



## 40 Under 40

**Talent, dedication, energy: These words just scratch the surface when describing the young 2009 award winners.**

*By Dawn Reiss, contributing writer, and Amara Rozgus, senior editor -- Consulting-Specifying Engineer, 5/1/2009 1:00:00 AM*

The 2009 40 Under 40 winners are among some of the best and brightest minds in our industry. They've created in problems, both in North America and abroad. These young geniuses have won awards and risen quickly to the top projects—and their companies—into the spotlight.

But each person is more than just an engineer or a building professional. They give their time to local charitable or engineers, and work to enhance the industry by thinking differently. These winners have been molded by their upbringing on to younger professionals. This year's crop of winners is very diverse: they're musicians and athletes, fathers, writers and entertainers.

The following pages will make you think outside the box, remind you of what you can do to help others, and push you what your age.

To nominate a young engineer next year, visit [www.csemag.com/40under40](http://www.csemag.com/40under40).



### Christian Agulles, PE, LEED AP, 38

Vice President, WSP FLACK+KURTZ, Las Vegas  
New York Institute of Technology, BS Mechanical Engineering  
Engineers are known for being resourceful, and Agulles certainly knows how. 7  
to sleep, he sings Motown "lullabies" of Al Green and Sam Cooke. When he's  
overseeing a team of 17 as WSP FLACK+KURTZ's Vegas office director. As the  
U.S. Embassy in Berlin, Agulles put his ingenuity to work again. The 200,000-sq  
on the historic site of the original U.S. Embassy near the famed Brandenburg Gate  
site, this embassy did not match any of the standards applied to other embassies  
fire codes, which focus on constantly moving airflow to help keep trapped people  
that prevent the migration of smoke from where the fire starts, forcing Agulles to  
lead HVAC engineer on projects like Miami's American Airlines Arena, Dallas' J  
Rico. Outside of work, Agulles, who has competed in Olympic-distance triathlons  
with his sons, vizsla dog Barclay, and wife Suzy.

### Kelly Altes, PE, 31

Senior Structural Engineer, KJWW, Des Moines, Iowa  
Iowa State, BS Civil Engineering

"My job can be very high stress," said Altes, the structural department supervisor who enjoys kickboxing. "So I like to



Her other way to de-stress: watching reality and gossip shows. “I just can’t get wreck,” she said with a laugh. An avid skier with her husband Jonathan, Altes : the fun in structural engineering with gum drop and spaghetti-stick towers scier challenges came with the two-story, 130,000-sq-ft expansion and 144,000-sq-ft. The school had multiple floor elevations and existing drawings from previous re stairs with their numerous reference points. The biggest surprise came when th the future site of the addition—found two old heating fuel tanks. Because the fu shoring of the existing gym footings had to be completed prior to removal of the role as the lead structural engineer for the Manifold Building, a part of the \$20C a 2,400-ton lake-coupled geothermal system.

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### **Sachin Anand, PE, LEED AP, 36**



Co-Owner, Principal, dbHMS, Chicago  
Delhi College of Engineering (India), Bach  
MS Mechanical Engineering  
Anand came to the United States in 1994  
pursue a master’s degree in engineering.  
and cooling design company—which he s  
five to 35 in 3 years. “Everyone outside of  
milk and honey,” he said. “I was fascinate  
engineer who worked for India’s Army Cor  
energy modeling, finding “simple and eleg  
bringing back the old ways of doing things  
Anand, an adjunct architecture professor :  
Webber Landscape’s LEED Platinum certi  
earn the \$1.80/sq ft federal tax credit for a  
90.1. Anand said the key to success is be

Although Anand grew up playing cricket, he now enjoys cooking for wife Deneace and son Siddharth, 6, and freque

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### **Oliver Baumann, LEED AP, 38**



President, Ebert & Baumann Consulting Engineers Inc., Washington, D.C.  
Technical University of Munich (Germany), Bachelor of Mechanical Engineerin  
At one point, Baumann considered becoming a professional musician. “I’m gla  
can play the trombone and tuba. Instead, he now strums the guitar to unwind a  
one of last year’s 40 Under 40 winners, with Billy Joel’s “Piano Man” and Eric C  
German-born Baumann moved to the United States to start his own company,  
with more than \$1 million in revenue. Baumann and his firm are working on 10  
in Germany, Russia, Slovenia, and Turkey, including the “Green Towers,” nick  
the mechanical project manger for the \$20 million Gerhard-Mueller School in h  
insulation, daylight harvesting, and groundwater for heating and cooling to mak  
Germany. Other projects include the Dubai Pearl and Moscow’s Mirax Federat  
ASHRAE committees as well as on an advisory panel helping to develop a res  
buildings.

