President’s Message

The ability to adapt to change is a true hallmark of excellence. So, for the past several years, we at the FEF have supplemented our support system to ensure we continue to prepare our Doctoral Fellows for a changing job market, in which earning the Ph.D. is no longer sufficient to secure employment. To be competitive, today’s doctoral graduate must demonstrate the ability to develop and teach courses, present a manageable and cutting edge research agenda, and publish articles in respectable journals prior to graduation. You will read in this edition of the Focus stories detailing our efforts to help Fellows meet these challenges, by connecting them to senior editors of journals, such as renowned scholar Dr. Rangachar Kasturi, and editors of commercial and university presses. Our goal is to help students understand the entire publication process and introduce them to industry professionals.

Before they publish, however, we are keenly aware that our Fellows must develop significant material to write about, and so we require them to conduct research that addresses important issues affecting our nation. You will read here about Alejandro Diaz, one of many Fellows who are meeting that mandate, who works to fine-tune techniques for enhancing communication skills in autistic children. According to experts, “...about one in three people with autism has trouble producing speech sounds to effectively communicate with others.” Alejandro’s innovative research promises to help alleviate this impediment.

Our innovation does not end with the Ph.D. program. You will also read here how our new middle and high school CodeMasters program has not only enhanced exposure to science, technology and mathematics, but also provides opportunities for underserved students to learn how to write code to develop games, animate drawings, and program robots. And, even more important, since most school districts do not teach computer programming, we are helping fill a critical educational gap for poorly funded schools.

We succeed at our mission because we invest in human capital by helping develop the intellectual capacity of the people we serve, even when others do not. In turn, our people become the means for maintaining, implementing and expanding our programs.

This edition’s stories about former Junior Faculty Fellow Dr. Sylvia Thomas’s rise from Assistant Dean to tenured Associate Professor and about four former National Achievers who now direct our Centers of Excellence provide vivid examples of this sustaining impact of developing our own human capital.

In closing, although our environment continues to create usual and unanticipated challenges, we rise to the occasion to address our most pressing concerns with experience, imagination and the will to succeed. We continue to survive and achieve because of our commitment to excellence.

Commercial and University Press Editors Offer Fellows Publication Advice

At all McKnight conferences, a paramount goal is to help Fellows enhance their marketability and impact, with an emphasis at the Summer Research & Writing Institute (SRWI) on strengthening scholarly writing skills and thoroughly explaining the publication process. To meet this goal, FEF recruited two highly respected publishers, Ms. Lynne Rienner and Dr. Carey Newman, to discuss the submission process at commercial and university presses at the 2016 SRWI.

Rienner founded Lynne Rienner Publishers, an independent commercial press, in 1984, after a number of years on staff at other publishing houses. Her company, respected for its peer reviewed scholarly works, publishes books, textbooks and two journals in international studies, comparative politics, U.S. politics, sociology and criminology.

She launched the SRWI discussion by first advising the audience to personalize their contact with publishers by addressing specific company representatives identified on websites, at conferences, and even from the prefaces of their favorite books. She then encouraged them to be sure to prepare their proposals pursuant to publisher guidelines and present themselves to publishers as writers rather than graduate students. “I want an author who is an expert that presents a question I want to know the answer to,” she said. “Be prepared to tell the publisher the concise question you are exploring and why your approach is significant.”

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Early in life, most of us become aware of our own predilections. For Sylvia Wilson Thomas, growing up in the college town of Itta Bena, Mississippi, one of those early revelations was her love for math. A penchant for the discipline ran in the family. Her father taught university-level math, her mother taught math in K-12, and together, they established the foundational importance of education in the family.

At her father’s urging, Thomas spent her last two high school summers at a pre-engineering program at Vanderbilt University, where she later earned her bachelor’s and master’s degrees in electrical engineering. After a number of positions in private industry as well as recruiting for the GEM fellowship program at the University of Notre Dame, Thomas earned her Ph.D. in electrical engineering, specializing in materials, at Howard University under an NSF-sponsored fellowship.

