• Announcements
• News from around the College
• New Faculty and Staff
• Tenure and Promotion

• Where are we now and how did we get here
  o Changes in Staff
  o Retirements
  o Current Enrollments
  o Budget
  o Research

• Priorities
Announcements

• **Parkview Bus Schedule** may change
  - One bus, M-F through 9:00 pm?

• **Asynchronous courses**
  - some students are struggling (contact, engagement)

• **Online testing/quizzes**
  - auto grade, timing issues

• **COVID-19, classes, and notification**
  - you can ask for verification
• The Industry Outreach Office will be reaching out to professors about their research interest

• We are looking to gather information that we can present to both industries and potential students

• We hope to drive industry investment, connect you with potential research partners, and show current and future students the amazing work being done at WMU’s College of Engineering and Applied Sciences.

• Interviews will be geared towards research with an emphasis on areas you see potential for growth and real world application.

• Be prepared to provide photos that we can use to help trumpet your work.

• John Chew will be emailing professors, however, if you are interested in the project please email ceas-ioo@wmich.edu
CS Department News

- **Cybersecurity BS degree** began Fall 2020.
  - offered jointly with BIS from HCOB

- Dr. Ajay Gupta addressed the global online conference “AI Solutions for Covid” hosted by Bennett University in India. Dr. Gupta delivered a talk entitled “AI Solutions Can Help Manage Social Crisis.”

- Drs. Fong, Bhattacharjee, Gupta and Carr recently received a $300K National Science Foundation grant to create curriculum materials to teach artificial intelligence and multiple levels of the CS curriculum.

- Dr. Shameek Bhattacharjee recently received a $250K research grant from the National Science Foundation to develop foundational science of data driven and AI-inspired security approaches for emerging IoT-based applications in smart living.
Dr. Kecheng Li, Dr. Abdus Salam, Dr. Said Abubakr, and Dr. Dewei Qi
DOE - Biotechnology for paper recycling
$1.5 million

Dr. Kecheng Li, Dr. Said Abubakr, Dr. Dewei Qi, Dr. Abdus Salam, and Dr. Alexandra Pekarovicova
DOE REMADE Workplace Education
$200,000

Dr. Mert Atilhan
National Energy Research Scientific Computing Center
Computational Time Award
1 million hours

Erin Riley
TAPPI Coating and Specialty Paper Student Award
MDOT Center of Excellence for Structural Durability

Upul Attanayake, Ph.D., P.E.
Director, Associate Professor
Department of Civil and Construction Engineering

*Pandemic did not slow us down!*

- Two-span Continuous Steel Plate Bridge Girder Design Workshop
  - Date: September 24, 2020.
  - Total number of participants: 70
  - Audience: MDOT and local agency engineers and Michigan consultants.

- *Extending Service Life of Concrete Structures: Construction Quality Control and Maintenance Practices* - Webinar
  - Date: August 18, 2020.
  - Total number of participants: 25
  - Audience: International Association for Bridge Maintenance and Safety (IABMAS) - Sri Lanka Group members

- Abul Fazal Mazumder, Ph.D. candidate, received Dissertation Fellowship from the Graduate College.
MDOT staff, sealant/overlay manufacturer representative, and Tourney Consulting Group (a local firm), and 14 student employees participated in this 2- ½ year project.
A total of 56 slabs with and without overlays are being subjected to southwest Michigan exposure.
Congratulations Upul!

Named Term-limited Professorship

The University seeks to recognize and support outstanding individuals who are making substantial contributions in teaching and/or research for the benefit of its students and society.
Dr. Kailash Bafna
Professor Emeritus of IEE&EM

Recipient of Two Elite National Awards

• 2020 Albert G. Holzman Distinguished Educator Award
• 2020 Engineering Economy Division Wellington Award
OUTSTANDING ISE CAPSTONE SENIOR DESIGN PROJECT
TOP 10 FINALIST

WMed Health: MDS Clinic

IEE Team:
Sa, Olmstead (Presenter, IEE - Fall 2020),
Sean Fitzsimonz (IEE - Spring 2020),
Paul Geyer (IEE – Spring 2020)
Omar Albalawi (IIE Ph.D. Student)

(Scholarly Activities with Professors Houshyar and White)


ENGINEERING MANAGEMENT RESEARCH LAB

DIRECTOR: LARRY MALLAK

Co-PI with Dr. Lori Wingate on NSF EvaluATE grant working with Dr. Nolen Akerman for Sentiment Analysis Project.