### Neal Boothe, PE, 38



Vice President, X-nth, Maitland, Fla.

Georgia Institute of Technology, Bachelor of Electrical Engineering

When it comes to extremes, Boothe, a father of two, takes it to the top. He's got the Marine Corps Marathon, and likes to rock out on the electric guitar with his son Jimi Hendrix, and Eric Clapton. At work, Boothe oversees production for four on charge of X-nth's East Coast technical market sectors (healthcare, mission critical and manpower in projects that range from renovations and additions to master Projects include: Madison County Medical Center, Medical College of Georgia Center in Naples, Fla. Boothe's biggest project is the \$1.6 billion (estimated) Q coordinator, he oversees 70-plus employees for the MEP design of the 3.5 million parking structures that are spread out over 160 acres and includes everything from a seat soccer stadium. Boothe, who specializes in power distribution, emergency Florida and Mississippi following a string of hurricanes, including Katrina, to he

### Virginia Charter, 25



Consultant, Rolf Jensen & Assocs. Inc., Littleton, Colo.  
Oklahoma State University, BS Fire Protection Engineering  
Every engineer needs down time. For Charter, it's college lacrosse athlete, who founded Oklahoma State snowboarding, off-roading on ATVs, hiking and snowboarding. Charter, who was named Oklahoma State a senior, has distinguished herself as a leader. She was awarded in 2006 and has been appointed a fire protection engineers. As a fire protection engineer, she works with contractors, architects, and other engineers on fire codes and the design intent of the Planet Hollywood development, she is in charge of

report, developing the master exiting drawings, and assisting in the commissioning of the smoke control systems. She is working on a 17.5 million sq ft Project CityCenter in Las Vegas. Charter volunteers with Adopt-A-Trail and a building committee when she's not playing with her dogs, Guinness and Bailey.

### Michael Chow, PE, LEED AP, 39



Principal, Senior Electrical Engineer, Metro CD Engineering LLC, Worthington, Ohio  
Ohio Northern University, BS Electrical Engineering

This maverick can recite any line from the movie "Top Gun." His favorite: "Talk a good game, but back it up." (Chow manages all know it well.) Chow's other passion is working on reducing light pollution. Marathon Oil employee is juggling nine LEED-certified projects. "It's about educating them and showing them how it can be a win-win situation." Chow is part of a growing

shine only where it is wanted and needed, to help save energy and also benefit nocturnal animals whose body rhythms are disrupted by light. To do so, Chow is trying to convince businesses to reduce their interior lights between 11 p.m. and 5 a.m. "It's expensive to throw light out everywhere." An avid tennis player, Chow has made it to the Agassi, Pete Sampras, and Steffi Graf when he's not helping 7th- and 8th-grade girls use their engineering, math, and

with his wife Heidi and their 3-year-old daughter Lily, who has affectionately nicknamed everyone in the family after other daughter, 2-month-old Ella, is now called “Sneezy.”

### Mike Ferreira, PE, 39



Senior Fire Protection Engineer, Hughes Assocs., Baltimore  
Worcester Polytechnic Institute, BS Mechanical Engineering, MS Fire Protection Engineering  
Mike Ferreira needs outdoor adventure, or maybe it's just that the outdoor world needs him. He's spent time exploring underground caves or exploring places like Cambodia's famed temple complex. He's also worked on improving fire safety standards to protect others during a disaster. Ferreira has worked on submarines for the U.S. Navy and worked on the World Trade Center investigation report for the National Institute of Standards and Technology. He's also worked on the Pentagon Shield system to help ward off biological, radiological, and chemical threats—a multi-disciplinary approach—by incorporating fire behaviors within a traditional building air flow and fire computer modeling. The method has been used in high-rise office buildings and in the U.S. Capitol. As an England Patriots fan, Ferreira enjoys spending time with his wife Mary with whom he is hiking in Costa Rica, and their 3-year-old daughter Elena.

### Phil Friday, PE, 35



Principal, Senior Fire Protection Engineer & Fire Investigator, Harrington Group  
University of Tennessee, BS in Chemistry; University of Maryland, MS in Fire Protection Engineering  
Phil Friday's love of fire—and learning how to extinguish it—started early. As a child, he set a tire on fire. During college, he lived at the Tri-Community Volunteer Fire Station and worked as a firefighter. He also spent time as a forest services wildland firefighter working in Washington's Wenatchee National Forest on the East Slope of the Cascade Mountains. As an investigator, Friday now designs fire protection systems for mission critical facilities. Recent projects include the Keesler Air Force Base fuel cell hangar that services C-130 Hercules aircraft that will house nine training aircraft at the Naval Air Station in Pensacola, Fla., and the new U.S. Capitol. He also serves as the president of the Greater Atlanta Chapter Society of Fire Protection Engineers. His wife Jennifer enjoys snowboarding.

