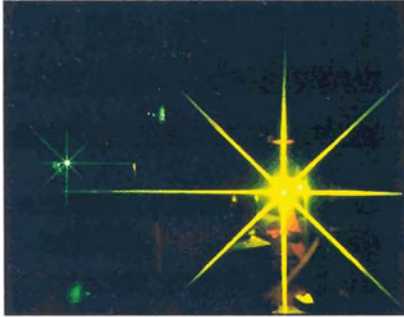


# CREOL

"A Newsletter Published By UCF's Center for Research in Electro-Optics and Lasers"

# HIGHLIGHTS



Summer 1991

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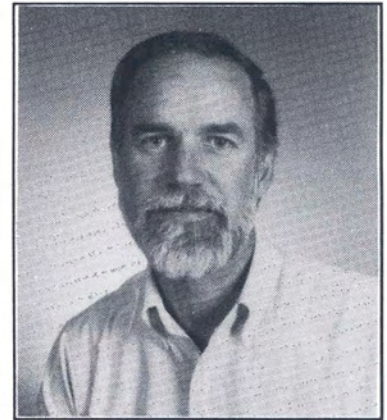
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## Van Stryland Named UCF Distinguished Researcher of the Year

Eric W. Van Stryland, Professor of Physics and Electrical Engineering and CREOL faculty member, has been named the UCF Distinguished Researcher of the Year.

Professor Van Stryland, who has been at CREOL for four years, received his PhD from the University of Arizona in 1976 in Physics/Optics, and was a part of the nonlinear optics group at North Texas State University prior to coming to UCF.

CREOL Director M.J. Soileau presented the nomination for this prestigious award, citing Professor Van Stryland's contributions in the field of light-matter interaction. In particular, he has developed an experimental technique, called the Z scan, to measure the physical parameters governing multiphoton absorption and nonlinear refraction. He and his group have also implemented a theoretical framework for these phenomena.



*Eric W. Van Stryland*

In addition to the fundamental importance of this research, practical applications have also resulted, with the award of a patent and technology transfer to a Florida industry, Schwartz Electro-Optics, in process.

Professor Van Stryland's professional stature is evident in his list of publications, invited presentations, and appointments to Editorial Boards. The importance of his work can be judged by the array and scope of funding granted by national and corporate sponsors, including the NSF and the U.S. Army.

In spite of his research schedule, Professor Van Stryland maintains a strong commitment to education. He has served as chair of fund raising for Educator's Day at the national OSA meeting, on the OSA Education Council, and as advisor to the Florida student section of the OSA. He also headed the CREOL contingent and obtained NSF funding for the collaborative seminar with the Australian Defence Science and Technology Organisation.



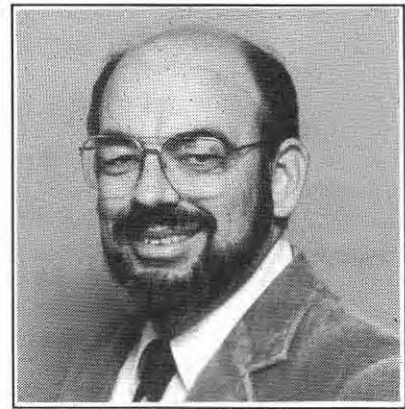
## Director's Corner

Summertime at universities is supposed to be a slow period with fewer students about, less pressure and more places to park. Not so around here! As I came in to work this summer Sunday morning, I found the CREOL conference room filled with graduate students engaged in a mammoth study session, and faculty members busily preparing their inputs to two major multi-investigator proposals. Our normal complement of graduate students has been supplemented by a group of eager undergraduates taking part in Dave Hagan's "research experience for undergraduates" program. Parking on campus seems as crowded as ever as students fill all available classes. Whatever happened to those lazy days of summer?

Dave Hagan's summer program for undergraduates is proving to be a great success. Part of the program involves a lunchtime seminar series (called "Lasers with Lunch") by the CREOL faculty. The idea is to gear the seminars to the undergraduate science and engineering students in Dave's program. It is proving to be a

great way for the faculty, research staff and graduate students to find out what's going on at CREOL. The seminar room is usually filled to capacity for these talks.

We are all happy and proud that one of CREOL's own, Eric Van Stryland, was selected Researcher of the Year at UCF. This is well-deserved recognition for Eric and his collaborators. Their work on the measurement and understanding of the nonlinear optical properties of materials is a major contribution to the field. Eric is quick to point out that the success of this project is due in large measure to teamwork. And speaking of teamwork, I want to publicly thank Eric for his contributions to the larger CREOL team. He does yeoman duty on key CREOL and Department of Physics committees; he is always willing to change his teaching plans to ensure that the right courses are available to the students (who are ever-present in his office); he has been a major factor in our recruiting success; he often hosts social gatherings to honor distinguished visitors, students, or simply to build camaraderie in



*Dr. M. J. Soileau*

the Center; and he is working with Martin Stickley in planning the new CREOL laboratories. Atta Boy Eric!

We are pleased to welcome the "fall crop" of new graduate students (see page 4). We are particularly pleased to see that we are now getting good students from schools with established optics programs such as the University of Arizona, University of Rochester and the Rose-Hulman Institute. Selected from over 325 applicants, the class of '91 sports an average GPA of 3.7. Happiness for faculty is access to top students!  
—M.J.

## Progressions

**DR. PAUL BEAUD**, from the Institute of Applied Physics at the University of Berne, Switzerland, has joined CREOL as a Visiting Scientist. He will be working with Professor Martin Richardson in the Laser Plasma Laboratory as a Fellow of the Swiss National Foundation, concentrating on the development of new techniques for the generation and amplification of intense ultrashort laser pulses in new solid-state laser media. Dr. Beaud received his PhD from the University of Berne in 1988 in femtosecond laser technology. His major research activities have concentrated on the generation and application of femtosecond pulses in the infrared and on nonlinear pulse propagation in optical fibers. Recently

he demonstrated a rather simple stabilization technique applicable for synchronously pumped lasers, which significantly improves the stability and the mode locking of these lasers.

In August **DR. XINXIONG ZHANG** will be joining the laboratory of Professor Michael Bass to work on solid-state laser materials, spectroscopy, and laser properties. Dr. Zhang comes to CREOL from Boston College, where he received his PhD in Physics under B. DiBartolo studying spectroscopic aspects of ruby. His MS and BS degrees, both in Physics, were earned at Xiamen University in China.

**DR. MARC HIMEL**, Research Associate in Professor Karl Guenther's group, has accepted a

position as Resident Visitor at AT&T Bell Laboratories. He will be working on the x-ray lithography project headed by Dr. John Bjorkholm.

**DR. MARTIN STALDER**, Research Associate in Professor Michael Bass's laboratory, has returned to his native Switzerland.

**DR. ALI SAID** has received his PhD under Professor Eric Van Stryland. His thesis was entitled "Development and Application of a Nonlinear-Optical Characterization Technique." For the present Dr. Said will remain at CREOL on the research staff.

**EDWARD MIESAK**, technician in the laser damage group of Professors M.J. Soileau and Eric Van Stryland, has received his BS in Electrical Engineering.



