



Ryan Badman | COSMIC MATTERS

RYAN BADMAN '13 LIKES TO KNOW HOW THINGS *REALLY* work. It may have started when his grandfather, an electrician, gave him a book on electronics when he was a kid, or when his father, Lee, an information technology analyst at SU and a ham radio operator, introduced him to radio waves. "My dad was always building antennas and stuff, and he made me get my ham radio license when I was 12," Badman recalls. Intrigued by the physics of waves, he was drawn to fundamental questions and scientific revelation. While other kids were reading about Harry Potter, Badman was reading about string theory, holographic universes, and dark energy.

Despite an interest in world history and a knack for playing the accordion, it was inevitable he would study physics and math. Badman, who grew up in nearby Jordan, came to Syracuse University on a prestigious Coronat Scholarship, the highest award presented by the College of Arts and Sciences. A Renée Crown University Honors student, he has worked with SU physicists investigating dark matter, electron clouds, and fundamental particles, and co-authored several scientific papers. This summer, he will work at the Large Hadron Collider, the world's foremost particle accelerator, at CERN, the European Organization for Nuclear Research, near Geneva, Switzerland. He was recently named a 2011-12 Astronaut Scholar, one of 26 science and engineering students nationwide honored for exceptional performance, daring, creativity, and a desire to positively change the world. Badman seems to take the accumulating honors in stride. "It

looks good on your résumé, and for getting into grad school," he says.

Badman plans to pursue a Ph.D. degree in particle physics, with the goal of working at a university or a national lab where scientists are discovering—or creating—revolutionary physics. "It's a really fun job, you get a lot of cool things to play with, like computers, instruments, and particle colliders, and you meet a lot of crazy, creative, interesting people," he says. "I like trying to figure out how the universe works, on a really fundamental level. There's this whole other world we can't actually see that's behind everything going on, and we understand maybe 4 percent of it, and not fully all of that. There is a lot going on back there that we know nothing about."

Badman expects to spend the next few decades exploring that topic. Meanwhile, he'll continue tutoring Somali refugees, applying for scholarships with names like Rhodes and Gates, learning Mandarin (there's a large particle collider in Beijing), and playing the accordion and bagpipes (to the chagrin of fellow residents of Haven Hall). He also encourages his younger brother, Tom, a first-year SU student, to pursue jobs in physics labs rather than dining halls, which Badman has done during summers and the school year since he was in high school. "Research jobs are a lot more fun than washing dishes," he says. "Whether you do it for credit or pay, you're learning all the time—sometimes more than you learn in class—because it's just you and the professor. Yeah, you're working, but it's stuff I would probably do for free."

—Jim Reilly

Jenny Doctor | SOUND DECISION

IT HAD TO BE AN EXCEPTIONAL JOB OPPORTUNITY TO lure Jenny Doctor away from the University of York, where she served on the music faculty and as a Research Fellow, responsible for the university's sound archives. A noted musicologist and specialist in 20th-century British composers, the Chicago native had lived and worked in England since the 1980s, when she arrived there as a Fulbright Scholar doing doctoral research at King's College London. She then became affiliated with St. Hilda's College, Oxford, where she organized the archives of renowned British composer Elizabeth Maconchy. With her research focused on mid-century British composers, it seemed likely she would remain in the United Kingdom for the rest of her career.

What convinced Doctor and her husband, composer Stephen Ferre, to endure the rigors of a transatlantic move back to the United States was an offer for her to become director of Syracuse University Library's Belfer Audio Archive, and a faculty member of the S.I. Newhouse School of Public Communications. Ferre is an adjunct professor at the Setnor School of Music. "I was ready for a change, and this is an amazing chance to do new research," says Doctor, who began her position in January. "I can't imagine a better opportunity to bring us home to the States. We're very pleased to be here."

With more than half a million recordings in a wide variety of formats—from the earliest experimental recordings on tinfoil to today's digital CDs—the Belfer archive is one of the nation's foremost repositories of audio history. Many of the materials are fragile, making preservation one of the archive's highest priorities, according to Doctor, whose position is initially funded by a grant from the Andrew W. Mellon Foundation. "I've always had an interest in American culture, and the Belfer archive contains so much history—not just music, but many other types of recordings, such as interviews and radio broadcasts," she says. "My job is to bring it to life, and to help others use it in their research."

