

OVERVIEW OF CMMI AND UPCOMING FUNDING OPPORTUNITIES

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IMPORTANT NOTICE

For Fiscal Year 2017, the CMMI winter proposal submission window will be December 30, 2016, through January 13, 2017. The proposal submission deadline will be 5:00 PM submitter's local time. Proposals will not be accepted after 4:59:59. Please submit via Fastlane as it offers automatic compliance checking for most compliance requirements. Submit early to assure time to correct instances of non-compliance prior to the submission deadline.

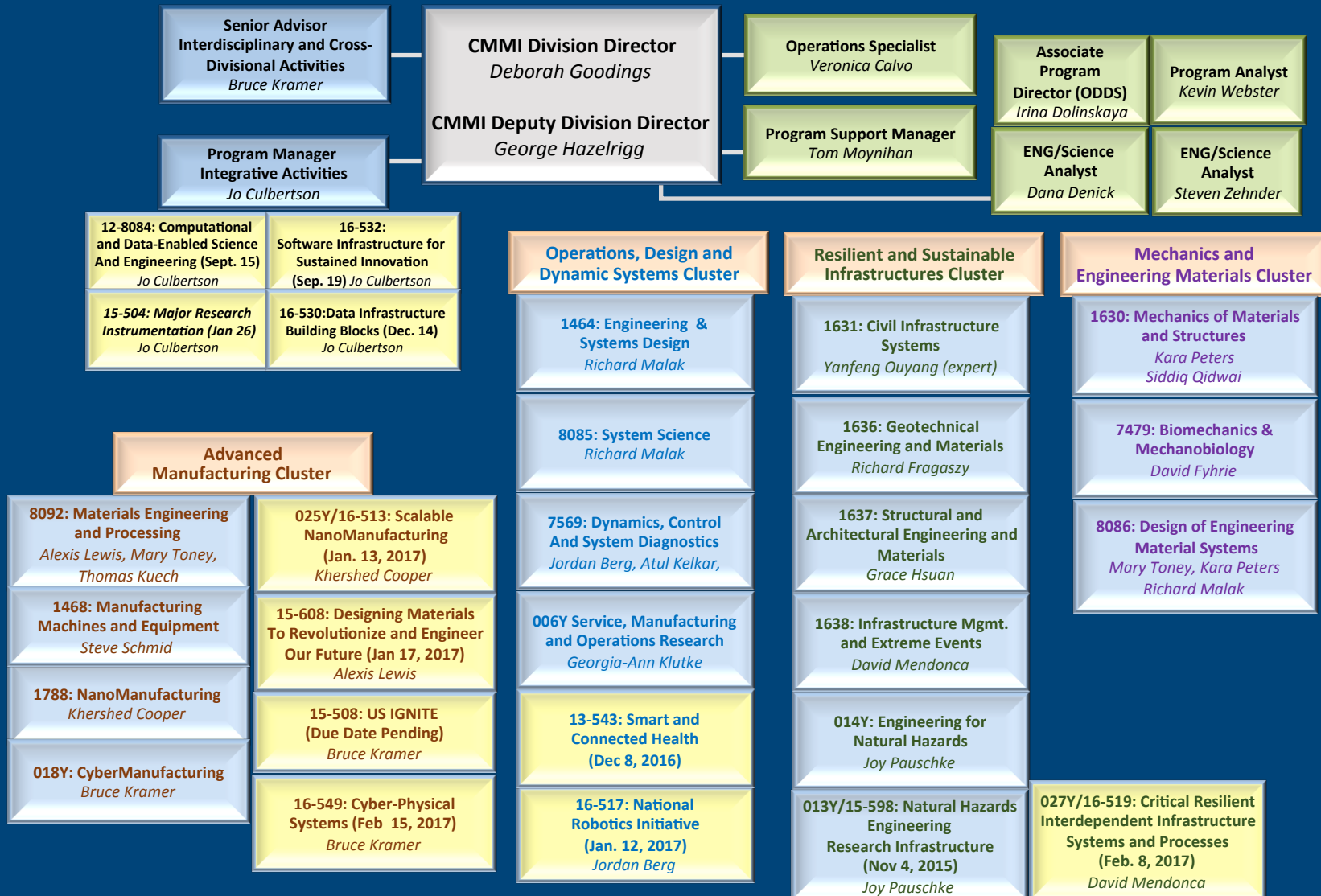
Engineering Directorate (ENG) Budgets

	FY 2016 Estimate	FY 2017 Request, Discretionary	FY 2017 Request, Mandatory	FY 2017 Request, Total	FY 2017 Request Total change over FY 2016 Estimate	
					Amount	Percent
CBET	\$183.82	\$187.18	\$11.24	\$198.42	\$14.60	7.9%
CMMI	216.39	220.67	13.25	233.92	17.53	8.1%
ECCS	113.95	115.80	6.97	122.77	8.82	7.7%
EEC	107.61	113.50	6.82	120.32	12.71	11.8%
IIP	239.93	254.17	14.73	268.90	28.97	12.1%
<i>SBIR/STTR</i>	<i>188.56</i>	<i>201.67</i>	<i>11.59</i>	<i>213.26</i>	<i>24.70</i>	<i>13.1%</i>
EFMA	54.49	55.09	3.31	58.40	3.91	7.2%
ENG TOTAL	\$916.19	\$946.41	\$56.32	\$1,002.73	\$86.54	9.4%