Today, she is an Associate Professor in the College of Engineering at the University of South Florida, where she focuses her research primarily on the investigation of advanced materials for bio (biomedical, biological) and electronic device integration to meet global technological challenges. She leads the Advanced Materials and Bio Integration Research (AMBIR) team, which specializes in fabricating, characterizing, and studying the properties and fundamental applications of polymeric nanofiber systems, nanolaminate and thin film interactions, and integrated bio and device systems.

Dr. Thomas has brought more than $3.2 million in funding to the University and credits her 2011 McKnight Junior Faculty Development Fellowship with making it possible for her to submit 11 research proposals that year, the most in the College of Engineering. She holds seven patents and one patent pending and has published at least 17 articles plus three in preparation and another submission under review. Additionally, she has contributed to six books or book chapters, three as first contributor.

Even with her full research agenda, Dr. Thomas makes time to provide invaluable guidance to her students, whom she refers to as her children. For those efforts, in 2015, the same year she earned tenure, Thomas won the USF Graduate Faculty Mentor Award, just one in an extensive list of her honors and awards, which includes being the first female chair of the FEF Board of Directors.

Thomas commutes to her USF office from the Orlando home she shares with her husband and two teen sons, Jakobe and Armani, and says the 75 minute trip is her therapy time, when she collects her thoughts and sets her priorities for the day. "I am a quiet optimist. I find the positive in everything." Despite her determination, there are times when Thomas feels overwhelmed, and that is when she resolves to be at peace with her efforts, "to live another day."

One such challenging time was when she applied for tenure. "A lot of things are out of your control during that life changing experience," according to Thomas, "but there are at least three constants, three things a person can do, in the tenure process: 1) learn and adhere to the measurable guidelines and objectives; 2) work with a mentor, whether a peer or a colleague; and 3) make sure your plan includes both the research group and your family. Everyone must understand the goal."

Prior to applying for tenure, Dr. Thomas served as Assistant Dean for the USF College of Engineering. Reflecting on her path, she advises "...if you are going tenure track in academia, make sure tenure track is part of your offer and do limited academic administration. If your future career goal is academic administration, I recommend you start with a tenure track position." Thomas also recommends activities such as service on a strategic planning committee or the faculty senate, which facilitate learning experiences without the burden of full responsibility.

In a few years, once her sons go to college and are independent, she will return to administration with tenure. There is no doubt, however, that as an administrator and in as many other ways as possible, she will continue leading by example and mentoring her diverse, extended family of students.

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Dr. Sylvia Thomas: A Leading Scholar with a Mother’s Heart
Newman’s similar advice to prospective authors is to be ready to explain in three succinct sentences what the book is about, what the argument is, and why the argument is important. “When you can describe it in three sentences, you have everything; if you can’t, you have nothing,” added Newman, Director since 2013 of Baylor University Press, which introduces thirty new books yearly in the areas of social criticism, literary criticism, cultural studies, sociology, rhetoric, political science, history, and popular culture.

Publishers are hungry, opined Newman. “Our job is to be found by potential authors who can briefly and clearly present their work so we can determine fairly quickly whether it meets our criteria.”

“We also want to feel that you believe our press is the best one to publish your work and are ‘courting’ us alone,” Rienner said. “Ninety percent of academic publishers don’t accept work submitted to other publishers,” she noted. So, be mindful of the impression you make. For example, when meeting in person, do not hand the editor your manuscript from a stack of identical packages.

Once under contract with a press, writers should cultivate good chemistry with their editors, Rienner and Newman agreed, and that starts with letting the editor drive the conversation and always meeting deadlines. Writers should also learn about their editors’ idiosyncrasies. Will you be on a first name basis or more formal? What is the editor’s preferred mode of communication, email, mail, or phone? To what extent does the editor want or expect to collaborate on the project?

