A University’s relationship with its surrounding community is essential for each to continue to grow. When I arrived in Beaumont a little over six years ago, the vital role of maritime commerce, in particular, the port marine terminal sector played within the community, was evident.

Upon further review, it became clear the responsibility for managing that scarce and important asset was in the hands of men and women whose training was primarily gained while on-the-job. At a time when the industry, across petrochemical terminals, general cargo ports, and military terminals was facing unprecedented change; this seemed to be a significant challenge. But for those of us in education, a wonderful opportunity.

The immediate question was how could Lamar University adapt our academic programs to meet the needs of this growing industry? Clearly, an innovative approach was needed. First, the online space had to be utilized to reach the working professional who was in need of quality training. Second, industry expertise had to be blended with academic knowledge in order to leverage the best of both worlds.

The Center for Advances in Port Management fills a need, not only in Southeast Texas, but throughout our state and beyond to the nation, for increased professionalism and training in the port and marine terminal operating industry. Our partnerships with industry, such as the American Association of Port Authorities, allows us to make a difference. With continued energy and expertise, blending theory and practice, we can continue to add value to these most critical components of our economic life and social well-being; ports and trade.
While their backgrounds and geographies differ, they all view the Center’s curriculum as a means to enhance their careers. As Larry Kelley, Executive Director of the Port of Port Arthur, and the program’s first student, stated: “This unique program offers access not only to the smart faculty in Lamar’s colleges of business and engineering, but also to industry experts literally throughout the world who serve as guest lecturers. In all courses, theory is applied to practice across the wide variety of port and marine terminal management roles and responsibilities.”

Fundamental to the Center’s success is a strong alliance with industry. Our research immerses faculty and grad students in the study and resolution of problems facing the port and freight transportation sectors. (See related article.) Industry experts serving as guest lecturers align every course with industry pertinent content, as well as developing important relationships with faculty and networking opportunities for students. The Center’s Advisory Board is comprised of industry experts in Texas, throughout the US and Canada.

Highlighting our industry partnerships is the MOU with the American Association of Port Authorities (AAPA) signed in the fall of 2016. CAPM is actively engaged in numerous AAPA technical committees as well as in its Professional Development Board (PDB), which oversees AAPA’s Port Professional Manager (PPM) certification program. Importantly, this past October, the University was notified that up to 15 credit hours could be granted to CAPM students who have received their PPM.

An important feature of the Center’s mission lies in continuing education for industry professionals. In 2017/18, the Center offered seven, CEU-eligible workshops, attended by over 250 port and transportation industry professionals. In addition, the Center’s annual symposium focuses on critical industry topics, featuring nationally prominent speakers. (See related article.) Industry certifications (also listed in this newsletter) represent another important feature of our education mission. We continue to explore industry needs for additional training and certifications.

The path forward for the Center’s unique program is full of exciting opportunities. We will continue to create awareness and interest in our port and marine terminal master’s degree program, expanding our efforts internationally. Adding value to our current alliances with industry, academia and government, and exploring new partnership opportunities will also be a major focus. Finally, leveraging the incredibly bright faculty and grad students here at Lamar University, addressing industry challenges and opportunities, will continue to bring rewards both to the Center and our industry partners.
Center for Advances in Port and Terminal Management (CAPM)

MS in Port and Terminal Management
Graduate Level Industry Certificates

Preparing the next generation of port and marine terminal managers today!

The Center for Advances in Port Management (CAPM) is dedicated to preparing the port and marine terminal industry for the challenges and opportunities of the 21st century through education (a fully online masters of science in port and marine terminal management), and in conducting cutting-edge industry relevant research. CAPM was established in the fall of 2015 supported by a $2.72 million special appropriation from the State of Texas.

“Lamar University has a tradition of offering programs that are responsive to the needs of our community, the region, the state and the nation,” said Lamar University President Kenneth Evans. “This program responds to a need for a graduate program that prepares the next generation of leadership with the practical skills necessary in the dynamic port environment.”

The fully online Master of Science in Port and Terminal Management program is a unique, fully online, advanced education degree program designed to accommodate working professionals. The 12 courses are offered through a collaboration between the Colleges of Business and Engineering, with industry professionals sharing their expertise in every class. Courses can lead to the master’s degree as well as special certificates related to specific aspects of port and marine terminal management.

<table>
<thead>
<tr>
<th>Fully Online Degree Offerings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Science in Port and Terminal Management</td>
</tr>
<tr>
<td>Master of Business Administration (MBA) in Port Management</td>
</tr>
<tr>
<td>Master of Engineering Management (MEM) in Port Management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Certificate Offerings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports, Trade &amp; Global Logistics</td>
</tr>
<tr>
<td>Port and Marine Terminal Development and Operations</td>
</tr>
<tr>
<td>The Management of Port &amp; Marine Terminals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certificates in Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port and Maritime Cyber Security</td>
</tr>
<tr>
<td>Risk Analysis</td>
</tr>
<tr>
<td>Strategic Asset Management</td>
</tr>
</tbody>
</table>
CAPM hosted Rear Admiral Paul Thomas on April 6, 2018 in our 2nd annual symposium. Admiral Thomas spoke on the theme of “Resilient Ports and Waterways in 2030.” Lauren Brand, Thomas Wakeman II and Vijay Agrawal served in a roundtable discussion capacity to augment Admiral Thomas’s remarks.