### Andrew Gorton, 31



Associate, Papadimos Group, San Rafael, Calif.  
Columbia College, BA Audio and Acoustics; University of Cincinnati, MS Mechanical Engineering  
Maybe it comes from being a classically trained pianist. As a noise and vibration consultant, Gorton knows how people miss. He tries to control the imperceptible movements within a building. In doing so, he helps ensure that machines, CT scanners, and electron microscopes, have accurate readings and images, down to the nanometer. “The smallest disturbance is a big disturbance,” said Gorton, who specializes in noise and structural vibration. He worked on Arizona State University's School of Journalism TV studio space, which needed to buffer itself from the adjacent Science Complex, which contains nano-scale research instrument labs within a challenging L-shaped building. An avid triathlete, Gorton is training for his first half-Ironman and enjoys chopping wood by hand. He also worked in the Amazon Rainforest, where he taught people in Tanzania how to create water filtration systems out of found materials like a bucket.





### **Tony Hans, PE, RCDD, LEED AP, 35**

Principal, Electrical Engineer, CMTA, Louisville, Ky.

University of Louisville, BS Electrical Engineering, MS Engineering

On and off the volleyball court, Hans knows how to get things done. Hans spec performance schools," including Richardsville Elementary, the first Net Zero Energy largest solar photovoltaic system in Kentucky. He was also the project manager certified school in the state. A licensed engineer in 33 states, Hans manages projects in Indiana, and New York. He is the principal-in-charge on Houston's Spring Elementary certification with its solar panel roof, geothermal HVAC system, wind turbines, athlete and father of three girls enjoys adventure racing in 6-hour multisport events. University of Louisville volleyball athlete, in college and still plays in three-on-three a team that won the Kentucky Derby Festival Classic, the largest outdoor tournament

play against professionals.



### **Chris Hewitt, CEng, PEng, LEED AP, 35**

Partner, SMS Engineering, Winnipeg, Manitoba

University of Sheffield (U.K.), Bachelor of Engineering

Hewitt loves playing with fire. "Ninety-nine percent of the time I'm behind a desk mud at a hog farm or at a fire in a house or factory," he said. "We just roll up and happened. If a fire investigator doesn't understand what caused a fire, they usually I come in." As a forensic investigator, Hewitt looks for the tiniest pieces of evidence to a loose nut under the dash, where a small wiring problem led to several major electrical engineer. As the lead electrical engineer, he is overseeing the \$250 million 1,600-space parking garage; and upgrades to an existing utility building (power). Another project, Hewitt was dropped in the middle of the Thailand to work on a "The locals would routinely catch and fry up snakes," he said. "And I don't eat snakes hates flying, ended up meeting his Canadian wife Shauna at a German bar in 11-month-old Charlotte.



### **Craig Hofmeister, PE, LEED AP, 38**

Vice President of Engineering Technology, Rolf Jensen & Assocs., Cary, N.C.

Worcester Polytechnic Institute, BS Civil Engineering; MS Fire Protection Engineering

As a child, Hofmeister would light plastic toys on fire to see how they burned. Watching ice hockey, in particular the Carolina Hurricanes. "If I had the opportunity," said Hofmeister, who played hockey in high school, college, and men's league. communication among 22 worldwide offices about ideas and technology initiatives. As the technical leader, Hofmeister worked on a fire modeling study for NASA's Canaveral, Fla., to predict and help prevent damage if a solid rocket motor ignited. Because rocket motor fuel is metal-based and doesn't require oxygen to burn, unique burning characteristics of the fuel to find usable data for heat release analysis. Hofmeister, a father of three, has been married for more than 15 years to wife Sunday school and ushers at his church, and has ridden a camel at the pyramids.

### Tom Hudson, PE, LEED AP, 32



Technical Consultant, Green Building Services, Portland, Ore.

Oregon State, BS Mechanical Engineering

It's nearly impossible to live in Portland and not be involved in cycling. For Hudson, it meant creating a Roman-esque chariot out of 16-in. kid bike tires and the frame together. The reason: the Ben Hur III Chariot Wars, an event in Portland's Minn. where a friend fought off other competitors as a gladiator. For work, Hudson equips and verifies and analyzes equipment performance in existing buildings. At the Unitarian Church in Portland, Hudson oversaw LEED commissioning for one of the buildings in the United States. He required the design-build contractors to include suggestions for direct digital controls programming, which improved energy costs. Hudson, who helped two orphanages in Mexico install a farming operation and Domino's pizzas in Ireland on a 90cc Yamaha motorcycle.