Even more importantly, writers must realize that they and their publishers are on the same team and act accordingly. “When we’re working with writers, one of the biggest problems we see is the defensive rhetoric in their responses,” noted Newman. Instead of seemingly taking publishers’ reviews as insults, writers should view them as constructive criticism and respond diplomatically. They must recognize that, at times, editors will misunderstand the work, and in those cases, they will need to present a clearer or different explanation.

SRWI attendees overwhelmingly enjoyed the open format discussion, citing Rienner and Newman for their lively, informative banter and willingness to disagree amicably to highlight competing views within the industry.

After the discussion, Rienner and Newman continued counseling McKnight Fellows in several personal consultations, during which they posed questions to gently prod their prospective clients to the next logical step in a pre-publication process that can take years. “Why is your book different from everyone else’s?” “Is your book theoretical or topical?” “Are you targeting researchers, clinicians, or lay people?”

Fellows praised the consultations as educational and challenging, and most workshop participants agreed that including perspectives and guidance from commercial and university publishers added value to the Institute.

McKnight Fellow Alejandro Diaz Works To Help Autistic Children Speak

For even the most promising doctoral student, the process of earning a Ph.D. can be daunting. So, like other McKnight applicants with stellar records and glowing recommendations, Alejandro Diaz sometimes doubted himself. Then he remembered a lesson from mountain biking. “I learned to focus on what was in front of me, not on the obstacles. Don’t pay attention to what’s on the side; it could be a snake or a cliff. If you focus on what is in front of you in that moment, other things become irrelevant. You start to overcome things.”

The oldest of three siblings of Cuban and Mexican descent, Alejandro grew up in New Jersey and Florida. He describes learning as an “addiction” that motivated him to pursue higher education.

In college, as a psychology major and behavior therapist, Alejandro became fascinated with applied behavior analysis, a specialization of psychology then in its infancy. He could hardly believe how well it explained behavior, and he saw developmentally disabled children treated with the newer therapies make amazing progress. At the same time, he noticed that certain elements of the treatment were inefficient and lacked a foundation in empirical evidence.

He had found a gap in the literature, which he intended to bridge in graduate school.

Alejandro is now in the dissertation stage of his doctoral studies, investigating procedures to increase vocalizations in children with autism. “With kids, if they can be reached at a younger age, the long term impacts are huge.” Alejandro believes his assessment of interventions will result in procedures that are effective sooner, so children can build critical communication skills earlier.

He credits McKnight with helping him through his Ph.D. journey. Even more than its financial support, Alejandro praises the Fellows, staff, and conferences that brought everyone together. “I feel as if I’ve been given so much through the program that it is my responsibility to grow so that I can give back.”
For more than twenty years, Dr. Rangachar Kasturi had been at Pennsylvania State University, rising from assistant to full professor, earning research and mentoring awards, and expanding his Institute of Electrical and Electronics Engineers (IEEE) responsibilities, editing its journals and chairing conferences. Notwithstanding these attachments, in 2003, Kasturi made the difficult decision to accept a position at the University of South Florida, as Douglas Hood Professor and Chair of Computer Science and Engineering.

The decision was vintage Kasturi, illustrating his penchant for challenges, willingness to sacrifice, and love for learning and teaching—traits that helped propel his success. Among his many accomplishments, Kasturi is an author of the textbook *Machine Vision* and has published numerous papers and research reference books. He is President Emeritus of the IEEE Computer Society, past President of the International Association for Pattern Recognition, and a Fulbright scholar. A Fellow in both the former organizations, he has served as Editor-in-Chief of two of the most prominent journals in his field and as vice president of IEEE’s publications board, with responsibility for 23 periodicals. He also has supervised nearly 50 theses and dissertations, sharing with students the same advice he has presented to McKnight Fellows at FEF’s Summer Research & Writing Institute (SRWI) since 2010.

After each SRWI, including the most recent one last July, McKnight Fellows and USF students have praised his presentations, described by one student as “how research translates to paper.” His discussions encompass questions a dissertation should answer, effective technical writing style, essentials for theoretical and experimental papers, formatting the dissertation proposal, and the useful information omitted in most papers.

