Message from the Chair

I invite you to take a look at our latest edition of the Nautilus, which highlights some of our accomplishments in Naval Architecture and Marine Engineering during 2013-14. In this issue, we highlight two programs that help our students prepare for careers that go beyond classroom instruction.

Design and construction of ships and offshore structures is an international business, and our students must be prepared to work with colleagues and partners from all across the globe.

Summer internships have always been a great way for students to gain real-world experience and connect with potential employers. Today, we are striving to provide international internship opportunities. NAME students have recently spent summers in Korea, China, Brazil, and the Netherlands, for example. While their sponsor often underwrites the local costs of internships, NAME has been using gift funds to help defray the cost of international travel. Our goal is to provide at least one international internship opportunity for all of our students before they graduate. Our internship program is highlighted in this issue.

NAME has a strong relationship with the U. S. Navy that goes back to the founding of our department in the 1880’s, and many of our alumni have become prominent naval engineers. However, the need to recruit and train the next generation of naval engineers is acute, as many scientists and engineers recruited during the Reagan Era defense buildup are now retiring. To that end, NAME is leading the Naval Engineering Education Center (NEEC), a program supported by NAVSEA, to develop future naval engineers through project-based education. The NEEC has over 20 partner universities engaged in over 30 student projects, engaging with warfare centers across NAVSEA. We expect to have around 200 undergraduate and graduate students on projects this year, and impact many more through curriculum development and other outreach activities. In this issue, we have a profile of NEEC Associate Director Rick Vanden Heuvel CAPT, USN (Ret).

And, as always, our alumni continue to be a strong source of support for our students and faculty, and I would like to thank all of you who have continued to play a part in the life of our department. In this issue we profile Mr. Bruce Rosenblatt, a steadfast friend and supporter of NAME, and the Chair of our Advisory Board. We invite you to let us know about your accomplishments and future plans, and you are always welcome to visit us in Ann Arbor.

Thanks you your interest and support of NAME, and Go Blue!

Steve Ceccio
NAME Department Chair
FEATURES

From the Chair

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Bruce Rosenblatt:
Continuing a family legacy by land and sea
Emeritus Harry Benford was memorable, Rosenblatt said, as was taking a course Benford taught on maritime economics. And during his first week on campus, Rosenblatt got involved in the Quarter-deck Society, the U-M student chapter of the Society of Naval Architects and Marine Engineers (SNAME). Early on, he attended meetings; soon, the student organization elected him commodore.

Rosenblatt's involvement with SNAME has continued. An Honorary Member and Life Fellow, he was elected the Society's youngest president and is its second youngest Land medalist. "My father was the influence to join when I was an undergrad," Rosenblatt said of Lester, who also served as SNAME president and also won the prestigious Land Medal. "Being active in SNAME has had an effect on me personally and on my career that continues to this day." Rosenblatt's involvement in professional societies is not limited to just SNAME. Among others, while a student at U-M, Rosenblatt joined The Royal Institution of Naval Architects (RINA). Now a Fellow of RINA, it was recently announced that Rosenblatt will become the next President of RINA, the first RINA President from outside of the United Kingdom.

After graduating from U-M with his NAME degree in 1983, Rosenblatt joined the family firm. He headed to Newport News, Virginia, a few years later to run the company's largest office. He brought the 210-person location back to profitability within less than a year and returned to the New York office. "That experience was a real game-changer for me," he said. "It was a huge confidence builder and the chance for me to notice some early signs of entrepreneurship."

Rosenblatt went on to earn a master's degree in business administration from Pace University and, soon after, at just 36 years old, took over as president of M. Rosenblatt & Son, continuing the design tradition of his father and grandfather.

The broad scope of work commissioned to M. Rosenblatt & Son over the years is hard to fathom.
DESIGNING THE FUTURE

The company’s storied history is what prompted Rosenblatt to re-establish M. Rosenblatt & Son in 2008, eight years after it had been sold. Bruce continues the legacy of Mandell and Lester through Bruce S. Rosenblatt and Associates, a design firm with a staff of more than 40. Bruce also continues Lester’s legacy of volunteerism and philanthropy in support of the NAME department.

For 55 consecutive years, Lester, who passed away in 2003, and Bruce have organized U-M NAME alumni reunion dinners at the annual SNAME meeting. It is at that event that the Rosenblatt-Michigan Award is bestowed to a College of Engineering graduate in recognition of outstanding professional achievements. Lester endowed the award in 1992. In 2012, Bruce was selected a recipient.

“I really cherish that award,” Rosenblatt said, “in part because my family name is on it, but more so because my father started it to recognize alumni who’ve done a lot for the industry and for the College. To be chosen based on those criteria means a lot to me.”

Rosenblatt has also led the NAME department’s Alumni Advisory Board for many years, and he’s an enthusiastic and oft-sought mentor of undergraduate and graduate students alike. “I don’t claim to have all the answers,” he said. “But I help students ask the right questions and to think about their priorities so they can make good decisions.” Many of his mentees have gone on to earn graduate degrees and land coveted jobs. “They’ve done very well, and that’s satisfying.”

The three generations of Rosenblatts also have supported students through the Lester and Mandell Rosenblatt Scholarship, which was endowed in 2003 by Lester’s estate (see sidebar).

“I love Michigan, and I really care about this industry,” Bruce said. “I grew up in an environment of giving back, and for me the best way to do that is to help students and young professionals. They’re the future.”

Rosenblatt is as optimistic about the future of the industry as he is about the caliber of students in the Department. “Naval architecture and marine engineering is a very good, satisfying career. Our graduates tend to get jobs right away, and many of them have their choice of jobs. The industry is smaller now than when I graduated due to consolidation, but there are still many strong companies out there, with new ones starting every day. It’s a great industry for people to get into.”

