

Mobility

at the **College of Technology Eastern Michigan University**

Mohamad S Qatu, PhD
Dean, College of Technology
Eastern Michigan University

We are not only mobile;

- **CoT is always on the move !**

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Introduction

- **Mobility**
 - Is at the center of Michigan Economy (automotive)
 - Is facing keen competition
 - Is an industry that is going through transformation
 - Using alternative energy
 - Electrified
 - More autonomous
 - Faster to market (innovations in manufacturing and rapid prototyping)
- **Public Forum**
 - The Auto Show
- **Engineering Outlets**
 - Society of Automotive Engineers (SAE)
 - ASME, IEEE, SME and others



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EMU at the American Center for Mobility (ACM)

- Initiative by Governor Snyder
- Broad base support (Academia, Industry and Government)
- EMU signed the MOU with other University Presidents
- EMU is leading K-12 education and public outreach on mobility
- EMU is represented by AVP Tornquist and Dean Qatu



More information

<http://today.emich.edu/story/story/10471>

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EMU at the Auto Show



Left to right: Roopkatha Pallye, Corbin Reeves, Franklin Schmitzer, Al Tessmer, Chris Carmody, and Kyla Berry.

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EMU at the Auto Show

- Be visible as a major institution in the mobility Industry
- Engage with the public regarding our competitive programs
- Highlight our growth in engineering disciplines
- Highlight our strength areas



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Highlights our Areas of Strength

- Engineering (new programs)
- Aviation Technology
- Drone Technology
- Information Assurance
- Textiles and Materials
- Virtual Reality
- Robotics (considered for future)



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EMU Engineering

- Updated laboratories and equipment
- Engaged with local industries
- Small class sizes
- Co-op and job placements
- Portfolio development and support for each student
 - Place for second chances
 - Transfer - friendly



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Aviation Technology & Flight Management

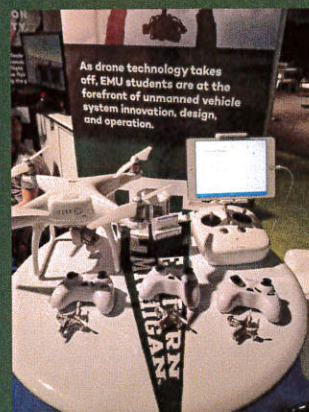
- Leads to successful careers
- Excellent growth the last 2 years (25%)
- The only academic program in SE Michigan
- Recognized shortage of pilots and flight managers in the aviation industry
- President Smith visited EMU Aviation in May '17



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Drone Technology

- **Studying remotely piloted and autonomous aerial vehicles for commercial applications (PhD)**
 - Emphasis on public/flight attendants/pilots acceptance
 - Development of curriculum on drones
 - Studying emerging legal requirements for operating drones
- **Introducing drone technology to first year students**
 - Engineering (mechanical, electrical & computer)
 - Emerging technologies
 - Help with retention



Ms. Kyla Berry

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Cyber Security in Autonomous vehicles

- **Cyber security of autonomous cars is a major concern**
- **EMU is developing a research group on this subject**
- **Working on resources:**
 - Machine Learning Algorithms and Equipment
 - Computational Power
 - Faculty and staff development



Dr. Samir Tout

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New Textiles for Automotive

- EMU is leading research on self cleaning (hydrophobic) fabric (no staining)!
- The fabric surface can be modified by attaching invisible microcontainers (can hold and release the fragrance or scent molecules for several weeks)
- Application in seating & roofs
- Durable and commercial ready
- In the process of patenting this technology



Dr. Subhas Gosh

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Virtual Reality

- Applications in various fields
 - Film and movie industry
 - Game design
 - light and heavy industries, *and more*
- **Automotive:**
 - Minimizes cost of prototypes
 - Minimizes time to market
 - Models dangerous scenarios
- **Integrated at EMU throughout the curriculum in many programs**
- **EMU built a VR lab (with help from Ford Motor Company)**



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Thank you

- **President Smith and Provost Longworth**
- **EMU Communication (Walter Kraft)**
- **EMU Enrollment Management (Kevin Kucera)**
- **EMU Foundation (Lisa Comben)**
- **Graduate School and Alumni Association**
- **Eagle Flight (Tom Trumbull)**
- **CoT's Student Success Center (Bia Hamed)**
- **EMU's Career Services (Mary Jane Fallot)**
- **Cot directors, faculty and lecturers**
- **CoT students, student workers and enthusiasts**
- **Many, many more...**

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