### Erin Inman, PE, LEED AP, RCDD, 38



Senior Vice President, Primera, Chicago

Auburn University, Bachelor of Electrical Engineering; MBA DePaul University

The Batman movies made Chicago's Wacker Drive famous. Inman quickly learned how difficult it was to be a director for the power service to the 48-story 155 N. Wacker building in downtown Chicago, where she had to go through 65 manholes in the middle of the night to avoid rush hour traffic. "It took a year and a half," she said. "And we had to come out of a manhole and route a 3-by-4 ft concrete duct bank underground without hitting piers or bending it more than 270 degrees." This, of course, happened while a crew was working on piers that supported the building. As the fast-track project began, the crew found abandoned manholes, "said Inman, who also helped build a school and home on a mission trip to Haiti. "We had to go through manholes that weren't being used anymore." A self-proclaimed "foodie," Inman is a Food Network junkie and enjoys gourmet cooking. She and her husband Bill, son Austin, 12, stepdaughter Maggie, 14, and stepson Kyle

### Scott Jenkins, EIT, 31



Associate Electrical Engineer, Spectrum, Salt Lake City

University of Utah, BS Electrical Engineering

Jenkins decided to show his appreciation for his wife Jamie this past Valentine's Day by having a Valentine's heart with her name in it, "I just couldn't pass it up. It was too funny." Jenkins is certainly known for his sense of humor and gadgets. As an electrical engineer, Jenkins helped Westminster College Science Center add daylight harvesting in all classrooms. His other projects include The Center for a public/private partnership composed of Idaho State University, private industry and the Environmental Laboratory that is researching energy solutions, and the Dixie Fire Center, a Gold Certified building. Jenkins started using a tablet PC, demonstrating a reduction in paper consumption and expenses, and create "on-the-fly" annotation of drawings.

Jenkins is a Boy Scout troop leader, volunteers at the Utah food bank, and enjoys—much to the delight of his son Jaxson, 3, an RC helicopter around the house.



### **Danna Jensen, PE, LEED AP, 31**

Senior Associate, Electrical Engineer, ccrd partners, Dallas  
Kansas State, BS Architectural Engineering

Jensen is the type of woman who will get the job done no matter what, even if “I was 26 weeks into my pregnancy so I had to stop and go to the bathroom a lot of potties, but I probably ate up 10 minutes of my race time waiting in line to go to the bathroom.” Jensen worked on many health care facilities, office buildings, parking garages, religious centers. Jensen's accomplishments include working as the project coordinator for the 900,000-sq-ft hospital for For Center and the 1.1-million-sq-ft C.S. Mott Children's Hospital and Women's Hospital in Ann Arbor, Mich., that is see of the Year, and she is the company's go-to person for sustainability education, helping her co-workers become LEI male-dominated industry, you still have to prove yourself,” she said. “But it forces me to stay on top of everything in first child Kaitlyn on March 14, also enjoys singing bad karaoke, rollerblading, and wakeboarding and snowboarding



### **Shaun Landman, PE, LEED AP, 38**

Associate Principal, Arup, San Francisco  
University of Cape Town (South Africa), BSc Electrical and Electronics Engineer  
Being a team player and leader comes naturally to Landman. Born and raised in college and in the 1995 and 1999 World Cup Qualifier tournaments on Zimbabwe years during his early years as an electrical engineer. To see firsthand, find a figure named after him. Now, the father of four enjoys fishing with his boys and sweetheart. Landman leads the electrical team in Arup's San Francisco office, Mart's experimental stores, incorporating sustainable ideas from cogeneration photovoltaic panels. Landman got his start in Zimbabwe's capital, Harare, on the commercial development in the country at the time, and the first in southern Africa. Landman's design capitalized on the diurnal temperature swings to create a nighttime temperatures in exposed concrete and vaulted ceilings and exhausts



### **Stephen “Steve” Lieber, PE, 31**

Mechanical Project Engineer, Westlake Reed Leskosky, Cleveland  
University of Arizona, BS Mechanical Engineering

Lieber likes to joke that had he might not be working as an engineer today had time of an Arizona basketball game while he was in college. “It was straight on never played organized basketball. Instead, he's coaching his 8-year-old son's where his highest score is 273. Lieber's work accomplishments includes renovating Cleveland Clinic's new Center for Autism, a benchmark for environmental design for people with autism. As the project mechanical engineer for The Maltz Museum the son of a Rabbi, creatively reconfigured the HVAC unit, which couldn't be put in place due to constraints but needed to be hidden from the public's view despite the low-lying units, hid the ductwork under the ground, and put a screen wall above and around the units. The father of three enjoys cruising with his wife Nicole and their four ge

### Abby Lipperman, PE, 29



Associate, Electrical Engineer, ccrd partners, Dallas  
Kansas State, BS and MS Architectural Engineering