Just like his father and grandfather told him it would be.
Summer Learning

Students Bring Their NAME Education to Life With Internships
FROM BRAZIL TO CALIFORNIA, NAME students are seeing the concepts they’ve learned in the classroom come to life. During the summer of 2013, 70 students participated in a summer internship/research experience, gaining invaluable hands-on knowledge while they earn their degrees and consider career directions.

“Internships really lay the foundation for students to excel in the real world,” said Undergraduate Staff Advisor Warren Noone. “Having a summer internship allows students the chance to explore career opportunities without risk. An internship provides a ‘preview’ of either a specific company or a specific subfield within naval architecture or marine engineering. Integrating classroom experiences with relevant work experiences also helps them become more well-rounded engineers.”

CHANGING COURSE
Students themselves are seeing the benefits firsthand. Louis Schaljo (BSE ’14) interned in Houston at Shell Oil Company in the civil and marine engineering group, whose projects focus on semi-submersible and floating production, storage and offloading vessels. Despite pre-internship worries of being under qualified for the work he might be asked to do, Schaljo successfully contributed to a number of projects. He calculated response amplitudes of semi-submersibles at various operating conditions.

At the end of the summer, Schaljo gave a formal presentation on his work. But the benefits of his experience didn’t end in August; they continue to shape his education back on campus. “Now I’m orienting my course load to be more focused on offshore design,” he said.

GETTING IN THE YARD
Shane Malone (BSE ’14) and Brad Lorant (BSE ’14) interned at General Dynamics NASSCO in San Diego in the Initial Design Naval Architecture department. Prior to arriving, Lorant said he was worried he might be cooped up in an office all day, but that was hardly the case.

“We made frequent trips to the shipyard, where we did weight checks and fire safety plan work on the Mobile Landing Platform (MLP-1) Montford Point,” he said. Both he and Malone worked on every active project at NASSCO, which included tasks such as scheduling, general arrangements checks, procurement, fire control plans, launch data analysis, supporting coastwise trade certification for a container ship and writing a white paper on ship survivability.

Now Lorant is applying what he learned in San Diego to his senior classes. “Everything from the software I used to the ship design process and how to approach complicated problems — the internship was a fantastic supplement to my education. Once you see the processes you learn about all year applied in a real world scenario, it just clicks. It also got me very interested in working in a shipyard once I graduate,” he said.

Malone, too, is seeing the impact of his summer work. “The internship allowed me to have more insight into the problems I do in my classes. It definitely improved my overall NAME experience and made me realize all the opportunities there are in our field.”

DESIGNING ON DEADLINE
Winn Curry (BSE ’14), Will Cyr (BSE ’14) and Cody Oeung (BSE ’14) interned at the INACE (Indústria Naval do Ceará S.A.) shipyard in Fortaleza, Brazil, where they worked — on a tight deadline — on a high-speed, 500-passenger ferry destined for Rio de Janeiro and the 2016 Olympic Games.

“After six semesters of coursework, I still had never been to a shipyard where my education could be specifically applied,” Oeung said.

That quickly changed when Oeung arrived in Brazil and began checking hydrostatics and computing flooding analysis to ensure the designs, drawings and specified equipment associated with the ship adhered to maritime standard...
features

regulations. He also assisted with propeller matching, cavitation analysis, shaft sizing and developing the ship’s stability report.

Cyr designed the ferry’s rudder and propeller, currently undergoing model testing at a Polish research facility. He also designed the midship to meet classification society rules.

Often, he worked with the lead engineer/naVAL architect. “I gained a vast amount of knowledge from him. He was basically an encyclopedia,” Cyr said.

But the highlight came when Cyr saw his managers poring over a propeller selection publication written by NAME Professor Michael Bernitsas.

“When I recognized what they were doing, speaking Portuguese of course, I said, ‘Wow he taught me!’” Cyr recounted. “I then offered to help, which turned into me taking over the propeller selection project, including the analysis. About a week after submitting it to the vessel owner, an industry consultant [validated the analysis] and congratulated us on a job well done.”

The summer experience ignited a passion in Cyr for ship design and hull optimization. “I’m hoping to begin a career in it next year,” he said.

REAL CONTRIBUTIONS
During her internship with SAFE Boats International in Tacoma, Washington, Lauren Cromer (BSE ’15) spent several weeks focused on a forensic weight analysis of a high-speed coastal patrol vessel.

“The total weight of the vessel was significantly underestimated during the proposal and contracting phase of the project” she explained. “My job was to analyze the structure and components of the vessel in order to understand where this increase in weight may have come from.”

That led to work on a new vessel that had just begun production, for which she helped develop and update a weight control plan. “It really forced me to understand the systems that go into a

Captions (clockwise from left): Senior Louie Schaljo Visiting Shell’s Olympus TLP in Corpus Christi, TX; Shane Malone and Brad Lorant interning at NASSCO aboard the Montford Point; Senior Kevin Schumaker volunteering while interning at Chevron; Senior Will Cyr underway in Brazil while interning at INACE Shipyard.
It’s never too early to start the process of landing an internship. According to Undergraduate Staff Advisor Warren Noone:

- Have your resume ready in the fall so you can apply to internships as early as possible.
- Keep abreast of events where you can meet potential sponsors, such as those hosted by the Quarterdeck Honorary Society. Presentations focus on individual companies, industry trends and internship and employment opportunities.
- Don’t be afraid to follow up with a potential internship sponsor.
- Apply for multiple internships. These positions can be very competitive, and limiting yourself in the application phase can result in not getting an offer at all. Having multiple offers to choose from is a much better situation.
- Keep an open mind, and apply to opportunities and companies outside of what you would consider your primary interest.
- Use the internship as a way to define your career goals.

