the individuals holding those memberships are each entitled to vote as usual. As currently implemented, the corporate membership itself is not a regular membership and does not have any voting power. But please contact a Council member to provide your input!

### **Whom do I contact if I still have questions?**

Please contact Joe Vornehm ([vornehm@optics.rochester.edu](mailto:vornehm@optics.rochester.edu)) or any other Council member.

### **When is the change to electronic voting planned to occur?**

Soon! We plan to submit the Bylaws changes for membership approval in February, so that we can use the electronic voting process for this year's Council elections in April. To give you a taste of the new procedure, we will be using SurveyMonkey to allow you to submit your vote online. You will also be able to vote at our two regularly-scheduled talks in February (on the 12<sup>th</sup> and the 26<sup>th</sup>). Watch your e-mail for details! ■

### **Did You Know ...**

that **Mike Mandina**, president of OSA-RS Corporate Member [Optimax Systems](#), recently wrote a web essay entitled "[We're not educating like we used to](#)" for the *Democrat & Chronicle*?

### **DAMOP '13:**

44th Annual Meeting of the American Physical Society Division of Atomic, Molecular and Optical Physics

June 3-7, 2013

Quebec City, Quebec, Canada  
<http://www.aps.org/units/damop/meetings/annual/index.cfm>

### **Did You Know ...**

that [Corning](#) provided the fiber optic network cabling and connectivity for the final presidential debate on October 22<sup>nd</sup>, 2012 in Boca Raton, Florida?

## M. Parker Givens

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mandatory age of 65 (at that time a federal law), he continued to teach for another twenty-two years, being primarily responsible for the senior laboratory course.

Professor Robert Boyd, who held the M. Parker Givens Chair from 2001 to 2011, recalled Givens as an inspirational and dedicated instructor, "He truly believed in educating students."

The chair was endowed in 2001 by James Wyant, a University Trustee, professor at the University of Arizona and a former student of Givens. "Givens was a fantastic professor and I was very fortunate to have him as my major professor," Wyant reflected. "He seemed to know everything and he could explain the most difficult subject in simple, clear terms, and he was always willing to help the student."

Right up until his final retirement, "he was loved and respected by the students," writes UR Professor Carlos Stroud in *A Jewel in the Crown*, a history of The Institute. "Even in the last year, students were in awe when he walked over to the balky experiment that they had unsuccessfully toiled over all after-noon, and with one little tweak of a knob he made it work."

On the occasion of this final retirement, Givens reflected on his time at the Institute and teaching. "I don't think we ever had the attitude at the Institute that research came first and teaching second," he said. "We tried to do the best we could at educating the students, and we were willing to talk to them outside the classroom, and they seemed to appreciate that. It was no big deal as far as we

were concerned. I think we just thought that was the way it ought to be."

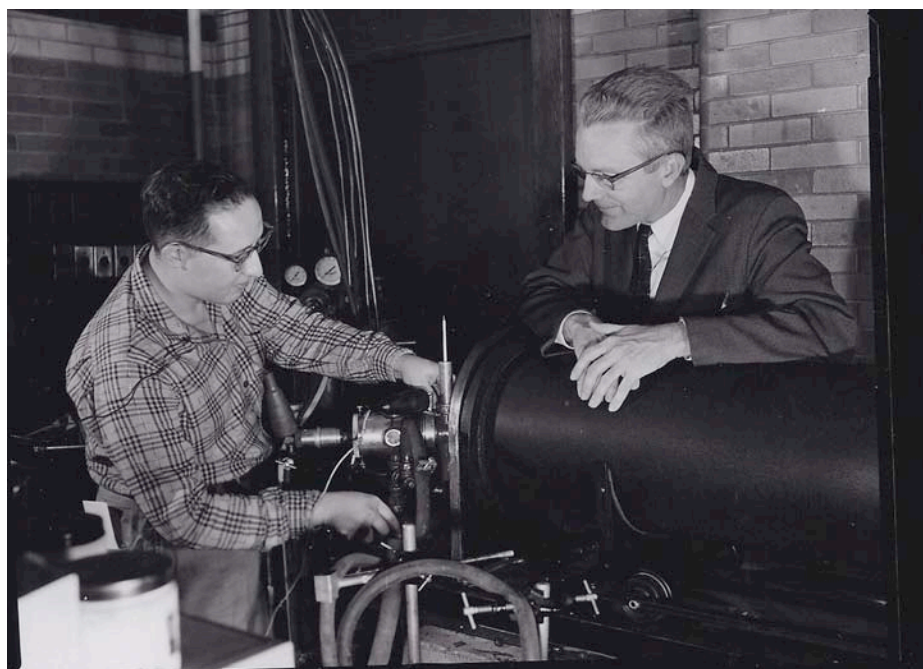
A native of Richmond, Virginia, he graduated in 1937 from the University of Richmond. Givens received his PhD from Cornell University in 1942, where his fields of interest were the optical properties of metals and vacuum ultraviolet spectroscopy. After his PhD, he became an instructor of physics at the Pennsylvania State College from 1942 to 1946. Prior to joining the University of Rochester, he also spent a year with the Johns Hopkins Applied Physics Laboratory. During his time at the University of Rochester, he also served as Acting Dean of the College of Engineering and Applied Science in 1984 and 1985.