Lipperman likes to joke that she is a “classic engineering nerd” who enjoys getting in touch w desk,” she said with a laugh. “And I’ve named a couple of them after people in the office.” WI party at Medieval Times, she is busy designing electrical systems for hospitals and volunteer program. Lipperman recently served as the lead electrical engineer on Texoma Medical Cen Texas. Not only did Lipperman design the entire distribution system for the center, but she a book “The Toyota Way” as part of a Lean design process, and attended an eight-week book full-service hospital from the ground up. “I look really young and being a female electrical engineer sometimes catcl enjoy proving myself.” Lipperman, who was married at the Bellagio Hotel in Las Vegas 3 years ago, is expecting he

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### Brandi McManus, CEM, 32



Global Energy Services Manager, Schneider Electric Buildings Business (TAC), Dallas  
Oklahoma, BS Environmental Engineering; MBA Southern Methodist University

Any time McManus travels internationally, she goes with a pre-scripted joke: “I know I’m an / really are the bad boys of the planet.” She hopes to reduce the amount of energy buildings u who will help Schneider Electric customers make better choices and reduce building operati Buildings use one-third of all energy,” said McManus. “So there is a huge opportunity to redt presentation, McManus travels the world to places like India, China, Australia, and the Unite delivers webinars about the return on investment of energy efficiency, government regulatio implemented examples, like how much using an efficient compact fluorescent bulb can save a company over its life valedictorian is a voracious Oklahoma football fan and loves Sudoku and her dogs, Monty and Einstein. She escap fireworks.

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### Kevin Miller, PE, 35



Project Manager, ccrd partners, Dallas  
Kansas State, BS Architectural Engineering

Miller lived in Dallas and his future wife lived in Denver when they met in Las Vegas. “And with a laugh. Now they enjoy making horseradish until “we are both bawling.” Miller won’t r passionately talk about duck hunting with his chocolate Labrador Coco. “I tell my wife (Sar so I can go out hunting to put food on the table.” Miller, a senior mechanical engineer, ove served as the project manger and senior mechanical engineer for the MEP design at the 1 Women’s Hospital in Ann Arbor, Mich. He designed a mechanical system with high-efficier could quickly convert an entire patient wing into a regional infection control unit where 100% of the air can be exhat an airborne infection in case of a pandemic outbreak from a disease like SARS. Miller earned ccrd partner’s Engine is an ASHRAE member of the Dallas chapter.

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### Conrad Miller, 21

Mechanical Designer - CAD Operator - BIM Specialist, Ron George Design and Consulting Services, Monroe, Mich  
The University of Toledo, BS Mechanical Engineering, December 2010





By far the youngest of the 40 Under 40, this college junior makes the 45-minute drive home 20 hours a week. Miller's projects include St. Joseph's Hospital in Ann Arbor, Michigan, piping for the variable air volume system and plumbing that went to the patient load and a 3.57 grade point average. As an assistant project manager, Miller assisted with a medical gas at the University of Michigan's C.S. Mott Children's Hospital and Vassar College, helped his father design an addition to the family's barn that sits on 17 acres, and wants to know everything I'm doing," Miller said. "In return, it makes me a student member of ASME and Campus Crusade for Christ. He enjoys playing video games or "stupid comedies like 'Superbad' or 'Step Brothers.'"

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### **Jim Nonnenmann, PE, 32**



Plant Mechanical Department Manager, Stanley Consultants, M.D., University of Illinois, BS Mechanical Engineering

If it weren't for Nonnenmann, "The Pearl" might be another mirage. It's one integrated district cooling plant. Nonnenmann was the project manager for the largest chilled water facility in the world that produces 130,000 tons of cooling capacity to show the chilled water pumps weren't going to overheat. Cultural difference: "In the United States things are accepted at face value. In the Middle East, you have to be president of the Mississippi Valley Chapter of ASHRAE for 200 years."

yourself and back up your study." Because water is scarce in the Middle East, Nonnenmann had to use other water treatment technologies for the plant, while building on a limited amount of space since land on an island is at a premium. Nonnenmann is a church member and enjoys escaping by float plane to Red Lake in Ontario, where he can fish for walleye, northern pike, and

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### **Raj Patel, 37**



Principal, Acoustic Consultant, Arup, New York

University of Southampton, BEng Engineering Acoustics and Vibration

For Patel, just listening to music isn't enough. It's about experiencing it, like music. As the lead consultant, Patel designed one of the world's greatest concert halls, the Gateshead, U.K. The complex includes a 1,600-seat concert hall and a cutting-edge facility with a wide range of musical or electronic instruments and performance spaces. Patel has the chance to perform or record at a facility with an "arts for all" mantra. Patel has worked at the famed Art Basel, Whitney Museum of American Art in New York, and London's Royal College of Art in England and consulted on various Olympics endeavors including the 2008 Summer Games in Beijing. For Iain Forsyth & Jane Pollard's CD "Silence of a mix-media classical orchestra at St. George's Hall in Liverpool that listened to Patel's not playing the trumpet, bass guitar, or harmonica, he is cultivating bon

Jennifer on their yellow Vespa.