Doctor earned a bachelor's degree in mathematics from Oberlin College and one in piano performance from Oberlin Conservatory of Music. She studied viola with the Vermeer Quartet, then earned a master's degree and doctorate in music history from Northwestern University. Author of *The BBC and Ultra-Modern Music 1922-36*; *Shaping a Nation's Tastes* (Cambridge University Press, 1999), she previously worked as an editor at Macmillan Publishers, contributing to various *New Grove* music



dictionaries. "I love editing, especially the attention to detail required," she says. "Some of my new projects will be editing anthologies." She is presently in the final stages of co-editing with Sophie Fuller, a book about Maconchy's correspondence with her colleague, Welsh composer Grace Williams.

Although Doctor is still finalizing the courses she will teach at the Newhouse School, she will draw subject matter from the Belfer collection to use in her classes. "People use their eyes to learn about the world around them, but I would like them to use their ears as well," Doctor says. "The saying is 'a picture is worth a thousand words.' To me, a recording can do the same thing—it's evocative in the same way."
—Paula Meseroll



Sam Salem | MODEL INFRASTRUCTURE



ABDALLAH H. YABROUDI CHAIR IN SUSTAINABLE CIVIL INFRASTRUCTURES

Recipient:

Ossama "Sam" Salem, L.C. Smith College of Engineering and Computer Science

Background:

The professorship, an endowed chair, was created with a gift from LCS alumnus and SU Trustee Abdallah H. Yabroudi '78, G'79 of Dubai. Yabroudi, president of the Dubai Contracting Company, created the endowed fund to allow the Department of Civil and Environmental Engineering to hire a faculty member specializing in sustainable civil infrastructures with an emphasis on international engineering in the developing world.

AS AN ENGINEER, PROFESSOR OSSAMA "SAM" Salem can determine the integrity of public infrastructure systems—bridges, roads, and water and wastewater pipelines—by developing deterioration prediction models and conducting statistical analyses. But his understanding of what makes a viable bridge for a community goes well beyond mathematical equations. Many cities struggling with deteriorating areas need more inviting, more sustainable ways to advance the life of residents, he says. Salem, a professor of construction engineering and management in the L.C. Smith College of Engineering and Computer Science (LCS), wants to impress on students that civil engineering can have a profound effect on the fabric of a community. "When we build a bridge, we don't build an ugly bridge; if we build a highway, we don't put it in the middle of the city, like Interstate 81 in Syracuse," says Salem, the Abdallah H. Yabroudi Chair in Sustainable Civil Infrastructures. "We need to improve not only the infrastructure, but also the environmental, economic, social, and cultural aspects of our communities."

As part of his work as Yabroudi chair, Salem oversees two international experiences for students with LCS professor Samuel Clemence. The Syracuse University-Dubai Contracting Company (DCC) Summer Internship Program was established in 2008 by DCC president and SU Trustee

Abdallah H. Yabroudi '78, G'79 of Dubai, United Arab Emirates (UAE). The five-week internship allows six civil engineering students to learn about the construction industry through observations of DCC building projects in Dubai. A second internship focusing on infrastructure was established in 2011 through LCS alumnus Mike Venutolo '77, managing director at Raymond International, one of the largest pipeline companies in the Middle East. In UAE last June, Salem and six students observed the operation of a desalination plant and construction of pipelines that transport potable water throughout a nation that has no source of fresh water. "Many countries pump billions of dollars into funding sustainable initiatives and infrastructure projects, and we need to prepare our students with the proper education and experience to be part of this," he says.

Originally from Alexandria, Egypt, Salem received degrees from Alexandria University and Clemson University before earning a Ph.D. degree in civil and environmental engineering at the University of Alberta, Canada. At that time, he worked for the Alberta Ministry

of Infrastructure and helped develop an integrated infrastructure management system that prioritized the province's projects.