In his office two days after the 2016 presentation, Kasturi was characteristically genial as he talked about his life and career. He was born into a family of teachers in Bangalore, India, and by age four was accompanying his mother to her school. Early in life, going to school became routine for him. Always interested in teaching, Kasturi tutored other students even as a youngster. At 14, he began pre-university classes, equivalent to twelfth grade, in engineering. Kasturi’s interest in teaching continued; he even practiced making engineering presentations, and in 1968, he earned a bachelor’s degree in electrical engineering at the age of 19.

Kasturi spent the next ten years in the workforce, primarily at Bharat Electronics, where one of his tasks was to redesign walkie-talkies using new digital chip technology. To this day, Kasturi still incorporates concepts he learned in that process into his logic design classes. Similarly, a job building electronics for museum exhibits hinted at later work in artificial intelligence. Although he valued those experiences, Kasturi still wanted to teach, so in 1978, he moved from southern India to Lubbock, Texas, to attend graduate school at Texas Tech University. The U.S. system felt very different, but the real shock was returning to school after a decade in the workforce. Once the youngest, there he was the oldest student in his classes. Also, until then, as a student and professional, he had rarely been required to write technical articles.

Because of his interest in new technologies, Kasturi took a course in laser optics, and Dr. John Walkup, founder and director of the Optical Systems Lab, became his advisor. Kasturi credits Dr. Walkup’s mentoring and writing requirements with helping him learn technical writing. Shortly thereafter, in 1980, Kasturi completed his thesis in multiplex holography. For his dissertation, he switched to image processing and analysis and, in 1982, earned his doctorate. He also landed his job at Pennsylvania State University. Kasturi ultimately produced five articles from his dissertation and presented one at the very first Computer Vision and Pattern Recognition (CVPR) Conference in 1983. That presentation marked the beginning of his long association with the IEEE Computer Society.

When he moved to USF, Kasturi helped the Computer Science and Engineering department recruit many new faculty and continued his prolific agenda of research and professional activities. Last year, the IEEE Computer Society presented him with the Merwin Award, its highest service honor. Now, Kasturi plans to shift more of his focus to teaching, especially undergraduates, 110 of whom enrolled in his fundamental computer logic course this fall. Some will go on to pursue high-demand graduate degrees in computer science and will work under Kasturi’s tutelage in his CVPR lab, helping invent technologies to ultimately enhance global security, health, and quality of life.
Pre-College Students Excel in FEF’s 31st Annual Academic Contests

In March 2016, for the 31st year, the FEF hosted academic contests for students in grades 3 through 12 at our Annual State Brain Bowl Championships and Florida National Achievers Society (NAS) Pre-College Summit, primarily to enhance student skill development and academic performance.

Leading up to March and throughout the school year, participants studied, trained and competed in local and regional competitions to earn the opportunity to compete in the state contests in Tampa. On Friday, March 18, the History & Culture and Mathematics State Competitions, featuring 30 regional winning teams, took center stage, as students competed for college scholarships, trophies, other awards and special recognition.

In the History & Culture category, where students answered critical reading questions on the text of college-level literature and history books, the Tallahassee Coalition Center of Excellence (COE) Rickards High team triumphed over several other well-prepared teams to become the 31st Statewide Champions.

In the Mathematics Competitions, now in their 16th year, teams solved mathematical problems that covered number and quantity, algebra, functions, geometry, statistics and probability. At day’s end, the Pasco-Hernando COE’s Girls to the 5th Power and Atlantic Coast COE’s Excel Inch emerged as the 6th through 8th grade and 9th through 10th grade champions, respectively.