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### **Brad Schaap, PE, LEED AP, 29**



Corporate Director of Sustainability, Structural Engineer, Leo A Daly, Omaha, Nebraska; Washington University in St. Louis, BS Civil Engineering; University of Texas, Austin. Schaap knows the stakes are high, even when he's not playing Texas Hold'em. He's "championing" by educating Leo A Daly employees and clients about sustainability.

develop and achieve the 2030 Challenge, an international call-to-action to reduce fossil-fuel-based, greenhouse-gas 50% today and for carbon neutrality in 2030. As a lead structural engineer and sustainability coordinator, Schaap is story, 67,000-sq-ft laboratory on the Army's Maryland-based Aberdeen Proving Ground to achieve a LEED Silver certification capacity against anti-terrorism and force protection loads and potential seismic and progressive collapse, while reducing codes. The walls and roof will be buffered with 6 in. of insulation, low-flow plumbing fixtures will reduce toilet water and company showers to a 1.6 gpm rate will decrease water use by 75%. The father of two, Schaap volunteers with his sixth-grade student whose mother was shot by gang members.



### **Michael Schwarz, PE, LEED AP, 31**

Associate, HVAC Engineer, KlingStubbins, Philadelphia  
Penn State University, Bachelor of Architectural Engineering

Schwarz admits that winning a Lego-building contest at age 6 might have paved the way. Now the former high school wrestler designs mechanical systems, with an emphasis on sustainability. "Data centers use 1% of all energy in the United States," said Schwarz, who likes to think he doesn't sound like much, but it really is. For a "confidential client" in Bridgewater, New Jersey, he designed a data center to support science and medical affairs. He also designed data centers for JPMorgan Chase and security design offices and museum. Schwarz is so passionate about sustainability that he's trying to find solutions on his own, outside of work. He is developing a new wind turbine design and writing a chapter in a new book about sustainable laboratory design. Schwarz has a lot of documentaries with wife Kristin, even if they have a hard time agreeing. "When it comes to movies, we are always agree on Phillies baseball," said Schwarz, who has a 1-year-old son, Ryan.



### **Tina Schweizer, PE, LEED AP, 31**

Mechanical Engineer, PEDCO E&A Services Inc., Cincinnati  
University of Cincinnati, BS Mechanical Engineering

It started with a new project. Schweizer was the lead mechanical engineer for a new medical center at the Medical Center Liberty Campus. "They really live and breathe the outcome of the LEED philosophy at every level. They are very detail-oriented." One example: the hospital went beyond typical code requirements and improve infection control. Schweizer participated in Cincinnati Walks for Kids to help offset the costs of building the Liberty Campus. She encourages people to walk and get coworkers to join her. For the past 3 years, Schweizer has led a team of colleagues in the charity walk in a field of 400 fundraising teams. In her off time, the former high school shooting guard coaches a girls' basketball team and enjoys playing tennis and golf or watching almost any sport with her husband Dave, except NASCAR, "because she said."

### **Crista Shopis, LEED AP, 36**

Project Engineer, Taitem Engineering, Ithaca, N.Y.  
Cornell University, BS Civil and Environmental Engineering

A former collegiate rower, Shopis spent 2 years in the Peace Corps helping rural communities in Paraguay earn grants. The village children saved 3 to 4 hours a day that had previously been spent hauling water. This allowed the children to go to school when she wasn't playing D.J. with her eight-tape rotation on a Paraguayan radio station. Now the mother of two is looking for a building that doesn't require compressors or refrigerant and has the possibility of a zero-carbon footprint. The theory: split the solar-heated coil, and then transfer moisture from the nonheated airstream to the heated airstream, effectively char-



able to cool and dehumidify with groundwater. Shopis spends much of her free nonsectarian home schooling organization called The Northern Light Learning backyard.

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### Mark Skidmore, 29



Vice President and Manager of Engineering at Arizona State University, BS Mechanical Engineering. Most people probably expect a good meal conversation during a family holiday. For Skidmore, it was an improvement project. One Christmas, it was other holidays Skidmore and his extended

about getting together and working toward a common goal," he said. It's a reality. Working in the solar industry is something Skidmore's college professors told him to become a reality in his lifetime. "People just assume solar is too expensive, because that's what we're taught," said Skidmore. Instead, Skidmore has made it his personal mission to change that philosophy. He installed 12 solar panels for approximately \$400 a year. He served as a project manager for Frito-Lay's installation of 200 kW solar panels on its Habitat for Humanity volunteer, Skidmore helped install panels on five homes. "Money can be mismanaged and is like giving your time to someone."