His initial appointment in 1947 was "apparently met with considerable skepticism" because he was primarily involved, at least initially, in pure research, notes Kenneth Teegarden, former Institute director, in *A Jewel in the*

*Crown*. This was a "radical departure" from the "applied" direction of the Institute at the time. However, Brian J. Thompson, former Institute of Optics director and provost emeritus, wrote that Givens "brought a broad point of view to the full range of physical optics knowledge and research problems."

Along with former director Robert Hopkins, Givens received a 1963 NSF grant to develop new teaching experiments and demonstrations using the then newly developed optical laser. Hopkins, Givens and others equipped a traveling unit – thus the origin of the "laser road show" – that was taken to several universities and an NSF institute for high school teachers.

He is survived by his daughter Jean F. Givens of Lexington, Kentucky. He is predeceased in 1979 by his son Robert P. Givens, in 1989 by his son R. Wayne Givens, and in 2007 by his wife of 65 years, Gene M. Givens. ■



M. Parker Givens with a student at the University of Rochester in 1959.

## Interview with an Optics Luminary

**Paul Conrow**  
East High School

courses in college. I love teaching and exploring the fundamental concepts of light and matter.

### **OSA-RS: What peaked your interest in optics?**

*Paul:* With my innate love of quantum chemistry and work on my Master's thesis at RIT in fluorescence quenching, I had been toying with developing a photochemistry & imaging course during my first years teaching; nothing serious though.

Then, during my 8th year teaching, I had a 7th grader who needed glasses. I realized the need in October; finally, he came to school with glasses on Valentine's day!

This delay was unacceptable. I resolved to propose a plan where high school students learn to make prescription glasses for their peers. I searched online and found that such a program existed in a high school in NYC. I made a pitch to district officials and I was referred to Tom Battley of the Rochester Regional Photonics Cluster. Tom had recently initiated an optics partnership with Monroe High School.

After meeting with Tom, he commended my idea for an ophthalmic program, but he explained that Monroe County is the center for precision optical manufacturing in the U.S. Tom and I quickly began to work together. One of the first things he did was to take me on tours of Optimax, Rochester Precision Optics, and Sydor Optics. As a result of the tours, I realized that high schools can be equipped to teach students skills that are valued by potential employers in precision optical manufacturing and engineering.

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*Paul Conrow has been teaching physics at East High School in Rochester for years, and has recently brought optics into his curriculum. Now his students learn not only the lensmaker's equation, but actually learn to make lenses as well!*

have been married to Elizabeth (DeMatteis) Conrow for 13 years and I have five kids; the three oldest attend schools in the RCSD.

I love teaching at East High; many of the joys and challenges of teaching are amplified at East. There is nowhere I'd rather work.