Sponsoring interns can serve a company in many ways, according to Undergraduate Staff Advisor Warren Noone. “Internships allow a company to see what kind of potential employee a school is producing and can serve as an extended job interview, if you will. Companies have the opportunity to see how a prospective hire performs in different areas of a company, with relatively low risk.”

If your company is interested in sponsoring one or more interns, Noone has the following recommendations:

- Come visit the Department. The Quarterdeck Honorary Society hosts sponsor visits and arranges company presentations beginning in mid-September through the end of the academic year.
- Consider attending one of the College of Engineering’s career fairs, held the last week of September and January every year. For more information, visit the Engineering Career Resource Center website at www.career.engin.umich.edu/studalums/career-fairs.
- Contact the NAME Undergraduate Office at (734) 764-6471. “We are always looking for opportunities for our students, no matter the time of year,” said Noone. The office works with sponsors to advertise internships and other positions and can assist with developing and distributing job postings. The Undergraduate Office also helps sponsors collect student resumes and screen applicants and can follow up with students on the sponsor’s behalf.

Ready to be a sponsor or have other questions? Contact Noone at nooner@umich.edu.
FEATURES

THE EXCITEMENT IN Associate Professor Yin Lu (Julie) Young’s voice is audible as she talks about the courses she teaches. And her passion is contagious; many students who take Introduction to Marine Engineering (ENG100) with her go on to declare Naval Architecture & Marine Engineering as their major.

“Not many students actually know what Naval Architecture & Marine Engineering is when they start the course as a freshman. I want to get them excited. I want them to see how exciting this field is,” she said. “And, I want to challenge them.”

Challenge she does. Young admits she can be hard on students. “I have high expectations. I like to teach them the skills necessary not just to succeed academically but also to survive in the real world. They have to know how to ask the right questions and be able to tell if the answers make sense. Just because the computer generates a solution doesn’t mean it’s right. Those skills aren’t taught in textbooks.”

Young is a strong believer in and proponent of project-based learning. In ENG100-600, students work in teams to solve realistic and complex problems. In one project, students build a model-scale bathysphere that must descend one meter of water and ascend by itself. “But students aren’t allowed to drop weights,” Young quickly adds.

In another project, student teams design and build submersible remotely operated vehicles that must locate, and close, an underwater valve or find a material sample and then collect and transport it across a set distance underwater. “It has to be done by camera mounted on the vehicle with the control system they designed; students aren’t allowed to look into the water,” Young

Professor Julie Young: Exploring Creative Solutions in the Lab and the Classroom

ENG100-600 students getting their ROVs ready for the ROV competition at the Canham Natatorium on 04/14/2013
explained. “And they have to race against human swimmers in the finale.”

It may sound daunting, but Young encourages creativity and gives students the freedom to explore all sorts of solutions. “I really love seeing the different ideas students come up with,” she said. And she loves that “aha moment,” when students make the intellectual connections between the principles they learn in lecture and the hands-on application to their projects.

Young’s teaching has been recognized with a number of awards, including a 2013 departmental achievement award and the Outstanding Faculty Award from the Quarterdeck Society in 2012. While at Princeton University, she landed a spot on the Princeton Engineering Commendation List for Outstanding Teaching in 2008 and won a junior faculty award in 2005.

Young brings a similar sense of creativity, possibility and rigor to the research she conducts in her laboratory. Through numerical and experimental studies, she explores the fundamental physics that govern how flexible bodies interact with surrounding fluids.

“Most natural structures — birds, fish, plants, heart valves, blood vessels — are flexible and an ingenious composition of different materials that allow them to change in shape and/or stiffness according to function — gliding, speeding up, slowing down, making quick turns to evade capture or to catch prey,” Young explained.

“By understanding the fundamental physics that govern how such flexible bodies interact with the flow around them, and by taking advantage of advances in materials as well as active and passive control techniques, we can develop a whole new range of energy-saving and energy-generating devices with incredible function, agility and range,” she added.

Most of the applications Young focuses on involve marine/ naval propulsion devices, such as integrated propulsion systems and flexible, composite propulsors that automatically change shape to better align with the flow. As of January 1, 2014, the United Nation’s International Maritime Organization is instituting a new energy efficiency design index for new merchant vessels over 400 tons. “A lot is riding on improved propulsion. It’s a very interesting, good time to be working in this field,” she said.

Young also applies similar concepts to marine current turbines in order to improve energy capture and structural safety, as well as to devices that harvest energy from ocean waves and other currents. That often means investigating novel materials, such as newer ionic metal composites and embedding electroactive materials.

“There have been a lot of great advances on the materials side recently, and we need to broaden our perspective to use them to improve on many fronts: efficiency, flexibility, maneuverability, vibration and noise reduction and shock absorption,” she said.

Young’s master’s-level research focused on solids, while her doctoral research centered on fluids. The combination led her to the holistic approach she takes today. “In reality, a lot of things function in both mediums. To understand how fish really swim or birds really fly, you have to understand those solid-fluid interactions. We’re at a stage computationally and experimentally where we can look at both, and we can take advantage of advances in materials to tailor properties and make devices and systems perform better and more efficiently than they currently do.”

Young has led major, multidisciplinary research projects with colleagues from around the country and world. Her laboratory includes both undergraduate and graduate students, and she says it’s rewarding to see their transformation over time. “Not only academically, but you see them mature in how they present themselves, how they think about and solve problems, and how they interact with others. Some of my students are professors now themselves, and that’s really cool.”
WITH ASPIRATIONS OF BECOMING a commercial airline pilot, Rick Vanden Heuvel never imagined that setting off for flight school in the early 1980s would lead him to a 30-year career with the U.S. Navy. Or that it would be a Navy career that brought him back to Michigan.