Also on Saturday, 9th through 12th grade Achievers from across the State competed in the NAS Voices Speech and Oratory Contest, where each contestant earned points for writing and delivering a persuasive speech on one of the following topics: our privacy is more or less important than national security; information an applicant posts on Facebook should or should not be considered by a college admissions committee; religion is or is not the most common cause of war around the world; or children of illegal immigrants are or are not entitled to a public education. St. Petersburg College COE Achiever Vivica Roberson scored the greatest number of points to win the Contest.

All academic contest winners received trophies and recognition at the Summit awards ceremony, where FEF EVP & General Counsel Lyra Logan also congratulated students and parents chosen as Achievers of the Year, Community Servants of the Year, and Parents of the Year by FEF’s 10 COE Directors.
High School CodeMasters Learn Physics & Math While Developing 2D Games

Since FEF started working with our 100 mostly male middle and high school CodeMasters last fall, many have repeatedly said they want to become game designers when they finish school. But until this summer, they, like many people, had no idea just how much science, engineering, math, and design skill goes into creating the “awesome” games they play on their game consoles, computers and phones every day.

This June and July, in our Game Design++ Summer Camp, we set about to teach them that and much more. Students at Miami Central High and surrounding high-need schools learned game design and development through a project-based curriculum that guided them through building five different two-dimensional games, including one original.

To build the games, they used programming, graphic design, animation and other skills needed for game development and transferable to many other fields. They formed project development teams to create their games, where they worked through the same design cycle engineers use to design bridges and buildings.

They also experienced firsthand how physics and math play a major role in making games playable, incorporating concepts of gravity, acceleration, velocity, speed, trajectory, Newton’s Laws of Motion, force and elasticity, and using math skills to perform calculations, all in a real-world context.

In addition to building games, students spent time each day with a math teacher to shore up those math skills, which resulted in score increases by all participants on the Camp’s pre- and post-math tests by the end of Camp. They also met with college recruiters, talked with STEM career mentors, and visited colleges and STEM-related community venues over the six-week summer.

At the end of Camp showcase, student teams presented their unique games, and most proudly demonstrated the more advanced features, like functions, arrays, and loops, that powered their creations. In addition to displaying games to visitors, students explained how they will be able to apply their newly developed skills to a variety of future computer programming, graphic design, engineering, and science careers.

Middle School CodeMasters Continue Coding through Robotics

After creating animations on the computer all year in CodeMasters After School, middle schoolers in our summer Robotics Camp were thrilled to have the chance to push away from their desks, spread out on classroom tables and floors, and build robots with Lego parts, hundreds and hundreds of Lego parts.

They built alligators and cash registers and transformers and even a dog, none of which, as students soon discovered, could do a single thing until the students got back on their computers to program them. As a student noted, “I enjoyed the break from the computers for the first couple weeks, but I had the most fun with the robots when I saw them do what we wrote code to tell them to do.”

The Miami-Dade Summer Math & Robotics Camp, now in its fifth year, enrolled 37 students from high-need schools.

Participants split their time on Mondays through Thursdays between working with teachers in robotics and math classes and interacting with guidance and career mentors. On Fridays, they toured college campuses and visited cultural and science venues selected by the group.
Four of Ten FEF Centers of Excellence Now Led by Center Alumna

We met them as high-achieving elementary and secondary students, all inducted into FEF’s National Achievers Society (NAS), and some competing for scholarships on Brain Bowl teams representing their Centers of Excellence (COE) at State. We expected even greater achievement from them as they graduated high school and left for college, and they did not disappoint.

Each made high marks in undergrad, both in and out of the classroom, one worked as an Intern for the Congressional Black Caucus Foundation, and all earned or are now pursuing graduate degrees in education, social work, and public administration. Now all have come full circle, as they say, back at the Centers of Excellence, helping sustain and enhance NAS, which they see as a foundation for their current success.

They are Janice Fleuridor, Director of the South Florida COE in Miami; Sakeena Gohagen-Kenton, former state student president of NAS and new Director of the Atlantic Coast COE in Fort Lauderdale; Rasha Daniel, Director of the UCF-McKnight COE in Orlando; and Ronteryl Black, Assistant Director of the Pasco-Hernando COE in Dade City. We asked each to explain her motive for returning to the COE.