### **OSA-RS: How did you become interested in teaching?**

*Paul:* For as long as I can remember, I thought I'd like to teach, but I wasn't sure what subject. I always enjoyed math and history. When I took Regents Chemistry in 10th grade, I was hooked from the get go by my teacher, Mr. Don Stevenson. The way he unfolded the quantum nature of atoms (s, p, d, f orbitals, etc) and the organization of the periodic table resonated in really powerful ways. I loved learning about chemistry and did well in my

### **OSA-RS: Tell us a bit about yourself.**

*Paul:* I am a Rochester native and East High graduate (class of 1995). East High looms large in the Conrow family. My parents were East High's valedictorian and salutatorian in the class of 1968. Each of my five siblings graduated from East. My youngest sister, Rebecca, had the (mis)fortune of taking my AP physics class in 2003-2004.

I attended SUNY Geneseo and RIT (B.S. and M.S. degrees in Chemistry) before teaching. I



## OSA Foundation Announces Success of Paul Bonenfant Scholarship Fundraising Campaign

The OSA Foundation (OSAF) announced last month the successful completion of the [Paul A. Bonenfant Memorial Scholarship](#) fundraising campaign, surpassing the total fundraising goal of \$190,000. The need-based scholarship will enable undergraduate students enrolled in engineering or physical science programs to attend semester-abroad programs offered through their college or university.

Established in 2011, the scholarship honors the late optical communications expert and Morgan Keegan analyst Paul Bonenfant, a dedicated member of the technical program committee for the Optical Fiber Communication Conference and Exposition/National Fiber Optic Engineers Conference ([OFC/NFOEC](#)) and speaker at OFC/NFOEC for many years. Bonenfant spent his career in various capacities from engineering to investment banking, and recognized the critical need for international experiences to promote global engagement and collaboration and expand an individual's total worldview.

The fundraising campaign was bolstered by an anonymous donor who matched donations up to \$62,000, as well as a [series of 5K runs](#) organized by Kelly Skelton, son of [Lightwave](#) magazine staffer Kathleen Skelton, along with telecom marketing agency Pacific Bridge Marketing and OSA Foundation staff.

"We're incredibly grateful to our industry peers, corporate donors, and individual supporters that have contributed to the success of this campaign," said **Michael Morris**, OSA Foundation Board chair in a prepared statement. "The Bonenfant Scholarship will allow the next generation of researchers, engineers, and physicists to gain important international experience and connect with industry leaders in the global optics community as they prepare for their professional careers."

The first scholarship will be awarded at OFC/NFOEC 2013 in Anaheim, California. For more information about the Bonenfant Scholarship and to make a secure online donation, visit the [OSA Foundation website](#). Attendees registering for OFC/NFOEC 2013 also have the option of including a donation to the scholarship during the [online registration process](#).

## Semrock Produces Eleven-Band Optical Filter

OSA-RS Corporate Member Semrock, a unit of IDEX Corporation, has begun the production of what it says is the world's first 11-band filter, with all the bands having steep edges within a 100 nm wide spectral window.

The filter has high transmission and exceptional blocking outside each of the 11 bands, says the company. The filter was designed specifically to match corresponding formaldehyde fluorescence emission spikes in the 380 to 480 nm wavelength range.

The filter can be used to investigate the homogeneous charge compression ignition (HCCI) combustion process, an internal combustion engine process.

Semrock notes that previously the company was the world's first manufacturer of a five-band filter for multicolor fluorescence applications.

Semrock manufactures optical filters for the biotech and analytical instrumentation industries, as well as innovative optical filters for more general laser and optical systems applications.

## Applied Image Group Acquires Microtronics

Applied Image Group of Rochester, New York has announced the acquisition of Microtronics Inc, of Newtown, Pennsylvania. Microtronics is a manufacturer of glass masks for the optical and semiconductor markets. Masks are primarily used to transfer electro-optical

designs from the glass imaged plates to a silicon wafer.

As [reported](#) by the Rochester Regional Photonics Cluster, all of the Microtronics equipment used



to produce the photomasks has been relocated to the Applied Image facility in Rochester.

With this equipment, the company says it will be capable of designing masks to submicron geometries with 1/10th micron tolerances.

Microtronics will operate as a wholly owned division of Applied Image Group.

## Paul Conrow

*continued from p. 6*

Touring advanced manufacturing facilities really shifted my view on education (in addition to optics companies, I toured Gleason Works, Kodak's film production building, Gorbelt Crane, and Harbec plastics).