“Every time I came to a decision point [to leave the Navy], I was doing something that I felt was important and I was still having fun. I’d think, why would I want to give this up?” said Vanden Heuvel, who now serves as the associate director of the Naval Engineering Education Center (NEEC) at U-M. (See sidebar on the NEEC’s mission and research.)

During much of his naval career, Vanden Heuvel flew the E-2C Hawkeye from aircraft carriers the world over. He commanded the “SCREWTOPS” of VAW-123 deploying aboard USS Theodore Roosevelt (CVN-71) six days after Sept 11, 2001. He also led the squadron during combat operations for Operation Enduring Freedom in Afghanistan, during which the ship and squadron spent 160 continuous days at sea. Although he was based primarily out of Norfolk, Virginia, for most of his career, “There isn’t an ocean I haven’t been on,” he said, adding, “but that’s not unusual for a naval officer after 30 years.”

Vanden Heuvel also served as ship’s company officer for three aircraft carriers in various positions, with his final assignment as the operations officer aboard the USS Dwight D. Eisenhower (CVN-69; a.k.a. “IKE”). “You’re kind of like the chief operating officer of the carrier in that role. You’re responsible for coordinating everything the carrier does — where the ship will go and operate, scheduling and conducting flight operations, weapons loading, underway replenishment, damage control drills and training, etc.”

Taking Off: NEEC Associate Director Sparks Interest in Naval Careers
There was never a typical day, Vanden Heuvel said. “Most of the time, I was just trying to balance all the moving parts!”

Throughout his career, each assignment honed a valuable skill: the ability to be flexible and adaptable. “You have to go through the planning process to know what’s coming and what options you have,” said Vanden Heuvel. “That gives you flexibility to react when things don’t necessarily go according to plan — they rarely do.”

It’s a skill he has put to good use in all of his roles. After serving as IKE’s operations officer, he was assigned as Director of Strategy and Policy for Naval Forces Europe and Africa and was stationed in Italy for two-and-a-half years. There he was responsible for determining which European and African countries the Navy would operate and train with.

In 2008, after leaving Michigan to attend flight school 26 years earlier, Vanden Heuvel was assigned by the Navy to serve as Commanding Officer for the Naval ROTC program at U-M. As a professor of naval science, he taught courses on leadership and ethics. He loved working with students and teaching.

“Coming back to Michigan in an academic environment, after all the experiences I had, allowed me to remember why I joined the Navy in the first place so many years ago — the energy, the excitement, the fact that I could now help undergraduate Midshipmen understand the environment they signed up for was very exciting and very rewarding,” he said.

Retiring from the Navy in 2012, Vanden Heuvel still sees that excitement in his role with the NEEC. He acts as a liaison among students, 15 partner universities and the Navy to provide hands-on, project-based engineering education to pique students’ interest in a civilian naval career.

Not surprisingly, his favorite part of the job is working with the students and seeing their successes. In the NEEC’s short history — it launched in 2010 — already nearly 300 students across the 15 university partners have been assigned to work directly on Navy projects. Twenty-five have been hired by the Navy after earning their degrees.

And the NEEC is poised for continued growth. Vanden Heuvel says the center has plans to add four to six more university partners in the coming year; initiate relationships with several additional Navy warfare centers; continue to refine an online Naval Engineering curriculum that students at any of the partner universities can access; and add continuing education programs for Naval Sea Systems Command (NAVSEA) employees. He is also assisting in the development of a minor in Naval Architecture and Marine Engineering here at U-M.

Vanden Heuvel is enthusiastic about being part of a trend he sees growing every day: the expanding multidisciplinary nature of engineering. “Students in other engineering disciplines, say computer science or electrical engineering, never would have thought about working in a shipyard, but those engineering skills are as much in demand in the maritime industry as naval architects. That’s part of the evolutionary change I’m seeing — students who never were exposed to it before now have that opportunity through the NEEC experience, which is very exciting.”

NEEC at a Glance

Naval Engineering Education Center

Mission

To provide multidisciplinary, project-based education to develop talented engineers that will lead the Navy forward.

The University of Michigan serves as the administrative hub for NEEC and is one of 15 NEEC partners.

NEEC Partners

University of Michigan  University of New Hampshire
University of Arizona  University of Rhode Island
Boston University  Georgia Tech
MIT  Penn State
Florida State University  Florida Atlantic University

Tennessee State University  Old Dominion University
Virginia Tech  University of California-Riverside
Iowa State  University of Washington
University of New Orleans  University of Texas - San Antonio
Webb Institute  Stevens Institute

NEEC Research

Through the NEEC, students work closely with university faculty and Naval Surface Warfare Centers around the United States. More than two dozen projects are underway, from quantifying how ocean waves affect ship hulls and building a miniaturized railgun system to the development of a jet-assisted hydrofoil for special operations.

“Our ultimate goal,” said NEEC Associate Director Rick Vanden Heuvel, “is to get students excited about Navy projects. The students get to travel to warfare centers, sit in on meetings and meet the engineers who are no-kidding-really-doing-this-stuff. We want the students to ask, ‘Okay, now how do I get a job here?’”

For more information on the NEEC visit www.goneec.org.
Hello, from Quarterdeck:

For the past few months I have had the pleasure of being the Commodore of the University of Michigan’s Quarterdeck Honorary Society, a student-led organization dedicated to serving the students of the Naval Architecture and Marine Engineering department.