PI on training project with Jonathan Rees (University of Bristol, UK) to design and deliver Essentials of Gathering Insights training in a virtual format for Stryker Instruments.
Mechanical and Aerospace Engineering Highlights 2020

• Fulbright Scholar - Bade Shrestha
  • Sabbatical Leave to Japan

• COVID-19 Remote Instrumentation Lab – Murali Ghantasala
  • Connect to real experimental device through lab computer from anywhere

• 2019-2020 MAC Academic Leadership Development Program Fellow – Jennifer Hudson
  • Develop, prepare and advance faculty as academic leaders

• An AGMA Technical paper “one of the ten incredible papers chosen by experts” – Parviz Merati and John Bair
  • Gear Sliding Losses paper with Eaton and Lubrizol Corporations
Mechanical and Aerospace Engineering
Highlights 2020

• Research Award of $ 289,782 from U.S. Department of Defense – Claudia Fajardo and Kristina Lemmer
  • Development of a Coherent Anti-Stokes Raman Scattering System for Plasma-Assisted Combustion Diagnostics

• Research Award of $ 56,030 from NSF – Kristina Lemmer
  • CubeSat Project

• Research Award of $ 39,000 from U.S. Navy – Tianshu Liu
  • Measurements of Wall-Shear-Stress Distribution in Hypersonic Flows

• Research Award of $ 50,000 from NSF – Zach Asher
  • Safe Adverse Weather Ops ICorp

• Research Award of $ 120,000 from U.S. Department of Defense – Kristina Lemmer
  • AF-M315E Propellant

• Research Award of $ 380,000 from NSF – Kristina Lemmer and Nick Taylor
  • Coaxial Ion Trap Mass Analyzer

• Student Fellowship of $ 77,250 from NASA – Pete Gustafson
  • Graduate Student Project

• Student Fellowship of $ 79,877 from NASA – Kristina Lemmer
  • Graduate Student Project
Dr. Steven Durbin and Dr. Robert Makin

*NSF Division of Materials Research*

Engineering Band Gap Energy Through Structural Motifs in Nitride Semiconductors

$443,064$

**Dr. Massood Atashbar**

*Adlore Inc*

Development of wearable electrodes for healing diabetic foot ulcer,

$223,043$

*DOD-ARMY-SBIR Phase I:*

Title Graphene-Based Composite EMI Shielding for RF Device Protection

$55,823$

*US Patent granted*

Metal-metal composite ink and methods for forming conductive patterns
New Faculty and Staff
New Faculty and Staff

Advising Office

Angela Feltner, Admin Asst. II
New Faculty and Staff

**Bronco Construction Research Center***

- Brian Montgomery, Director

*Formerly the Georgeau Construction Research Center*
New Faculty and Staff

*Chemical and Paper Engineering*

Mert Atilhan, Associate Professor
New Faculty and Staff

Computer Science

- Guan Yue Hong, Associate Professor
- Al-Mawee Wassna, Faculty Specialist I
- Michelle Hastings, Admin Asst II
New Faculty and Staff

EDMMS

• Steve Carr, Interim Chair

• Mitch Keil, Assistant Chair
New Faculty and Staff

IEE&EM

• Osama Abudayyeh, Interim Chair

• Azim Houshyar, Assistant Chair
New Faculty and Staff

**MAE**

- William Liou, Chair
Faculty Promotion

Matthew Stoops—Faculty Specialist II

Chemical and Paper Engineering
Faculty Promotion and Tenure

Dr. Lina Sawalha - Associate Professor

Electrical and Computer Engineering
Faculty Promotion

Dr. Alamgir Choudhury, Professor
Engineering Design, Manufacturing, and Management Systems
Where are we and how did we get here?
After COVID-19 hit

