

Ares Rosakis and Guruswami (Ravi) Ravichandran are shown here in the newly renovated Charles C. Gates Jr.-Franklin Thomas Laboratory's Division Chair office.



Dear alumni and friends of the Division,

After six and a half successful years, Ares Rosakis, Theodore von Kármán Professor of Aeronautics and Mechanical Engineering, has stepped down as the Chair of the Division of Engineering and Applied Science (EAS), and Guruswami (Ravi) Ravichandran, John E. Goode, Jr., Professor of Aerospace and Mechanical Engineering, has been appointed as the Otis Booth Leadership Chair, effective September 1, 2015.

Since becoming Division Chair in 2009, Professor Rosakis has overseen many notable accomplishments, including a major restructuring of the Division in 2010 and the creation of a new department, Medical Engineering, in 2013. This restructuring has enhanced the Division's effectiveness in a variety of areas, including teaching, research, recruitment, technology transfer, and fundraising. One mark of this enhanced effectiveness is that Caltech attained the top position in the *Times Higher Education* world university rankings in the subject area of engineering and technology for multiple years under Professor Rosakis's leadership. Another measure is in the number of EAS faculty who have received prestigious academic honors and awards, including membership to national and international academies.

I had the opportunity to sit down with Professors Rosakis and Ravichandran during this exciting time, and I asked Professor Rosakis what he hopes to be remembered for. He said, "I am proud of the very talented and promising faculty who have been hired during my tenure. As preeminent engineers and applied scientists, they are continuing the EAS tradition of serving as strategic interfaces within Caltech and with the rest of the world." He added, "I am very pleased by the results of our fundraising efforts, which amounted to over \$200 million during my tenure as Division Chair. I am also delighted that one of my last philanthropic successes was working with Foster and Coco Stanback to bring to fruition a magnanimous gift to establish the Center for Autonomous Systems and Technology."

Professor Ravichandran joined the Caltech faculty in 1990 and has served as the Director of the Graduate Aerospace Laboratories (GALCIT) since 2009. He has received numerous honors and awards, with the most recent being his election to the National Academy of Engineering in 2015. On the subject of his first steps as Division Chair, Professor Ravichandran shared that he "would like to understand the needs and aspirations of the Division and continue many of the initiatives Ares started, including diversity hiring, building renovations, and providing seed funding for groundbreaking early-stage research."

The Division will continue its efforts to engage the alumni with special events such as a full-day Electrical Engineering symposium at Caltech on Saturday, January 30, 2016. "We are extremely proud of the alumni achievements and would like them to know that we continue to attract outstanding faculty and students who are performing cutting-edge research and inventing the world that is yet to be," said Professor Ravichandran.

I asked him to share his vision and plans as the new Division Chair. "I will advocate for and articulate the vision for the Division to advance the interests of the faculty and facilitate achievement of their aspirations," he explained. "I will promote the EAS Division through further collaborations within Caltech and JPL while maintaining our identity as engineers and applied scientists. The alumni and friends of the Division play a key role in our success, and I am looking forward to being actively engaged with them, because they are our best advocates and champions." He added, "I want the Division to be a vibrant place and a world leader in undergraduate and graduate education, research, mentoring, technology transfer, and outreach—a Division that is diverse, inclusive, and unified! We need to attract the best minds in the world, whether it be faculty, students, or staff. These minds, in combination with our unique ability to drive advances that benefit humanity through basic research, will guide us in remaining at the forefront of the technological revolution."

I anticipate another era of success in the coming years as the Division continues its trajectory under Professor Ravichandran's guidance. Please enjoy exploring the pages of this issue of *ENGenious* for a glimpse of recent news and research highlights, as well as our special feature on the Computing + Mathematical Sciences department—an outstanding group of faculty with a drive to produce foundational advances in computing and mathematical sciences that hold the promise of lasting impact on future technologies.

As always, I look forward to receiving your thoughts and comments.

Trity Pourbahrami
Editor, *ENGenious*