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### Jeff Staub, 35



Application Engineering Manager, Danfoss, Baltimore  
Virginia Military Institute, BS in Mechanical Engineering

To put himself through college, Staub hitchhiked through Alaska. He arrived at the company and started working as a deck hand on a "Deadliest Catch"-style 42-ft deep-sea fishing vessel. Sleeping two or three hours a night, Staub would work for weeks, returning for home. Staub now oversees a team of 12 application engineers who work to make equipment reliable and energy-efficient in everything from vending and ice machines to supermarket refrigeration racks to commercial environmental climate chamber from the ground up to test air conditioning and refrigeration equipment. As a technician, Staub trained a team of six engineers who were launching a new product: thermostatic expansion valves that can increase efficiency of conditioning systems by 30% over the government rating. Staub gets his edge these days by riding a Honda Shadow Bay with his wife Kristin and their three children.

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### Rich Stump, LEED AP, 38



Vice President and Project Principal, Stanley Consultants, Muscatine, Iowa  
University of Illinois, BS Architecture; Massachusetts Institute of Technology, Masters of Architecture. For Stump, it's all about finding balance and a way to kick-start the day. "For some people it's coffee every morning, I'm not focused." With the seven-day-a-week schedule Stump typically keeps, he travels to many countries, many of which he has drawn on his sketch pad. His other way to relax: singing karaoke. Stump's Force captain has helped his company drastically expand its client base; re-enter Yemen, a country he had won new contracts in Italy, Japan, Guam, and the United Kingdom. Stump has led his company's construction management services to the Libyan government as part of its ambitious \$70 billion project.

to meet a person from another country, face to face, it helps break down barriers," he said. "It's very easy to stereotype and become friends."

### Robert Sty, PE, LEED AP, 34



Project Manager and Senior Mechanical Engineer in Technology Studio, Smith University of Illinois-Chicago, BS in Mechanical Engineering

This second-degree Judo black belt knows how to get into the game. In college, he went on to be a two-time Pan American Judo Champion in 2005 and 2006. But his real passion is in South Dakota and winning a pair of Phoenix Sun tickets in a three-man move by jumping into the air and landing in the splits. For a "confidential client," he is existing 56,000-sq-ft mission critical data center that needed to "build-out" its fire piping systems in addition to providing business development for the Technology Banner Page Hospital's eight-bed, 10,000-sq-ft emergency department addition. He also served as the 2006-07 president for the ASHRAE-Central Arizona Chapter. He works on MDA's Jerry's Kids, and works in the ACE mentorship program. He is engaged in a wedding scheduled in October.

### Paul Switenki, PE, 38



Associate, Mechanical Engineer, Arup, Seattle, BS in Mechanical Engineering from Penn State University, Bachelor of Architecture from University of California, Civil Engineering

Though he lives in California, Switenki knows hockey since age eight and has coached youth hockey. He is a mechanical engineer, the Mound-Westonka (Minn.) High School. He is designing, integrating, and coordinating local and arts and culture industry. As the project manager, he is overseeing the construction of the 97,000-sq-ft, 1,800-seat Arts on University of California-Davis's California Academy of Sciences building in Golden, Calif. The building incorporates exhibit space, aquariums, planetarium, and a theater.

He's also helped Arup deliver a templated hospital design for Kaiser Permanente. Currently, he's the lead project manager for California San Francisco's Mission Bay Medical Center, which incorporates a 289-bed acute care hospital, a 180,000-sq-ft energy center. Switenki met his wife Birgit on a sea kayaking trip in 2004. They now enjoy exploring playgrounds with their two children.

### Brandon Tinianov, 39

Chief Technology Officer, Serious Materials, Santa Clara, Calif.

Tulane University, BS of Mechanical Engineering; University of Texas, MS of Mechanical Engineering; Colorado State University, PhD of Mechanical Engineering. Tinianov jokes that he was raised by wolves. By the time he was 15, Tinianov had moved out of his home and was taking care of himself. "Helped by scholarships, Tinianov put himself through college by waiting tables at New Orleans's famed L'Ermitage. He was the only one who wasn't a professional waiter," he said. After college and a brief stint as a mechanical engineer at a local firm, he worked for six months in a 1973 AMC Jeep, reading books and camping outside. He now has his doctorate and is a product developer and commercialization of QuietRock drywall, the construction industry's leading soundproof drywall in the world. QuietRock drywall, which uses 80% less energy in the manufacturing of its core than gypsum drywall and uses 85% post-industrial waste. He worked on the first LEED-Certified low-income community housing complex in San Jose, Calif. He is married with two children.