• Building Closures

• Hiring Freeze and Travel Ban

• Staff forced to reduce hours supplemented with COVID-19 leave

• WMU took a $45M hit in FY20

• Faculty and Staff asked to take a 2.25% pay cut
Preparing for FY 21

- 2020-21 Budget projections – $65 to $85 million cut
- Asked to plan for the worst case = $76 million cut to Academic Affairs

- 24.5% cut across the board for the academic colleges
- $5.1 million cut to CEAS (Fund 11 and DT)
- Plus a 21% cut to GA/DA/RA budget (after appointments were made)
How were we to get to $5.1 M?

- Eliminate Operating budgets, PT faculty, student help
- Term Faculty were not renewed
- Notification to Faculty with 3 years or less at WMU
- Reduction in Force (RIF) => 25% reduction in Staff
- Voluntary Early Retirement Program (VERP)
Staff Losses due to Reduction in Force (RIF)
Reduction in Force

**Administrative Assistant I’s**
- Catrina Beeny, CCE
- Harmony Manion, ChP
- Detra Hervey, CS
- Staci Adams, ECE
- Paige Upchurch, EDMMS
- *Vacant Position*, IEE&EM
- Tamara Webb, MAE

**Administrative Assistant II**
- Cindy Thomason, Advising
Reduction in Force

*Laboratory Supervisor*

- Richard Sackett, Auto Lab (MAE)

*Laboratory Supervisor Senior*

- Scott Kinzy, Building Coordinator (Dean’s Office)

As a result, each department has one lab staff member (exception IEE&EM = 0)
Retirements (VERP and Scheduled)
Retirements

**Computer Science**

- Donna Kaminski
- John Kapenga
- Leszek Lilien
- Robert Trenary
Retirements

*Industrial and Entrepreneurial Engineering and Engineering Management*

- Kailash Bafna
- David Lyth
- David Meade
- John Patten
Retirements

*Engineering Design, Manufacturing, and Management Systems*

- Betsy Aller
- Paul Englemann
Retirements

Chemical and Paper Engineering

- Andrew Kline
Retirements

*Electrical and Computer Engineering*

- Raghvendra Gejji
- Daniel Litynski
Retirements

*Mechanical and Aerospace Engineering*

- Koorosh Naghshineh
Outlook Improving

- Projected Enrollment Losses up to 20%
  - Actual losses under 8% as we approached August

- CEAS VERP participation nearing projections

- Granted permission to hire back Term Faculty (based on VERP participation and enrollment)
Fall 2020 CEAS Faculty by Title

<table>
<thead>
<tr>
<th>Title</th>
<th>Number in Title</th>
<th>Percentage in Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>39</td>
<td>47.6%</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>16</td>
<td>19.5%</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>13</td>
<td>15.9%</td>
</tr>
<tr>
<td>Master Faculty Specialist</td>
<td>7</td>
<td>8.5%</td>
</tr>
<tr>
<td>Faculty Specialist-II</td>
<td>2</td>
<td>2.4%</td>
</tr>
<tr>
<td>Faculty Specialist-I</td>
<td>5</td>
<td>6.1%</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

(7 of the 82 faculty members are Term appointments)
## Fall 2020 CEAS Faculty by Department

<table>
<thead>
<tr>
<th>Department</th>
<th>No. of Faculty</th>
<th>No. of Term Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChP</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>CCE</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>CS</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>ECE</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>EDMMS</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>IEE&amp;EM</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>MAE</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>82</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>

*(Term Faculty included in No. of Faculty column)*
Fall Enrollments
### WMU Fall Enrollments