The Yabroudi chair coalesces all of Salem's work, including his concentration in green construction and infrastructure. He developed the specialty as a faculty member at the University of Cincinnati, where he directed the Infrastructure Systems and Management Program. Since arriving at SU in 2010, he helped institute a certificate program in infrastructure management and policy with the Maxwell School, and developed a new LCS graduate program in construction engineering and management. Along with teaching, Salem conducts civil infrastructure research and is the SU principal investigator on a \$7 million U.S. Department of Transportation grant (shared with four other universities) to establish a transportation research center focusing on reducing traffic congestion and greenhouse gas emissions. In another project, Salem and his doctoral student, Baris Salman, developed models using data from the Metropolitan Sewer District of Greater Cincinnati to predict deterioration. "What's really fascinating for me is using these kinds of highly theoretical statistics and structural models to get some practical answers," Salem says. "The models don't mean anything unless we use them to really impact people's lives." —Kathleen Haley



Rose Marie Cromwell | TROPICAL FOCUS

ROSE MARIE CROMWELL G'12 FORGES FRIENDSHIPS WHEREVER her camera takes her. Through photography projects, she has stepped inside the everyday lives of Cubans and spent three years in Panama, where she helped establish a nonprofit organization for youth. Look at her photographs and it's evident she enjoys capturing individuals in intimate, playful, and intriguing ways. In one, a Cuban man holds two chickens, one covering his face; in another, a man spreads a bunch of bananas across the top of his head. "I want it to be apparent in my photographs that there's an interaction between the subject and the photographer because there always is," says Cromwell, an M.F.A. student in the art photography program of the College of Visual and Performing Arts. "That's what's interesting to me—examining my relationships with people through photography and that interaction."

As a Fulbright Fellow in 2006, Cromwell journeyed to Panama to pursue a documentary photography project exploring the country's Afro-Caribbean culture and community. While working there, she was taken by a local bishop to Coco Solo, a former U.S. military base near the Panama Canal that is home to squatters relocated there decades ago by the Panamanian government. "I

was struck by the extreme poverty and conditions these people were living in," she says. "Millions of dollars pass by on the canal every day and here are these people living without running water." She began photographing—and building relationships—with residents. She taught English to Coco Solo children and raised money for a Christmas party. Moved to do more, Cromwell joined with Panamanian artist Lorena Endara and local pastor Michael Brown to found the nonprofit *Cambio Creativo* to facilitate a growing array of educational workshops. They want Coco Solo youth to learn skills, build self-confidence, and express themselves—and create an alternative to street life. "For four years, I've watched a lot of these kids grow up and some, who weren't doing so well, now work as our interns and are doing super well," she says. "We really want them to feel their voices are important. These kids should have that opportunity to feel empowered."

While continuing her efforts with *Cambio Creativo* (cambiocreativo.org), she works as a darkroom printer for her mentor, the acclaimed Panamanian photographer Sandra Eleta. Cromwell's passion to communicate through art took hold when she began shooting pictures at age 12. The Seattle native chose photography as a career path and, as an undergraduate at the Maryland

Institute College of Art in Baltimore, she spent a month studying abroad in Cuba. The experience proved invaluable, forcing her to examine her ideals about the island nation with the reality of life there. Her photography reflected this—and led to her recognition as one of "25 under 25 Up-and-Coming American Photographers" by the Center for Documentary Studies at Duke University and powerHouse Books.

Since arriving at SU on a fellowship in 2009, Cromwell has undertaken creative educational projects with children from the city's Near West Side, exhibited the photography of her Coco Solo workshop students at the Warehouse, and spent a great deal of time at Light Work. She also continues her work in Panama and Cuba, the subject of her M.F.A. final project (www.rosecromwell.com). "My relationships in Cuba are at the core of this work," she writes in her artist's statement about the project. "Being an outsider makes my relationships complicated and my work reflects these complexities. Ironically, it is the same complications that can make for life-affirming experiences." Those, no doubt, are the kind of experiences Cromwell will continue to discover with her camera.