QUARTERDECK PROVIDES OPPORTUNITIES for members to advance professionally, gain a better awareness of our industry and build a valuable network of fellow students as well as industry professionals. All of this is accomplished through activities such as presentations, industry-related field trips, attendance at the Great Lakes/Great Rivers Society of Naval Architects and Marine Engineers (SNAME) section meetings and the SNAME Annual Meeting, volunteer opportunities, mentorship pairing and social events.

One of the major highlights for students involved in Quarterdeck is the SNAME Annual Meeting. Last fall, 26 students had the privilege of attending this meeting, held in Providence, Rhode Island. They participated in a design competition, attended technical presentations, explored the expo hall and networked with industry professionals at the conference banquet and Michigan Alumni Dinner.

Over the past year, student groups also attended the SNAME Great Lakes/Great Rivers Section meetings in Ann Arbor, Cleveland and Chicago. At these meetings students learned the potential impact of liquefied natural gas (LNG) as a fuel source within the marine industry—especially within the Great Lakes region.

Another highlight of the past year were tours of Interlake Steamship Company’s general operations and ships undergoing winter repairs. In March, 10 students toured the M/V Lee A. Tregurtha and the Str. Herbert C. Jackson. This was a truly valuable experience, especially for the juniors who had spent the previous semester studying similar propulsion systems in Marine Engineering I (NA 331).

In August, six NAME students took a short cruise on the bulk ore carrier, Kaye E. Barker. Accompanied by Dale Miller, Interlake Steamship Company fleet engineer, students were ferried out to the ship while it passed under the Ambassador Bridge. The trip culminated with a walk out to the end of the Barker’s 250-foot self-unloading boom while she was offloading 6,000 tons of ore per hour.

In early March, eight students spent their spring break at Ingalls Shipbuilding in Pascagoula, Mississippi, learning about the ship production process. March also brought the annual Detroit Area Pre-College Engineering Program (DAPCEP). Each year, several middle school students from the Detroit area are hosted by Quarterdeck and learn about naval architecture, take tours of the Marine Hydrodynamics Laboratory and participate in a design-build-test project.
Captions: from left to right, The Quarterdeck membership was well represented at the 2013 Spring Banquet; A few members braved the cold during a March visit to the Interlake Steamship Company in Cleveland, Ohio; Professor Kevin Macki mixing it up at a Quarterdeck “Whirly-Ball” match.

The service chairs of the Quarterdeck Society also have been busy planning successful social and volunteer events throughout the year, including a trip to the Detroit Boat Show, whirlyball competitions, intramural sports and a welcome-back picnic. The group is looking into adding a fall volunteer event to increase Quarterdeck’s community involvement.

At our annual spring banquet, Quarterdeck presented Rick Spaulding of Ingalls Shipbuilding with the Honorary Commodore Award for his continuous support of the Quarterdeck Society and the important role he’s played in organizing the Ingalls Shipbuilding spring break trip for the past two years.

The Quarterdeck Society would like to acknowledge all our NAME alumni and friends for the many ways you have supported the Society. The great opportunities and experiences mentioned above would not have been available to the students without your help. Thank you for your dedicated involvement.

Sincerely,
Jonathan Holbert
Commodore of the Quarterdeck 2012-2013
jonathpa@umich.edu

Who to Contact
Need to speak to someone in our Department? Warren Noone is one of the many talented staff we have at NAME. Here is a roster of important contacts:

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STUDENTS
Swimming Lessons
NAME grad Valerie Barthelemy Applies Pool Learning to Academics and Life
AS VALERIE BARTHELEMY EMBARKS UPON her master's studies this fall, one thing is certain: She will no longer set her alarm for 5:26 each morning.

The self-described “fish of the family,” Barthelemy began taking swim lessons at the age of 10. She was a member of four Michigan state championship teams at Ann Arbor’s Pioneer High School and earned a varsity letter all four years.

It may have been grueling, but Barthelemy’s focus and discipline—not to mention the reliable alarm clock—paid off in many ways.

She joined the U-M Women’s Swimming & Diving Team as a walk-on the summer before her freshman year. The commitment meant a tight schedule that demanded an early start.

A typical day saw Barthelemy in the pool from 6 to 8 a.m. five days a week, in class until mid-afternoon, back at practice from 2:30 to 4:30, and weight-lifting for an hour afterward three days a week. Back at home, she would eat a quick dinner, tackle homework and try to get seven hours of sleep before repeating the routine the next day. “Down time,” she joked, “was a word I didn’t know too often.”

It may have been grueling, but Barthelemy’s focus and discipline—not to mention the reliable alarm clock—paid off in many ways. In May 2013, she was awarded a Big Ten Postgraduate Scholarship, primarily for academic achievement, and she won the Eric Namesnik Memorial Award in 2013, selected by U-M’s head swimming and diving coaches for best exemplifying desire, determination and dedication.

Also in 2013, Barthelemy finished 16th in the 400-yard individual medley and 25th in the 200-yard individual medley at the Big Ten Championships. She earned Academic All-Big Ten honors three times, U-M Athletic Academic Achievement four times, and a College Swimming Coaches Association of America Scholar All-America Honorable Mention. All while serving as tri-captain.

Her leadership role taught Barthelemy patience and how to stay calm under pressure and in the face of change, skills she readily applied to academics. “You learn that before exams, for example, like in competing, there’s no use getting stressed. You have to let the practice take its course,” she said.

Barthelemy’s teammates helped her to do, and be, her best, she said. “You’re never alone. The day you step on campus, you already have this established network of friends, support and experience.” She credits the NAME department, too, for her professors’ flexibility.

“I know from talking with the other girls on the team, that NAME was unusual in that respect; my professors were not only okay with my missing class sometimes, but they were willing to meet with me at other times to go over notes and answer questions,” Barthelemy said. “Some let me take exams on the bus going to meets. That’s the only way I was able to make it all work—I had a great department willing to support me and my crazy schedule.”