South Florida COE’s Janice Fleuridor

Janice Fleuridor joined the South Florida Chapter of NAS in 2001 as a 6th grader and often attended the Annual NAS Summit and competed in the Annual Talent Extravaganza through the years. After graduating high school, she earned her bachelor’s and master’s in public administration, both from Florida International University.

She notes that she values NAS and the COE for the many educational opportunities she received—productive summer learning experiences, college tours, pre-college workshops—as well as the lifelong relationships she developed with people who are now among her most cherished friends and mentors. “As a child of immigrants who were also low income and never went to college, I know I would not be where I am today had I not participated in NAS,” she says.

A major reason Fleuridor decided to come back and work for the COE was her strong relationship with the Director who hired her as a college student. “Ms. Kathy-Ann Lewis was a great mentor to me during and after the program, so I would often come to her office as an FIU freshman. When a position became available to work as a student assistant in 2007, I was more than honored to give back to the program that gave so much to me.”

Atlantic Coast COE’s Sakeena Gohagen-Kenton

Inducted into NAS in 1988 as a 4th grader at the Atlantic Coast COE, Sakeena Gohagen-Kenton led her peers as a math Brain Bowl team captain and as the local and state NAS president during her eight years at the COE. She says she appreciated the Center’s atmosphere, which encouraged her to develop holistically and nurtured many lifelong friendships.

After high school, Sakeena earned her bachelor’s and dual master’s degrees in public administration and social work from Florida State University. At FSU, she worked with the Student Coalition for Justice and served as a national fellow of Young People For, national board member of the United States Student Association, Grassroots Organizing Weekend Trainer, Congressional Intern for the Congressional Black Caucus Foundation, and campus organizer for the Florida State Vote Coalition, where she led the mission to register, educate, and mobilize the university campus in the 2008 election cycle.

She is excited to return home and serve the community that fostered her educational achievement and “strong commitment to positive, sustainable change, civic participation, and electoral involvement of youth and communities of color.”

UCF-McKnight COE’s Rasha Daniel

Rasha Daniel was inducted into the UCF-McKnight COE NAS Chapter in 1993 as an 11th grader. After graduating from high school, she attended the University of South Florida and earned her bachelor’s and her master’s in college student affairs. As COE Director since 2007, Daniel is “honored to help students develop from NAS inductees to college graduates” through the academic, leadership and service programs she implements for the three Orlando-area NAS Chapters.

Pasco-Hernando COE’s Ronteryl Black

Ronerly Black also joined NAS in 1993, inducted at the Pasco-Hernando COE as an 8th grader. During her years in NAS, Ronteryl competed as captain of the History & Culture Brain Bowl team for five years, performed in the Annual NAS Summit Talent Extravaganza, and always led in student fundraising. Her Director, Mr. Imani Asukile, applauds her for remaining a loyal ambassador for the Center and NAS. Ronteryl says she feels privileged to help current Achievers and Believers strengthen their academic and leadership skills.

Upcoming FEF Events

Feb. 24-25, 2017    MDF Mid-Year Research and Writing Conference, Tampa

March 17-18, 2017    32nd Annual Brain Bowl Competitions and Florida National Achievers Society Pre-College Summit, Tampa

Ms. Janice Fleuridor  South Florida COE Director

Ms. Rasha Daniel  UCF-McKnight COE Director

Ms. Sakeena Gohagen-Kenton  Atlantic Coast COE Director

Ms. Ronteryl Black  Pasco-Hernando COE Assistant Director
The FEF’s mission is to strengthen the larger community by creating and implementing programs and services that lead to greater educational advancement for historically underrepresented groups.

For information on how you may support FEF programs, please call 813-272-2772.

201 East Kennedy Boulevard
Suite 1525
Tampa, Florida 33602

Phone: 813-272-2772
Fax: 813-272-2784

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