—Jay Cox

Patrick Jones | FINE TUNING

PATRICK JONES BELIEVES ASPIRING MUSICIANS must learn to think like entrepreneurs. That's why as the new director of the Rose, Jules R., and Stanford S. Setnor School of Music, he encourages students to follow the example of Johann Sebastian Bach—the consummate musical entrepreneur. "Bach was a portfolio musician who had a regular church gig, composed and arranged major orchestral works and church music for weekly services, taught music lessons, and was an outstanding performer," says Jones, who holds a master's degree in conducting from George Mason University and a doctoral degree in music education from the Pennsylvania State University. "The 20th century was the era of 'big music' when you could graduate with highly developed performance skills and get a job for life in an orchestra or opera company. That's over. What excites me about Setnor is we have all of the pieces in place for our students to become accomplished performers and also learn to compose, arrange, teach, and handle the business aspects of their careers."

When Jones graduated from high school in a decaying mill town outside of Philadelphia, his prospects were limited. At the time, the practical thing for him to do was join the Army—a decision that launched a military career spanning three decades. Jones, who played the trombone throughout high school in jazz ensembles, bands, and pit orchestras around town, was accepted into the Army band program and served on active duty for three years before joining the reserves. In 1989, he was commissioned an officer and became commander and conductor of the 553rd Air Force Band under the command of the Pennsylvania Air National Guard. He served as commander of the band for 11 years, then moved to the Pentagon as chief of Air National Guard bands for the entire country. "It was my job to make sure all 11 Air National Guard bands were ready to deploy at a moment's notice for funerals, concerts, parades, and troop entertainment all over the world, including war zones," Jones says. "We deployed 10-piece pop rock groups to small forward operating bases in Iraq and Afghanistan, where the troops didn't get any other entertainment."

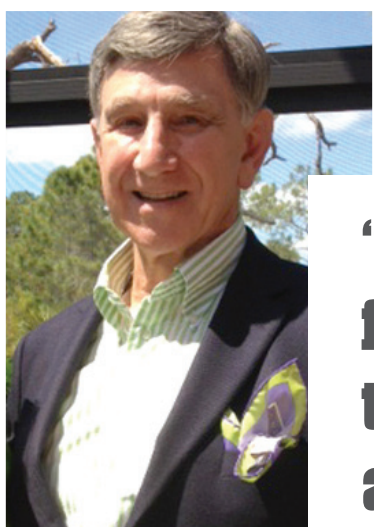
Jones has had two careers simultaneously. While serving in the National Guard, he held faculty positions at SUNY Fredonia, the University of the Arts in Philadelphia, and Boston University, where he was chair of the music education department. Retiring from the military last fall at the rank of colonel, he moved to Syracuse with his wife, Karen Weiss Jones, assistant dean for advancement in the College of Arts and Sciences, to take up his

new duties at the Setnor School. "I was attracted to Syracuse University by its vision of Scholarship in Action," Jones says. "This is where my military training comes in because for me, it's all about the mission—to prepare the next generation of students for a complex global society."

Jones believes the Setnor School—with its many opportunities to learn beyond the classroom—is a great place for students to master the variety of skills they'll need to chart successful music careers in the 21st century. For example, the school's Community Music Division, which offers private music lessons to members of the Syracuse community, helps students hone their teaching skills; the Center for Live Music, a research center and arts business incubator, involves students in original research and in creating business, marketing, and educational products and services for local arts organizations; and Music Works, which will soon provide digital publishing and audio support, will give students experience in arranging music for clients outside of class. "Clearly, Setnor has the total educational package in a university that's committed to marshaling all of its resources to make a difference in the world," Jones says. "The University's vision of learning for the world, in the world, really resonates with me—this is where my heart is."

—Christine Yackel





“We want our passion for Syracuse University to be seen and felt long after we’re gone.”



Throughout her career in public education, **PATRICIA MAUTINO '64, G'66** witnessed raw, young talent and identified personally with students who needed financial aid to help them pursue their educational goals. Her husband, **LOUIS MAUTINO '61, G'62**, attended SU on an athletic scholarship and went on to be a business owner in the building industry. Together, they are committed to helping young people prepare for successful lives and feel privileged to share their “Forever Orange” spirit with future generations.

As an active member of the Syracuse University Alumni Association and the iSchool Board of Visitors, and a longtime supporter of SU Athletics, “Pat” Mautino already has a strong presence on campus. And with the four scholarships the Mautinos have endowed through their bequest, their love for SU will become an everlasting legacy.

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