The NAME department helped Barthelemy take advantage of several summer experiences and internships, too. “The summer of my sophomore year I had to stay and train; I only had three weeks off and couldn’t really go anywhere,” she explained. But one of her professors suggested that if she couldn’t do an internship, she go to a conference he was planning to attend with several of his PhD students. “I learned about all their research and got to tour some high-speed ships. It was a mind-blowing experience.”

That same summer, Barthelemy went to the Naval Surface Warfare Center Carderock Division and shadowed there for a week. “I met some naval architects that I’m still in touch with today. It was another fantastic experience.”

The following summer, at the urging of her advisor, Barthelemy contacted a NAME alumna she had been introduced to previously, who owned a small naval architecture and marine engineering consulting company in Ann Arbor. The internship she subsequently arranged not only was “awesome” but within walking distance of her campus housing and the U-M Canham Natatorium. And the company introduced her to the Maritime Research Institute Netherlands, where she interned the next summer.

“Those internships gave me a range of experiences, from the small two-person office to the big 300-person company, where I wrote reports and gave presentations. They were two of the most memorable experiences I’ve had,” she said.

Now Barthelemy is taking those experiences and the skills honed in the pool, the classroom and the profession with her as she earns a master’s degree through the Sequential Graduate/Undergraduate Studies (SGUS) program and establishes her career.

It’s exciting if not daunting.

“When I was an undergrad, I had a plan in place each year for the coming year. Now, there’s no plan yet,” she said. “I have multiple ideas, but I’m also really open to anything; there are so many domains within naval architecture. So I’m looking for experiences this year that will help narrow the possibilities. I feel confident coming out of school with this degree and the skills I’ve gained. A lot of doors are open, and I’m excited to see what’s out there.”

Caption: Valerie Barthelemy at the Marin Tow Tank in Wageningen, Netherlands
### UNDERGRADUATE Scholarships 2012-2013

**AMERICAN BUREAU OF SHIPPING SCHOLARSHIP**
Lisa Bergeron  
Vittorio Bichucher  
Kevin Bowe  
Alexander Choi  
JonMarcos Diaz  
Conner Goodrum  
Brandon Harrison  
Jonathan Holbert  
Christopher Krebs  
Reed Lillie  
Sara Laffin  
Kevin Lounds  
Zachary Mineroff  
Benjamin Nagle  
David Oliver  
Kevin Schumaker  
Harleigh Seyffert  
Matthew Springstead  
Maëna Stover  
Michael Synpiewski  
Kazim Tosayev  
Fudi Wang

**HENRY CARTER ADAMS II MEMORIAL SCHOLARSHIP**
Valerie Barthelemy  
Alexander Ediger  
Matthew Graham  
Zachary Mineroff  
Andrew Stankovich

**BARTON BALLOU COOK, JR. SCHOLARSHIP**
Daniel Hogsed  
Diane Schroth

**BENJAMIN SAYRE TUTHILL SCHOLARSHIP**
JonMarcos Diaz

**CHARLES V. BOYKIN SCHOLARSHIP**
Kevin Lounds

**COLLEGE OF ENGINEERING SCHOLARSHIP**
Elizabeth Brown  
NonMarcos Diaz

**DONALD AND LUCILLE MALLOURE SCHOLARSHIP**
Carolina Madrid

### DISTINGUISHED ACADEMIC ACHIEVEMENT AWARD
Kevin Lounds

**FRANK C. AND IRVING PAHLLOW SCHOLARSHIP**
Chengwei Dai  
Xinyi Guo  
Sara Laffin  
Alexander Szust  
Diane Schroth

**JOHN F. JEFFREY SCHOLARSHIP**
Elizabeth Brown

**MADGE ROY SCHOLARSHIP**
Dilon Helfers

**THE LESTER AND MANDELL ROSENBLATT SCHOLARSHIP**
Lisa Bergeron

**RAY YAGLE MEMORIAL SCHOLARSHIP**
Emily Kubik

**SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS SCHOLARSHIP**
Nathaniel Meredith  
Diane Schroth  
Colin Shields  
Alexander Szust  
Eileen Tausch

**WILLIAM H. BRAY ENDEDOW SCHOLARSHIP**
Louis Schaljo

### NAME DEPARTMENT GRADUATE FELLOWSHIP
(1st Term PhD Department Graduate Fellowship)
Mark Woolliscroft

**UNIVERSITY OF MICHIGAN REGENTS FELLOWSHIP**
(1st Term PhD Department Graduate Fellowship)
James Gose

**CHARLES E. DART FELLOWSHIP & GEORGE L. WEST JR. MEMORIAL FELLOWSHIP**
(SGUS Department Graduate Award)
Benjamin Bagazinski

**AMERICAN BUREAU OF SHIPPING FELLOWSHIP**
(SGUS Department Graduate Award)
Yeli Wang & Devin Witt

**ROBERT AND EVELYN KEMP FELLOWSHIP**
(SGUS Department Graduate Award)
Weiran Jiang

**BENFORD-ZIMMIE AWARD**
(SGUS Department Graduate Award)
Kurtis Jankowski

**LOYAL CREW FELLOWSHIP**
(SGUS Department Graduate Award)
Kurtis Jankowski

**AMERICAN BUREAU OF SHIPPING FELLOWSHIP**
(SGUS Department Graduate Award)
Yeli Wang & Devin Witt

**ROBERT AND EVELYN KEMP FELLOWSHIP**
(SGUS Department Graduate Award)
Weiran Jiang

**BENFORD-ZIMMIE AWARD**
(SGUS Department Graduate Award)
Kurtis Jankowski

### GRADUATE Scholarships 2012-2013

**DEANS NAMED FELLOWSHIP & FRANKLIN D. CLARENCE T. JOHNSON FELLOWSHIP**
(1st Term PhD Department Graduate Fellowship)
Mark Groden

