Volume 26/Number 1

The Bridge

The Clarkson School Newsletter

A newsletter for alumni, students, parents and friends of The Clarkson School, a special division of Clarkson University for talented and accelerated high school students.

Winter 2009

THE Clarkson School

Upcoming Dates

Dec. 7-11 Final exams

Jan. 6 Returning students check-in

Jan. 7 Classes begin (8 a.m.)

Feb. 10 Break begins (6 p.m.)

Feb. 15 Classes resume

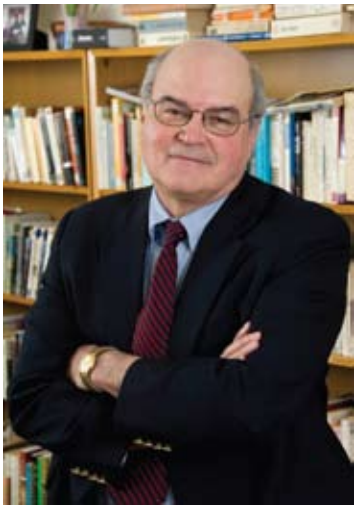
Mar. 12 Spring recess begins (6 p.m.)

Mar. 22 Classes resume

Apr. 26-30 Final exams

May 8 Commencement

The Fall Semester at The Clarkson School



David Craig

Dear TCS Parents, Alumni and Friends,

Since the beginning of The Clarkson School, its students and alumni have embraced the future and welcomed its challenges.

This issue of *The Bridge* celebrates with the stories of Adia Barreau's TCS '00 work at the Kennedy Space Center, Emily Stefano's TCS '08 research on the physics of the MegaRamp, and Scott Robinson's TCS '09 trip to Uganda. Exciting stuff, but also typical of the adventures and challenges taken on by our students and graduates.

In TCS itself, we also tackle the problems of the future, notably those that come with economic uncertainty and changing times. When TCS was founded, there were few AP courses, no online learning, and a handful of similar programs. Now, there are many pathways to earn early college credit. As with many challenges, this one creates opportunity and invites innovation.

Building upon our distinguished tradition, we are committed to enhancing what The Clarkson School offers. Among other TCS opportunities, we will add a summer research option, a fast-track way into Clarkson's Honors Program, and a skills-building program, all leading to the compilation of a portfolio to document the year's accomplishments. All of these efforts are in keeping with the spirit of TCS — develop the skills with which our students can thrive in college and after.

You'll be hearing more about these innovative developments. In the meantime, please stay in touch, adding your stories to the TCS community and its legacy.

David Craig
Headmaster of TCS and Director of the Honors Program

Ask a TCS student ...

What do you like best about TCS? … I can take college-level courses and still participate in clubs and sports at my high school — which isn't far away.

What has been your biggest surprise about TCS? … the nice dorms.

What has been your biggest challenge? … the large volume of reading expected for most of my classes, a significant change from what's expected in high school. — *Marty LaFleur, TCS '10*

www.clarkson.edu/tcs

Life After TCS

by Adia Barreau

TCS alumna Adia Barreau with Commander Mark Polanski (l) and Pilot Doug Hurley (r), members of the STS-127 flight crew.

After a fabulous year at The Clarkson School, Class of 2000, I traveled to Daytona Beach, Fla., where I attended Embry-Riddle Aeronautical University. From optics to linear algebra to quantum mechanics, I studied at Embry-Riddle for four years and graduated with a bachelor's degree in engineering physics in 2004.

I had to use the perseverance and determination instilled in me at The Clarkson School during the two years after graduating from Embry-Riddle. Between September 11th and the Space Shuttle Columbia disaster, my goal of having a career in the space program was looking very dim. Interviews were few and far between. But I continued to envision my dreams, and I finally landed a job with United Space Alliance at Kennedy Space Center, Fla., in November 2006.

Working at the Space Center has been an exciting adventure over the past three years. Watching what may be the greatest human technical engineering feat, the space shuttle, launch three miles from your desk; feeling those solid rocket boosters rumble never gets old. I currently work for the Launch and Recovery Systems Design Engineering Department as a design engineer for the Fluid/Thermal Systems Group. I design and maintain facility pneumatic systems at different operational areas around Kennedy Space Center, such as the Vehicle Assembly Building and at the Launch Pads. As a part of my group, I have been able to support shuttle launches in the Launch Control Center on the Hazardous Gas Console, which monitors the fueling of the External Tank.