Admiral Thomas is responsible for Coast Guard operations spanning 26 states, including the Gulf of Mexico coastline from Florida to Mexico, the adjacent offshore waters and outer continental shelf, and the inland waterways of the Mississippi, Ohio, Missouri, Illinois and Tennessee River systems. The Eighth District is headquartered in New Orleans. Admiral Thomas’ expertise is in the areas of marine safety, security and environmental protection.

“Our nation’s interest in resilient ports and waterways has never been more acute,” said the Center’s Executive Director, Erik Stromberg. “The Center’s 2nd Annual Symposium’s theme reflects our country’s fundamental priority concern for the resilience of critical infrastructure that supports trade, economic growth and national security in the face of natural and man-made disruptions,” Stromberg concluded.

CAPM hosted Jorge Quijano, CEO of the Panama Canal Authority on February 24, 2017 in our inaugural symposium. Mr. Quijano spoke on the “Development and Operation of the Newly Expanded Panama Canal and Vision for Its Future”.

“Under the leadership of Señor Quijano, the completion of the $5.25 billion, Panama Canal expansion project, inaugurated on June 26, 2016, marks the beginning of a new era in ocean transportation,” said Erik Stromberg, executive director for the Center for Advances in Port Management. “Faster transit times and lower costs are providing tremendous benefits in moving cargo between Texas ports and Asia as well as the west coast of South America.”

Stromberg added, “We are most fortunate to hear Señor Quijano’s perspective on the impact of the new Panama Canal on world trade, and on the value of the university’s new and unique Center for Advances in Port Management.”
Jaeyoung Cho, PhD (Assistant Professor, IE)
This CAPM funded research addressed the longstanding problem in the Houston Ship Channel caused by inefficient chemical tanker routing. Dr. Cho, utilized the Center’s High Performance Computer Cluster to develop a sophisticated optimization model. The model was able to demonstrate ‘high efficiency-low cost operations while eliminating wasted time, and maximizing terminal utilization and safety.’ The resulting centralized chemical tanker scheduling system was well received by the Lone Star Harbor Safety Committee and served as the basis for their continued exploration.

Maryam Hamidi, PhD (Assistant Professor, IE)
The Lone Star Harbor Safety Committee (Houston Ship Channel—HSC— users and stakeholders) were concerned with the potential impact on channel traffic the upcoming Beltway 8 Houston Ship Channel Bridge major renovation project, contracted by the Harris County Toll Road Authority (HCTRA), would have. At the recommendation LSHSC, HCTRA hired Dr. Maryam Hamidi to lead a study that utilized a simulation model for vessel traffic and operations within HSC, which determined the optimal closure scenarios, minimizing vessel waiting times and the resulting potential negative safety, efficiency and economic impacts.

Drs. Victor Zaloom, Xing Wu, Mien Jao, Qin Qian
Funded by the Sabine-Neches Navigation District (SNNND), the study’s goal is to reduce the impact of wake wash waves caused by large vessels transiting the Sabine-Neches Waterway (SNWW). The first phase identified critical waterway vulnerabilities. Mitigating strategies will be investigated in phase two. The researchers studied fluid mechanics of wake wash, analyzed each vessel's physical profile and speed, with generated wave data collected by wave sensors (Aquadopp Profiler) located along the SNWW. Bank soil samples were analyzed to better understand scale and scope of subsequent erosion. An erosion model was built to indicate future erosion. Based on study findings, recommendations will be developed to reduce the impact of wake wash.

The Center’s research activities support port and related transportation interests throughout Texas and nationwide. The Center employs the analytical expertise and tools possessed by Lamar’s Engineering, Business, and Arts and Sciences college faculties to solve complex industry problems.

Current and recent research topics include:
- **Navigation channel optimization for safety and efficiency**
- **Asset management—optimizing maintenance to minimize cost and assure required service levels**
- **Strategies to optimize noncontainerized cargo yard and warehouse utilization**
- **Marine surface anti-fouling and anti-corrosion techniques**
- **LNG boil-off minimization strategies**
- **Cyber-security for energy facilities**
- **Autonomous vehicle usage in port and marine environments**
- **Ballast water detection through mobile application**
- **Dredged material management and beneficial use strategies**
- **Wake-wash assessment and minimization**
FACULTY

Dr. Jaeyoung Cho
Assistant Professor
Industrial Engineering
jcho@lamar.edu

Dr. Alberto Marquez
Associate Professor
Industrial Engineering
amarquez@lamar.edu

Dr. Ahmad Mohassel
Visiting Assistant Professor
Economics
amohassel@lamar.edu

Erik Stromberg
CAPM
Instructor
rstromberg@lamar.edu

Dr. Maryam Hamidi
Assistant Professor
Industrial Engineering
mhamidi@lamar.edu

Dr. Melissa Baldo
Instructor
Business Law
mbaldo@lamar.edu

Dr. Bradley Mayer
Professor
Management & Marketing
mayerbw@lamar.edu

Adjuncts
Dr. Mahdi Safa
Gerhardt Muller
Peter Kolp

STAFF

Erik Stromberg
Executive Director
(409) 880-7114; (910) 617-6800
rstromberg@lamar.edu

Brian Craig
Associate Director
(409) 880-8804
craigbn@lamar.edu

Candice Moore
Administrative Coordinator
(409) 880-7121
candice.moore@lamar.edu

CICE Building (Room 135), 5091 Rolfe Christopher Drive, Beaumont, TX 77705
lamar.edu/portmanagement