**NAME DEPARTMENT GRADUATE FELLOWSHIP**
(1st Term PhD Department Graduate Fellowship)
Seongjin Yoon

**COLLEGE OF ENGINEERING FIRST YEAR FELLOWSHIP**
(1st Term PhD Department Graduate Fellowship)
Jared Defoe

**NAME DEPARTMENT GRADUATE FELLOWSHIP**
(1st Term PhD Department Graduate Fellowship)
Mark Woolliscroft

**UNIVERSITY OF MICHIGAN REGENTS FELLOWSHIP**
(1st Term PhD Department Graduate Fellowship)
James Gose

**CHARLES E. DART FELLOWSHIP & GEORGE L. WEST JR. MEMORIAL FELLOWSHIP**
(SGUS Department Graduate Award)
Benjamin Bagazinski

**AMERICAN BUREAU OF SHIPPING FELLOWSHIP**
(SGUS Department Graduate Award)
Yeli Wang & Devin Witt

**ROBERT AND EVELYN KEMP FELLOWSHIP**
(SGUS Department Graduate Award)
Weiran Jiang

**BENFORD-ZIMMIE AWARD**
(SGUS Department Graduate Award)
Kurtis Jankowski

**LOYAL CREW FELLOWSHIP**
(SGUS Department Graduate Award)
Kurtis Jankowski

**RICHARD AND ELEANOR TOWNER PRIZE FOR DISTINGUISHED ACADEMIC ACHIEVEMENT**
(College of Engineering Graduate Award)
Dominic Piro

### FALL 2012

**DOCTOR OF PHILOSOPHY**
Dae Hyun Kim  
Deborah Edmund  
Justin Gillespie  
Nathan Niese  
Rahul Subramanian  
Sara Jabbarizadeh

### SUMMER 2013

**DOCTOR OF PHILOSOPHY**
Alton Luder III  
Brian Cuneo  
Dominic Piro  
Matthew Kramer  
Thomas McKenney  
Nicholas Stowe

### FALL 2012

**MASTER OF SCIENCE**
Carlos Ferrari  
Jacob Faust  
Jinfu He  
Nan Si  
Shuai Zhao  
Srikanth Perne  
Yan Liu  
Yue He

### WINTER 2013

**MASTER OF SCIENCE**
Atheendra Sreenivasan  
Bahadir Yucekaya  
Benjamin Bagazinski  
Daniel Brahan  
Devin Witt  
Esteban Castro-Feliciano  
Jason Hill  
Jeffrey Smolik  
Jiaqi Wang  
Joshua Kapusta  
Katharine Woods  
Kurt Nielson  
Kurtis Jankowski  
Mary Morgan  
Michael Vittorio  
Mischa Dylewski  
Rebecca Piks  
Talgat Ramazanov  
Yang Chen  
Yaowen Liu  
Yeli Wang
Robert Beck, Odd Faltinsen and Bernard Molin  Professors Beck, Faltinsen and Molin presented six Maurizio Landrini Lectures at INSEAN, the Italian ship model basin, in fall 2012.

Steve Ceccio  Professor Ceccio was elected to serve on the Governing Board of the International Conference on Multiphase Flows. He will serve as vice chair.

Ryan Eustice  Professor Eustice has been promoted to the rank of Associate Professor with Tenure.

Michael Parsons and Thomas Lamb  Emeritus Professor Michael Parsons and Emeritus Research Scientist and Adjunct Professor Thomas Lamb are sharing their expertise with the University of British Columbia in Vancouver, Canada, as the university started a graduate program in naval architecture and marine engineering.

Tassos Perakis  Professor Perakis was invited to be a keynote speaker at the Annual Conference of the International Association of Transport, Trade and Service Studies (IATTSS), and he presented on November 11, 2013, at City University of Hong Kong. He also was appointed to the Board of Directors of the IATTSS. In addition, he presented an invited seminar at the University of Macau on November 14.

Marc Perlin  After many years of service, the Marine Hydrodynamics Laboratory Physical Model Basin’s wave maker underwent a major rebuild. Repairs included new bushings and ball screws, and new motors and controllers are planned for the near future.

David Singer  Professor Singer earned The Solberg Award (Research), given to an individual who has made a significant contribution to naval engineering through personal research during the past three years for his work Set Based Design.

Jing Sun  Professor Jing Sun was appointed as the General Chair for the 2017 American Control Conference by the American Automatic Control Council.

Armin Troesch  Professor Troesch and two doctoral students students, David Hodapp and Dae-Hyun Kim, presented papers at the 2013 SNAME meeting in Bellevue, Washington. Professor Matt Collette was a co-author with Hodapp.

Julie Young  received the NAME Departmental Achievement Award for 2013. She was also elected to serve on the Senate Assembly and ADVANCE Advisory Board at the University of Michigan. Several of Young’s former students are now professors: Heng Xiao at Virginia Tech, Michael Motley at University of Washington, Wai Ching Sun at Columbia University, Antoine Ducoin at Ecole Centrale Nantes, and Biao Huang at Beijing Institute of Technology.

