School of Mathematical Sciences

COS Dean Appointment

Dr. Sophia Maggelakis was appointed permanent dean of the College of Science in March 2010, after serving as interim dean during the past 2009 academic year. SMS congratulates Sophia and looks forward to her continued leadership and contributions on behalf of the COS and the Institute.

Dean Maggelakis was born in Greece and early on developed a keen interest in the biological sciences. She had initially planned to attend medical school after completing her secondary education in Greece. Sophia came to the US to visit her uncle who lived in Virginia Beach. He convinced her to stay to attend university there and to keep him company. Sophia decided to try it and began her undergraduate studies at Old Dominion University in Norfolk, VA. As part of her undergraduate program she became deeply interested in mathematics and computer science. She earned her BS in mathematics with a minor in Computer Science.

It was during her graduate studies that she discovered a love for academia. Never losing sight of her interest in the biological sciences,

Sophia turned to math modeling of biological phenonema and found it a perfect complement to both of her interests. She was awarded her doctorate in applied and computational mathematics from Old Dominion University, where her PhD research addressed mathematical models of tumor growth.

Sophia remained as a postdoc for one year to continue her research. She also worked on models that included capillary growth, retinophathy, and wound healing. It was then that she met her husband, Dr. Andreas Savakis, who was researching in the area of imaging with funding from the Eastman Kodak Company. Eventually opportunities brought them to Rochester, NY. (Dr. Savakis is currently department head of Computer Engineering.)

Dr. Maggelakis joined the Department of Mathematics and Statistics in 1990. She served as department head from 2001 to 2006 and in 2006 formed the School of Mathematical Sciences which she continued to lead. The formation of SMS broadened the department

areas of study to include the Center for Applied and Computational Mathematics and the Center for Computational Relativity and Gravitation. She also launched the Summer Math Institute, SMI, in 2008. This program is a collaborative effort between local area high school teachers and SMS. Its charter includes approaches to enhance future undergraduate successes in mathematics.

Sophia is deeply devoted to students. Not surprisingly, she was a recipient of RIT's Eisenhart Award for Outstanding Teaching. Being passionate about improving student successes, she led and implemented new approaches to the engineering and science calculus curriculum, championing the project-based calculus series.

Dean Maggelakis has an unwavering passion for excellence, respect for faculty, staff and students. Her ability to foster collaborative efforts and her dedication to leadership principles will help shape RIT's commitment to world-class teaching and research.

New Faces in SMS

Lecturer Olga Tsukernik

Professor Olga Tsukernik accepted the position of SMS Lecturer in 2009. Olga studied physics and mathematics at the University of Yerevan in Armenia where she received a Masters of Science in optics and mathematics. Her professional interests include Math Education and Pedagogy. She attributes her passion for education to the excellent math teachers she encountered and has always been grateful for teachers who have a genuine interest in teaching.

Olga moved to Israel with her husband in 1991 where she taught mathematics. She received her teaching certification and worked in high school secondary education for eleven years. She became an assistant Principal and worked at a center of education to instruct high school teachers.

Olga moved to Rochester in 2001 with her family and has been a part of our community since then. Her interests include history, but first and foremost, raising her children. She is a very proud mother and takes much joy in their accomplishments.

SMS is grateful for her contributions to both our department and our students.

International Visiting Research Scholar

Dr. Miguel Sama is visiting the School of Mathematical Sciences at RIT from 1st March 2010 till 1st July 2010. Dr. Sama is recipient of a prestigious grant of Spanish Government entitled "Abroad Mobility Stages 'Jose Castillejo' for Young Ph.D's."

Dr. Sama received his Ph.D. in 2007, and is affiliated with the Departamento de Matem´atica Aplicada, Universidad Nacional de Educaci´on a Distancia, Madrid (Spain). Dr. Sama's research interests are in set-valued and non-smooth optimization and their applications to optimal control and inverse problems. In recent years, Dr. Sama has brought substantial improvements to optimization theory by introducing new existence conditions for the notion of contingent epi-derivatives, a fundamental differentiability concept in non-smooth and set-valued optimization. He has also introduced a radically innovative scalarization technique and employed it to prove new optimality conditions and Lagrange multipliers rule.

Dr Sama has published numerous papers of very high scientific quality in important research journals such as Positivity, Mathematical Analysis and Applications, Set-valued Analysis, Nonlinear Analysis, and others.

During his stay at RIT, he is working to develop a new tumor identification model by using the techniques from non-smooth optimization. His collaborator and host at RIT is Dr. Akhtar A. Khan.

Staff Council Award Recipient Anna Fiorucci

It's safe to assume that when Anna Fiorucci learned she had won a 2009 RIT Staff Council Award, she hugged a few people... well, actually, a lot of people. As anyone who has passed by her door knows, be they students, alumni, staff, or faculty, Anna hugs a lot of people. In the nine years she's been at RIT, it is unlikely that any member of the School of Mathematical Sciences, past or present, hasn't ended up on the receiving end. It comes as no surprise then, that at the award ceremony she was thanked for her "strong desire to improve the world around her by making it a happier, less stressful, more cooperative, friendlier place."

When she came to RIT in 2001, she says she had little experience with the ins and out of the workings of a Math Department. "I still don't know what calculus is, but my skills are people skills." Indeed, interacting with students remains her favorite part of the job.

As the Staff Assistant for the SMS Student Support Office, she says it is the exposure to the students and faculty that she finds most rewarding. "The students here are a constant source of positive energy for me." Her advice for current students and those who have graduated is simple: "Students who are successful at RIT are not afraid to get to know people. It's important to form a bond with someone, to whom you can turn when you need help. To so many of us, you're not a number, you're a real human being."

Though graduation is something of a bittersweet time, as the students with whom she's grown close leave to pursue their futures, Anna manages to stay in touch with a tremendous number of alumni through e-mail, Facebook, and other means. "They send me wedding pictures, baby pictures...", she says, pointing to the photographs along her office walls. Even during the course of a short interview, two alumni managed to stop by for a visit.

It is this community through time that has made RIT such a special place to work, she says. "There are not many jobs where you get recognition like this. Getting this award meant a lot to me. The feedback I got from everyone after the news was wonderful. It's much more than you get from 95% of the jobs out there."

Congratulations from the entire SMS family to Anna!

Outstanding Undergraduate Scholar

Christopher Thomas is a 5th year BS/MS Computational Mathematics student in the School of Mathematical Sciences. He is from Kinderhook, New York where he attended Ichabod Crane High School. After graduating, Chris enrolled in Hudson Valley Community College for two years before transferring to RIT. In addition to holding a high GPA since arriving, Chris conducted research working with Professor Matthew Coppenbarger on the complete analysis of a finite game based on the familiar Tic-Tac-Toe game and the rules of a Magic Square. Moreover,

Chris has worked with Professor Anurag Agarwal studying "Continued Fractions and Using the LMM Algorithm for Solving Pell Equations," a topic in number theory. He has presented his research at the MAA Seaway meeting.

He has also been the recipient of the RIT Achievement Scholarship, an inductee of Pi Mu Epsilon, and was announced as a John Wiley Jones scholar last year. Chris has worked as a teaching assistant for the calculus courses and served as a mentor for the freshmen in the School of Mathematical Sci-

ences. He is particularly interested in Number Theory, Abstract Algebra, and Cryptography and plans to attend grad school in pursuit of his Ph. D.

Although Chris is a very accomplished student, his interests extend beyond mathematics. Chris enjoys playing a variety of sports such as racquetball, tennis, baseball and many video games. He's also quite the history buff!

SMS 2010 Graduates