#### WMU Headcounts

<table>
<thead>
<tr>
<th></th>
<th>Fall 2019</th>
<th>Fall 2020</th>
<th>difference</th>
<th>% difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>17,051</td>
<td>16,554</td>
<td>-497</td>
<td>-2.9%</td>
</tr>
<tr>
<td>Graduate</td>
<td>4,419</td>
<td>3,936</td>
<td>-483</td>
<td>-10.9%</td>
</tr>
<tr>
<td>Total</td>
<td>21,470</td>
<td>20,490</td>
<td>-980</td>
<td>-4.6%</td>
</tr>
</tbody>
</table>

#### WMU Credit Hours

<table>
<thead>
<tr>
<th></th>
<th>Fall 2019</th>
<th>Fall 2020</th>
<th>difference</th>
<th>% difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>224,246</td>
<td>210,238</td>
<td>-14,008</td>
<td>-6.2%</td>
</tr>
<tr>
<td>Graduate</td>
<td>25,442</td>
<td>23,278</td>
<td>-2,164</td>
<td>-8.5%</td>
</tr>
<tr>
<td>Total</td>
<td>249,688</td>
<td>233,516</td>
<td>-16,172</td>
<td>-6.5%</td>
</tr>
</tbody>
</table>
## CEAS Fall Enrollments

### CEAS Headcounts

<table>
<thead>
<tr>
<th></th>
<th>Fall 2019</th>
<th>Fall 2020</th>
<th>difference</th>
<th>% difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>2,348</td>
<td>2,204</td>
<td>-144</td>
<td>-6.2%</td>
</tr>
<tr>
<td>Graduate</td>
<td>463</td>
<td>363</td>
<td>-100</td>
<td>-21.6%</td>
</tr>
<tr>
<td>Total</td>
<td>2,811</td>
<td>2,567</td>
<td>-244</td>
<td>-8.7%</td>
</tr>
</tbody>
</table>

### CEAS Credit Hours

<table>
<thead>
<tr>
<th></th>
<th>Fall 2019</th>
<th>Fall 2020</th>
<th>difference</th>
<th>% difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>19,181</td>
<td>18,294</td>
<td>-887</td>
<td>-4.6%</td>
</tr>
<tr>
<td>Graduate</td>
<td>2,309</td>
<td>1,814</td>
<td>-495</td>
<td>-21.4%</td>
</tr>
<tr>
<td>Total</td>
<td>21,490</td>
<td>20,108</td>
<td>-1,382</td>
<td>-6.4%</td>
</tr>
</tbody>
</table>
How about the FY21 Budget?

- WMU Budget cut reduced ($85M → $76M)
  - Reduced our CEAS cut from 24.5% to 21.9%
  - $5.1M → $4.6M (Fund 11 & DT Operating)

- State Appropriations flat
  - No further reduction in cut
<table>
<thead>
<tr>
<th>Year</th>
<th>Perm Budget (Booked)</th>
<th>Reduction (%)</th>
<th>Actual Cut ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-2019</td>
<td>$18,842,120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019-2020</td>
<td>$18,470,565</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020-2021</td>
<td>$14,096,375</td>
<td>21.9%</td>
<td>$4,045,054</td>
</tr>
</tbody>
</table>

Original 24.5% cut = $4,525,288

Difference = $4,525,288 - $4,045,054 = $480,234
### Differential Tuition

<table>
<thead>
<tr>
<th>DT Account</th>
<th>2019-20</th>
<th>Cut (21.9%)</th>
<th>2020-21</th>
<th>Additional DT funds used to Support Fund 11 Cut</th>
<th>Available 2020-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>2,404,656</td>
<td>$526,620</td>
<td>$1,878,036</td>
<td>$136,211</td>
<td><strong>$1,741,825</strong></td>
</tr>
<tr>
<td>Scholarships</td>
<td>$811,304</td>
<td>&lt;$811,304</td>
<td>&lt;$811,304</td>
<td>&lt;$811,304</td>
<td>&lt;$811,304</td>
</tr>
</tbody>
</table>