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**Department Stats**

**UNDERGRADUATE**

- Total US Resident - 98
  - Male 77
  - Female 21
- Total International - 19
  - Male 13
  - Female 6

**MASTERS LEVEL**

- Total US Resident - 53
  - Male 48
  - Female 5
- Total International - 39
  - Male 35
  - Female 4

**DOCTORAL**

- Total US Resident - 4
  - Male 3
  - Female 1
- Total International - 3
  - Male 2
  - Female 1

**TOTAL**

- Total US Resident - 117
- Total International - 33
- Total - 150
Howard Fireman Receives 2012 Alumni Society Merit Award

An invaluable resource to the NAME department, Howard Fireman (BSE NA ’79, MSE ’85) was awarded the 2012 Michigan Engineering Alumni Society Merit Award for Naval Architecture and Marine Engineering.

Fireman has served on the NAME Alumni Advisory Board since 2005. He has shared his expertise and helped guide faculty and students alike in many ways. In addition, Fireman currently serves as Senior Vice President of Asset Performance Management with the American Bureau of Shipping (ABS). He also serves as President of the ABS Nautical Systems Product Line. Fireman has been leading ABS efforts to expand services in the areas of vessel performance, energy efficiency, asset integrity management and environmental compliance to assist designers, shipyards, owners and operators in maximizing performance across the entire lifecycle of marine and offshore assets.

Fireman joined the ABS in 2013 from the U.S. Navy, where he retired as the Deputy Director of the Programming Division and Systems Engineering in the Office of the Chief of Naval Operations. During the time of his service with the U.S. Navy, he was recognized as a distinguished leader in the areas of ship design, hull form optimization, total ownership cost, systems engineering, design integration, research and development, and fleet operational support. Fireman also served as Chief Naval Architect and Director for In-Service Submarines for the U.S. Navy.

Fireman’s Michigan Engineering legacy continues and includes many family connections. His wife Karen is an alumna of the Electrical Engineering and Computer Science Department. Their son Seth is a U-M Navy Reserve Officers Training Corps midshipman and a junior in the NAME Department. Son David is a freshman in the College of Engineering.

Edward N. Comstock Receives 2013 Alumni Society Merit Award

Edward N. Comstock (BSE NA ’70, MSE NA ’74), a dedicated NAME alumnus, was awarded the 2013 Michigan Engineering Alumni Merit Award for Naval Architecture and Marine Engineering.

Comstock is currently a Senior Engineering Fellow at Raytheon Integrated Defense Systems. His responsibilities include programs for the Advanced Technology Programs and Seapower Capability Systems Directorates. This role includes naval engineering and strategic planning in support of Naval Power Systems initiatives. He also is involved with the Office of Naval Research’s Ship Design Process Workshops. He is a member of the National Academies’ Naval Engineering in the 21st Century Study Committee, and the Marine Board of the Transportation Research Board.

Prior to joining Raytheon in 2006 he worked thirty-one years for the Naval Sea Systems Command (NAVSEA) and six years with GD/Electric Boat Division and GE Marine Turbine and Gear Department. In his last service at NAVSEA, Ed was the Director for Science and Technology and acted as the Executive Director of the Ship Design, Integration and Engineering Directorate.

Among his honors, Mr. Comstock has received the Presidential Meritorious Rank Award, the David W. Taylor Medal from the Society of Naval Architects and Marine Engineers, recognizing his contributions in ship design, naval architecture, and ship hydrodynamics during his 31-year career with the Naval Sea Systems Command prior to joining Raytheon in 2006.

“As Chief Naval Architect, he made countless innovative contributions to the design, construction and in-service support of most existing U.S. Navy ships and submarines,” according to the award citation. Comstock’s contributions in ship design have led the U.S. Navy, foreign navies, and the marine industry to achieve significant progress in cost-effectiveness, performance, safety and productivity.
If anyone appreciates the value of attending to details, it’s NAME alumnus Scott Ferguson (BSE NAME ’84). Ferguson served as wing design manager for Oracle Team USA, which won the 34th America’s Cup in September.

In the best-of-17-race regatta, Oracle Team USA beat Emirates Team New Zealand 9 to 8 in a very close series, coming from behind in the final race to win by 44 seconds. This is the team’s second consecutive America’s Cup win, and it’s holding tight to the Auld Mug, said to be the oldest trophy in international sports.

“It was a very sweet win indeed,” Ferguson said. “The team made an epic comeback. We were down 8 to 1, but managed to come back and win eight consecutive races. We made some changes to the wing twist profile midway through the regatta along with some other small changes to the boat, and it was enough to get us back into the game.”

The towering 135-foot wingsail required “by far the most challenging design work on the fastest, most amazing America’s Cup boats ever built,” Ferguson said. And he was well prepared, both by NAME coursework at U-M and his subsequent work experience in the field. He also drew heavily upon his love of and abilities on the water and a successful sailing career with the Michigan Sailing Team. The three-time Collegiate All American says, “Much of the last minute fine-tuning of the wing came from many years of being on the water and intuitively knowing how to make sailboats go fast.”

Winging It: Scott Ferguson Helps Oracle Team USA Sail to Victory

Scott Lang:

was recently awarded the Navy’s Meritorious Civilian Service Award while serving as the senior technical advisor to Submarine Development Squadron 12 in Groton, CT. He’s a proud product of Michigan’s NAME department, BSE in 2000 and MSE in 2001.

Mike Grubb:

LCDR Mike Grubb (BSE NAME, 2000), recently returned home following a six-month deployment aboard the USS NEW MEXICO (SSN-779). Mike is currently the Executive Officer onboard USS NEW MEXICO.

Ninety-Five Years of Recollections & Reflections

Professor Emeritus Harry Benford, soon to celebrate his ninety-sixth birthday, plans to observe the occasion by publishing his memoirs: “Ninety-Five Years of Recollections & Reflections.” He promises to set aside a few copies for U-M alumni who are willing to make $1000 contributions to his favorite charity: the Loyal Crew Fund of the College of Engineering. (The fund provides scholarships to students in our department).

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