High schools need to devote more time and resources to teaching students the skills that will make them productive in the workforce. The current trend in education is toward more standardized testing preparation.

### **OSA-RS: How did you first bring optics to your high school science class?**

*Paul:* The partnership with Tom Battley and the RRPC quickly grew to include MCC. A dual-credit optics course was developed and implemented for the first time in 2011-2012. Students at East High are able to take the first course in the optical technician certification program.

With curriculum help from MCC professors and industry consultants, I was able to spend an entire year teaching optics to high school students. The student responses and results from the first year were favorable.

Right now, East High is bringing a full-blown optical manufacturing laboratory online. There is a separate optical fabrication course. The lab was funded by a grant from the state of New York. The lab has a Rogers and Clark G-150 generator, a YGS grinder (small version of a Blanchard), several bench top grinders, 10 polishing spindles (Yudagawa and Nord), a Bothner edger, a Zygo GPI interferometer, double-sided machines for grinding and

polishing, and a continuous planetary polisher. Students are getting hands-on experience in the manufacturing and metrology of precision lenses.

### **OSA-RS: Did you have any concerns that you were asking more of high school students than they would be able to or willing to do?**

*Paul:* Student response, so far, has been mostly positive. Students want to be challenged. Students want real responsibility and duties. The courses in East High's optics program give students the opportunity to make and test precision lenses and finish prescription glasses – products that will be used by a real end user or customer. This has been a great motivator to students.

My primary concern is that U.S. high schools are not giving students enough time to develop specific technical skills demanded in the marketplace. This program seeks to give students what I call 'resume-worthy skills.' Resume-worthy skills directly benefit students and employers. Students become more marketable job seekers and employers have partially trained new hires. We determined the most critical resume-worthy skills by forming partnerships with local industry experts.

### **OSA-RS: How has the optics program met your expectations so far?**

We are still very early in the program development. The optics program is in its second year. The precision fabrication and ophthalmics courses are offered for the first time this year. Any impressions and evidence, so far, are anecdotal, but this first wave of kids going through the program are creating a lot of memorable moments.

Developing this program has been more challenging and rewarding than I expected or could have imagined. The main challenge is straightforward: I have had to learn principles of optics and the techniques of machining while simultaneously figuring out how to teach them in a way that is accessible to high school students. I expected that there would be "on the job" training for me, but I had no way of knowing exactly how much. The only way that I have been able to pull this off is through the enormous amount of support, advice, and assistance that I have received from industry partners. Jim VanKouwenberg, from Optimax, deserves special recognition for his efforts. He is a consultant instructor for the precision fabrication course. I am learning, along with the students, so much about optical machining and testing from him.

I knew that there would be uncommon rewards in this program. The school is developing something that benefits a broad range of students. Students near the top of the class academically and students who have not had much success in high school are engaged and enthused about the work. I hoped this program would attract students from a wide-range of levels and interests. I expect that the program will continue to appeal to a large cross-section of students.

In order to get our lab up and running, the students needed to create test spheres. These are the reference lenses used to check the quality of each lens that we will make in the future. Test spheres must be more precise and fully characterized than anything else we will fabricate. Lattrell, a very

*continued on p. 10*



## Passings

### Herb Graf

Herbert H. Graf, who was employed by the University of Rochester as an applied research optician for forty-three years, died suddenly on January 14<sup>th</sup>, 2013, aged 89 years.

Graf was graduated from Edison Technical High School and worked at Delco and Bausch & Lomb before joining the University in 1943.

A avid hunter, fisherman, golfer and bowler, Graf was predeceased by his wife of 52 years, Elizabeth Tulley Graf, and is survived by four children, five grandchildren and four great-grandchildren.

Donations in Graf's memory may be made to the Riedman

Foundation (memo: [Powder Mills Park Fish Hatchery](#)), 45 East Avenue, Rochester 14604.

### Bryce Bayer

Bryce Bayer, the Eastman Kodak scientist often called the "father of digital imaging", died in November 2012 in Brunswick, Maine, aged 83 years.