I enjoy my future with the space program, however uncertain it may be, but I have many talents that must be expressed. So, I have also been working on some side projects. All of my yearbook experience since middle school through college turned into doing interior book design and cover design for various authors all over the world. I recently designed two books — *Get the Picture, You are M.O.R.E.* and *We Think This ShTuff Up!* — for an author in England, both of which are in the process of being published. I am also helping to launch a fledgling publishing company.

Overall, I have been busy living and loving life. I have been supported along the road by friends, family and my loving husband, DeAvalon, whom I met at Embry-Riddle. We just celebrated our two-year wedding anniversary!

I am very excited to become a TCS ambassador. I enjoyed my year at TCS and I hope to inspire other young people like myself that have outrageous goals like mine to go forth and conquer their education in unique ways.

(l-r) Prof. Lado with students Cristina Trevarrow '12, Scott Robinson TCS '09, Mariela Gomez '12, Kimberly Loucks '10 and Brittnie Carroll '10.

In May, TCS student Scott Robinson '09 (third from left) finished his year at The Clarkson School with a two-week trip to Uganda to look at micro- and small business development in the East African country. Robinson joined four Clarkson University students and Augustine Lado (left), professor of Consumer & Organization Studies in the School of Business, to learn firsthand about the development of micro-businesses and the support network of micro-loan companies and nonprofits, government agencies and distribution outlets. The trip was the final chapter in a Global Business Experience course taught by Prof. Lado in the spring. The students spent time at three companies: Mukono Vanilla Spices & Horticulture, Gumutindo Cooperative Coffee Enterprise, and Numa Feeds, which processes animal feed and human foodstuff. The visit also provided a window into the culture of doing business in Africa. "It was interesting how the vanilla spice company ran for example," said Robinson. "It was different than how it would be run here. Although the entrepreneurs work very hard, the whole culture of business seems much more laid back, less frantic."

TCS Grad Takes on Skateboarding's Biggest Challenge

For the past four years, skateboarding has been a passion for Emily Stefano TCS '08, a mechanical engineering junior at Clarkson University. Now, it's also the basis for her Honors thesis.

Emily Stefano, TCS '08

With her project, "The Physics and Engineering of Skateboarding's MegaRamp," Emily Stefano hopes to advance skateboarding by redesigning one of its biggest and most challenging competitive structures: the MegaRamp.

The MegaRamp is the world's largest skateboarding structure, used by skateboarders and BMX bikers in competitions such as the X Games. It consists of a 50- or 70-foot long "roll-in" leading to a 50- or 70-foot gap, followed by a 30-foot-tall quarter-pipe. Athletes ride down the steep roll-in platform to gain speed in order to perform tricks over the gap and on the quarter-pipe to complete a "run."

"My dad sent me a video of the MegaRamp one day when I was at school and asked if anyone had ever looked into the physics of it," explains Emily. "Unlike most other structures of this scale, the MegaRamp didn't start out grounded in scientific knowledge or from a set of fully engineered plans. Instead, it was designed by professional skateboarder Danny Way based on his experience and knowledge."

In its current design, performing on the MegaRamp can be risky due to the speeds the athletes must reach and forces they must endure in order to perform well. In the last few years, concerns have been raised about the ramp's safety based on the number of injuries associated with it.

Emily Stefano working on her formula for the better designed ramp.

Emily decided to study the physics of the ramp and to develop calculations that would result in a better engineered — and safer — design. She contacted the builder of the ramp, John Tyson of California Ramp Works, who immediately saw the potential benefit in her research. Tyson then helped Emily get in touch with MegaRamp so she could make her proposal. After working out the legalities of the situation, the MegaRamp team gave Emily the raw data she needed, including the dimensions of the ramp, which called for the signing of a nondisclosure agreement.