Original 24.5% cut = $589,141

Difference = $589,141 - $526,620 = **$62,521**
To be Charged to DT Operating

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perm Faculty</td>
</tr>
<tr>
<td>Term Faculty</td>
</tr>
<tr>
<td>Perm Staff</td>
</tr>
<tr>
<td>Part-time Faculty</td>
</tr>
<tr>
<td>Department Operating</td>
</tr>
<tr>
<td>Student Office Workers</td>
</tr>
<tr>
<td>Recruiting</td>
</tr>
<tr>
<td>Marketing</td>
</tr>
<tr>
<td>Student Success Services</td>
</tr>
</tbody>
</table>

Available DT funds = $1,741,825
Current Estimate = $1,646,980
(for items in table)

Difference = $94,845

*Other items typically charged to DT operating: Equipment & Infrastructure, Travel, Professional Development, RSO support, and others*
Grants
Submissions, Awards, Expenditures
<table>
<thead>
<tr>
<th>FY</th>
<th>Submission Dollars</th>
<th>Award Dollars</th>
<th>Expenditure Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>100,895,683</td>
<td>23,520,175</td>
<td>24,591,206</td>
</tr>
<tr>
<td>2016-17</td>
<td>177,274,780</td>
<td>27,333,277</td>
<td>24,908,713</td>
</tr>
<tr>
<td>2017-18</td>
<td>112,772,371</td>
<td>25,805,340</td>
<td>24,789,432</td>
</tr>
<tr>
<td>2018-19</td>
<td>111,985,871</td>
<td>37,686,626</td>
<td>29,101,805</td>
</tr>
</tbody>
</table>

**WMU Totals**

<table>
<thead>
<tr>
<th>FY</th>
<th>Submission Dollars</th>
<th>Award Dollars</th>
<th>Expenditure Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>34,697,995</td>
<td>3,653,858</td>
<td>3,780,429</td>
</tr>
<tr>
<td>2016-17</td>
<td>35,020,185</td>
<td>4,034,194</td>
<td>4,532,156</td>
</tr>
<tr>
<td>2017-18</td>
<td>22,528,138</td>
<td>1,821,588</td>
<td>4,025,438</td>
</tr>
<tr>
<td>2018-19</td>
<td>24,499,211</td>
<td>2,620,066</td>
<td>3,059,263</td>
</tr>
<tr>
<td>2019-20</td>
<td>32,724,271</td>
<td>2,453,000</td>
<td>2,840,245</td>
</tr>
</tbody>
</table>

**CEAS Totals**
FY 20 CEAS Grant Expenditures

- **ChP**: $153,521
- **CCE**: $680,741
- **DO**: $71,378
- **CS**: $236,753
- **ECE**: $385,568
- **EDMMS**: $216,536
- **IEE&EM**: $91,402
- **MAE**: $1,004,345
1. **Support our Students, Staff and Faculty** – many are struggling

2. **Support admissions, enrollment, and yield efforts** – your efforts saved us this fall
   - A search for an Enrollment Assistant to support the Graduate student applications processes for the college has been approved and is currently open

3. **Initiatives continue**
   - Western Essential Studies – live as of this fall
   - Higher Learning Commission visit – still on for spring (academic program review)
   - New Budget Model (SRM) – will run in parallel this year
   - Capital Campaign is moving out of soft launch (big ideas/big strategic items)

4. **Crisis brings opportunity** – we now know our constraints – so let’s innovate
   - Hard discussions will take place on what we can do well with fewer faculty and staff and what must go away or change
   - Department/College strengths may change with retirements and layoffs
   - We need to share resources, courses, and opportunities
   - We have an unprecedented opportunity to consider reorganization within department, across CEAS, and/or across WMU
   - Cuts were permanent, but we have opportunities to build under a new model
Thank you!

It is truly amazing what we have all gone through this year -- many, many ups and downs at work and in our personal lives.

It is not over yet. We do not know when the pandemic will end. But together we will survive this unprecedented time.

Even in crisis, there is no better place to be and work. Keep caring for each other and please take care of yourself. You are all very special people. Stay safe and reach out if you need anything.