In 1974, Bayer invented what is now called the 'Bayer Filter', a pattern of red, green and blue filters that allows CCD and CMOS sensors that cannot distinguish colors to capture color images. This invention was granted US Patent 3,971,065 in 1976.

While at Kodak, Bayer also made significant contributions to other areas of digital

photography, including storage, enhancement and printing.

In 2009, Bayer was awarded the Royal Photographic Society's Progress Medal 'in recognition of any invention, research, publication or other contribution which has resulted in an important advance in the scientific or technological development of photography or imaging in the widest sense.' In 2012, he received the first Camera Origination and Imaging Medal from the Society of Motion Picture and Television Engineers .

Bayer retired from Kodak in the mid 1990s. He is survived by his wife Joan, sons Douglas and David, daughter Janet, sister Margery Parks, and three grandchildren.

## RIT Center for Imaging Science Hall of Fame Induction Ceremony

The [Chester F. Carlson Center for Imaging Science](#) of Rochester Institute of Technology honored notable scientists during its annual Imaging Hall of Fame induction ceremony on January 16<sup>th</sup>.

One of the honored scientists was keynote speaker Ray Jayawardhana, the Canada Research Chair in Observational Astrophysics at the University of Toronto, who gave a talk entitled "First Glimpses of Alien Worlds."

Jayawardhana uses many of the world's largest telescopes to explore planetary origins. An award-winning writer, he has published articles in *The Economist*, *New York Times* and *Scientific American*. Jayawardhana is also the author

of the popular book, *Strange New Worlds: The Search for Alien Planets and Life Beyond Our Solar System*.

The Center also honored John Schott, the Frederick and Anna B. Wiedman professor of imaging science, for his dedication and accomplishments. Schott has been a faculty member in the Center for Imaging Science since 1981, and will step down from his tenured position in June 2013, though he will continue to conduct research and advise students as a research professor.

Each year, the Imaging Hall of Fame enshrines a selection of scientists whose work has impacted the field of imaging science.

This year's inductees join over thirty scientists named to this honor since the Hall of Fame was established in 2006.

## NASA awards RIT \$1.1 million for detector research

The National Aeronautics and Space Administration (NASA) has awarded Rochester Institute of Technology \$1.1 million to advance a new family of large format infrared detectors grown on silicon wafer substrates—Raytheon Visions Systems' breakthrough technology in detector development. The RIT-Raytheon detectors are expected to support future NASA missions to understand the nature of dark matter and dark energy and to find Earth-like exoplanets.

Last year, RIT won a \$1.2 million grant from the National Science Foundation (NSF) for a similar collaboration between the Center for Detectors and Raytheon. The NSF award supports research advancing infrared detector technology for use on ground-based telescopes.

## Paul Conrow

continued from p. 8

amiable senior, generated, ground, and polished one of the first test spheres. His convex part was the first we looked at with the interferometer. On the first pass with the interferometer, we had solid evidence that Lattrell's part is a "1/10th of a wave" optic. It was exciting to see the image and data appear on the computer screen. It confirmed that the equipment in the fabrication lab can generate industry quality parts. Of course, Lattrell did not fully appreciate the result on the screen – he will as gets more experience – but he could tell that Jim Van Kouwenberg and I were wildly excited.

**OSA-RS: Paul, thanks for speaking with us about your innovative efforts to bring optics into the high school. Do you have any parting comments?**

This is my 12th year teaching and I have had a lot of conversations, big and small, with students over the years.

This year, I am having some of the most rewarding and important conversations of all. I am talking to students about careers, jobs in industry, how to translate experiences in high school to the work force and to college. Students understand that they are performing exercises and experiences in optics that are valued by potential employers and professors.

Although this program is geared toward optics, this type of close collaboration between industry and high school can and should be replicated whenever and wherever possible. ■



Student in Paul Conrow's Optics Laboratory at East High School.



**Ready to join the Rochester Section of the OSA?!**

Go to <https://osarochester.wildapricot.org/membershipform.html>

**Did You Know ...**

that Stefi Baum, director of RIT's Center for Imaging Science, and Chris O'Dea, professor of physics, had an image chosen as one of the [Best Astronomical Images of 2012](#) by Slate magazine?