Emily needed a way to see and record real skateboarders' movements on the MegaRamp to accurately make her measurements in the laboratory. She was invited by MegaRamp to videotape pro skateboarders while they practiced for the X Games in California. Over a two-week period, Emily was able to get all the footage she needed.

Now back on campus, Emily is putting it all together. "I'm trying to put an equation to the ramp to figure out how it could be built differently to make it easier for the athletes to use," says Emily. First, she will build a scale model of the MegaRamp and experiment with weights in different locations to learn the effects of center of gravity on the ability of a skateboarder to land tricks on the ramp. This will help to isolate the effects of friction and air resistance in the equations.

Next, Emily will use the video footage to find the effects of other body movements of the skateboarders that cannot be mimicked with a scale model, leading to an equation that accurately models the path of a skateboarder on a ramp. Using the equation will help Emily learn the effects of changing certain dimensions of the ramp and allow her to find the best ones.

Finding these dimensions will also allow Emily to scale the ramp, which may just give pro skateboarders like MegaRamp inventor Danny Way what they really want: bigger ramps and a bigger challenge.

But for now, it's one step at a time for Emily, who is eager to resume her research in the lab. "I'm excited to see what I can accomplish now that I have all the pieces to the puzzle," says Emily. "I'd love to continue with similar work in the future so my job can be just as much fun!"

Alumni News Update

David T. Huang, TCS '95, recently married and is an epidemiologist for the CDC's National Center for Health Statistics just outside of Washington, D.C. He has also run several marathons (including Boston, New York City, Marine Corps - D.C., and Chicago).

Britt Mitchell, TCS '95, is at the College of the Marshall Islands (in the middle of the Pacific Ocean) after accepting a faculty position in 2006. She has kept a blog about her experiences in the time she has lived there, which can be found at http://flobiegirl.blogspot.com.

Jason Dorsey, TCS '96, is a keynote speaker and bestselling author. To find out more about Jason, check out his Web site at www.jasondorsey.com/.

Cord Farmer, TCS '97, is having fun being a Badger, as he is now the coach for the University of Wisconsin's soccer team.

Rusty Lowder, TCS '98, worked as a contract firefighter in Iraq starting in October 2005. He provided fire protection services for Al Taqaddum Air Base.

Peter Oneppo, TCS '98, wrote in to share his e-mail address peter@oneppo.com.

Leah Agnew, TCS '01, graduated this past May from Syracuse University with an M.S. in Nutrition Science and Dietetics and is now a Dietetic Intern at Emory Healthcare in Atlanta, Ga.

Sheena Adams, TCS '02, is at the University of Penn Medical Center working in the emergency room.

Nancy Fullman, TCS '03, ran in the New York City Marathon this fall, running with the nonprofit organization Malaria No More. Nancy and her teammates raised more than $5,000 to buy bednets for the malaria endemic country of Senegal.

Jonathan Bott, TCS '06, is majoring in Chemistry with a minor in Computer Science at Rose-Hulman Institute of Technology in Indiana.

Mike Grosky, TCS '08, is studying for a semester at City University in Hong Kong. He will be graduating in May with the Class of 2010 and is considering different possibilities, including Law School or an MBA.

Robert Dufek, TCS '09, transferred to Cazenovia College and is enjoying his new studies of Criminal Justice and Homeland Security.

Brenda Kozsan '87, '90 MBA
Associate Head of School

Brenda Kozsan Returns to The Clarkson School

Brenda Kozsan, associate head of school, returned to The Clarkson School this past July after working in the Graduate Business Programs Office at Clarkson. For TCS alumni who may remember Brenda, she was the director of academic and student affairs at The Clarkson School from 1994 to 2000. Since her return, she has reconnected with many alumni from those years and is getting to know alumni from 2000 and on as well as our current students.

She says, "After working in admissions for nine years, I returned to The Clarkson School because I missed the day-to-day interaction with students. I have very fond memories of students I worked with in the past and getting back in touch with them has been wonderful."

Brenda encourages alumni to contact her if they are interested in mentoring current and future Clarkson School students as part of the Alumni and Current Student Ambassador Program. She would love to hear from all of you! E-mail her at kozsanbd@clarkson.edu or head to The Clarkson School Facebook page to connect with her and your former classmates!

The Clarkson School

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