### Ari Tinkoff, PE, 36

Vice President, X-nth, Maitland, Fla.

Penn State, Bachelor of Architectural Eng  
It's a good thing Tinkoff chose the profess  
but I hated chemistry," said Tinkoff, who n  
open heart surgery. It's also good that he  
only once. President Ronald Regan was c  
was told 'don't go behind the blue curtain,'  
and my locker was only four lockers behind  
backpack away and two guys stopped me  
Tinkoff, a father of two, enjoys going to the  
He serves as the Director of Business Dev  
worked as the project manager for Epic S  
Originally, the fast-tracked building was su  
changing five different times over the cour  
growing needs. The other challenge: typic  
weeks every year, user groups from all ov

population swells to 10,000. That meant adding air valves to the dedicated outdoor air system that could modulate 1 occupants in the building.

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### Mike Walters, PE, LEED AP, 31



Sustainable Market Leader, Affiliated Engineers (AEI), Madison, Wis.

Milwaukee School of Engineering, BS Architectural Engineering

You could say Walters was sparked by science at any early age. He was 10, p  
to adjust a light to see the court better. "I was standing in water when I grabber  
with a laugh. "I didn't understand, and I wanted to know why." These days Wal  
helping Cornell University—which produced 320,000 metric tons of carbon in 2  
With five main initiatives: go green on all new development, transition from fos  
energy conservation efforts in existing buildings, and a transportation demand  
carbon offsets. "It's a lofty goal because of the scale of Cornell's research facili  
campus to contribute," Walters said. "It can't just be a technology fix." A fan of

national parks with his wife Hilary and their two children. Despite living in Wisconsin, he likes the Washington Redsi

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### Jeremiah Watson, PE, LEED AP, 34

Associate, Plumbing Engineer, TRO Jung|Brannen, Memphis

University of Memphis, Bachelor of Science

Watson jokes that when he passed the PE exam he thanked God in his driveway for a long time. Now he's using th  
oversaw the plumbing and fire protection for the Salvation Army's Ray & Joan Kroc Community Center in Memphis.  
Silver certification, includes pools, a chapel, exercise area, theater, classrooms, and more. Watson's biggest challe  
building to reuse in a gray water system for the toilets. "I was trying to do something new and innovative and it was  
creatively route the piping halfway through the ceiling and below ground to spread it out to achieve the proper slope  
is the president of his college fraternity's (Omega Psi Phi) Shelby County alumni chapter where he raises awareness

the NAACP, St. Jude Children's Research Hospital, Habitat for Humanity, and youth ministry at Shiloh Baptist Church and tutors low-income students about the most outgoing engineer they've ever met."



### Nate Wittasek, PE, LEED AP, 36

Associate, Fire Protection Engineer, Arup, Worcester Polytechnic Institute, BS Civil Engineering. When it comes to work and play, Wittasek is a collegiate rower who loves kayaking, running, and eating grapes in the hopes of making his own wine. Wittasek, a "big picture guy," also loves to cook, play guitar, and is more of an art," Wittasek said. "My dad was an artist who made ceramics. I learned from him. As a Fire Discipline Leader, Wittasek is trying to bring a firefighter-assisted emergency evacuation to the next emergency. Wittasek, who has worked as a curator at the Guggenheim Museum in Abu Dhabi, and is now leading this new concept in West Hollywood's Pacific Palisades forward," Wittasek said. "But it is controversial to have elevators in a fire. But having elevators de-stacked out by cutting the evacuation time in half."



### Curtis Yokoyama, SE, 38

Principal Technical Specialist, Fluor Corp., Aliso Viejo, Calif. California Polytechnic State University, San Luis Obispo, BS Architectural Engineering. Yokoyama jokes that when he comes home from Fluor, the work begins. "I'm a father of three children—with wife Christi—who range in age from 7 years to 11 months. "My job and I'm the one who gives the kids their bath and puts them to bed." During the large multidisciplinary projects, typically in the energy and chemical industries

facilities. As the engineer of record, Yokoyama oversaw all design aspects of building a natural phenomenon barrier at a nuclear plant. The barrier will help prevent 300 mph tornado winds and flying automobile debris from destroying the house training class for new Fluor hires to ensure they understand building codes and the design of industrial structures. Yokoyama is a fanatic who is notorious for starting—but not finishing—projects around the house. After 9 months, he is still trying to get the stands now stands.

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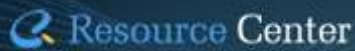
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