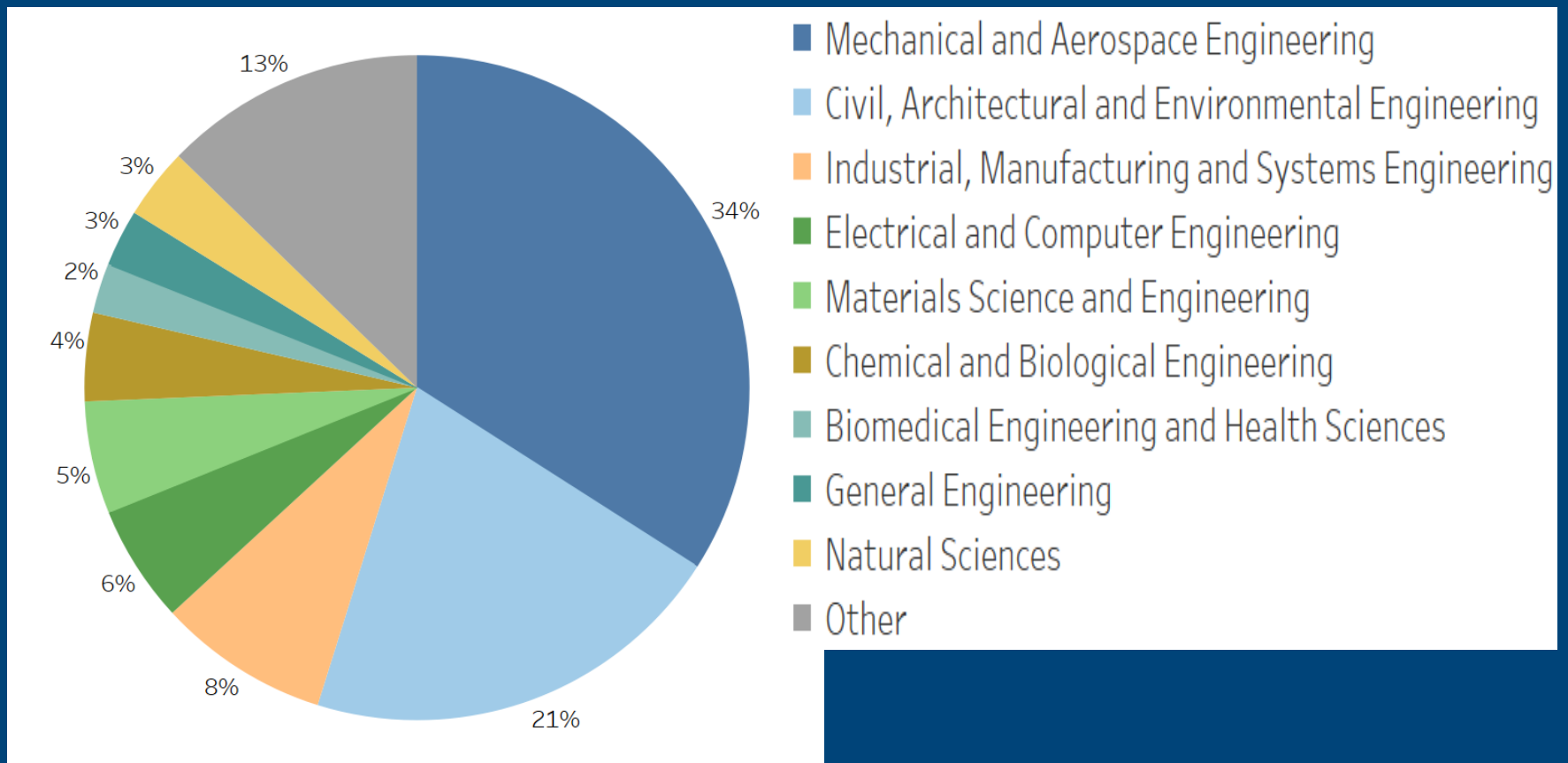
ENG Initiatives and Priorities 2017

- Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS)
- Risk and Resilience
- Clean Energy Technology
- Cyber-Enabled Materials, Manufacturing, and Smart Systems
 - Advanced Manufacturing
- Smart and Connected Communities
- National Nanotechnology Initiative
- Understanding the Brain
 - BRAIN Initiative
- Broadening Participation
 - NSF INCLUDES: Inclusion across the Nation of Communities of Learners that have been Underrepresented for Diversity in Engineering and Science
- National Strategic Computing Initiative
- Innovation Corps

CMMI Organization



FY16 CMMI Research Community



CMMI Notes

- FY2016: 3,772 competitive proposals/624 competitive awards (17%), 223 supplements
- Larger-scale proposals—\$1.5M/5 yrs, collaborative awards (https://www.nsf.gov/news/news_summ.jsp?cntn_id=108057&org=CMMI)
- CMMI REUs now \$8k/student (applications: Oct 1 to March 31)
- Rotator positions (IPA and VSEE) opening during FY2017
 - IMEE
 - Deputy Division Director

Upcoming Solicitations

- National Robotics Initiative (NRI-2.0) NSF 16-517 (Berg) – Jan. 12, 2017
- Smart and Connected Communities (S&CC) NSF 16-610 (Mendonça) – Feb. 16, 2017
- Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP) NSF 16-618 (Fragaszy) – Feb. 8, 2017
- Designing Materials to Revolutionize and Engineer our Future (DMREF) NSF 16-613 (Lewis) – Jan. 17, 2017
- Scalable Nanomanufacturing for Integrated Systems (SNM-IS) NSF 16-604 (Cooper) – Jan. 13, 2017

Upcoming Solicitations

- IUSE/Professional Formation of Engineers Revolutionizing engineering and computer science Departments (IUSE/PFE RED) NSF 17-501 – Jan. 18, 2017
- Training-Based Workforce Development for Advanced Cyberinfrastructure (CyberTraining) NSF 17-507 (Culbertson) – January 18, 2017
- Major Research Instrumentation (MRI) NSF 15-504 (Culbertson) – Jan. 11, 2017
- Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS) Funding Opportunity on Nitrogen, Phosphorus, and Water, NSF 17-013, DCL, posted October 7

Upcoming Workshops

- Mendonça/Lewis – Public Access Data for CMMI Research, NSF, May 17, 2017
- Malak – Future Directions in Engineering Design and Systems Engineering, Georgia Tech, January 20-22, 2017
- Berg – NRI PI Meeting 2016, Crystal City, VA, November 29-30, 2016
- Fragaszy – Connecting Women in Geotechnical Engineering, NSF, April 10-11, 2017
- CISE Workshop Large Grants: may help to frame what CMMI is looking for in large grants
- Pauschke/Hsuan/Schmid – 3D Printing Workshop, NSF, March 16-17, 2017

Upcoming Workshops

- Pauschke/Hsuan/Fragaszy – Future Buildings, 2017
- Pauschke/Fragaszy/Hsuan/Mendonça – Future Cities, 2017
- Mendonça – Interdisciplinary Methods for Hazards Research, NSF, Spring 2017
- Hsuan – Building Sustainability, NSF June 17, 2017
- Pauschke – Structural Engineering RAPID Reconnaissance, 2017
- Hazelrigg – CAREER Proposal Writing Workshop, Portland, OR, April 2-4, 2017
- Additional workshops are in the planning stage

Ethical Conduct of Research

- Persons submitting proposals to the Federal government are held to high standards of conduct
- Misbehavior can be dealt with quite severely
 - PI may be barred from submission to NSF for 1-5 years
 - May be barred from proposal review
 - At least two cases of jail time
 - Maximum \$250,000 fine, 5 years in prison

Major Forms of Misconduct

- Plagiarism—uncited reproduction of the work of others
- Falsification—intentional misrepresentation of data or results (progress reports)
- Fabrication—making up data
- Double charges—billing the government twice for the same work, e.g., accepting funding from two different Federal agencies for the same work

Plagiarism

OIG recommends NSF suspend award CMMI-██████████ (the proposal),
“██████████,” under the direction of Principal Investigator (PI) Dr. ██████████
██████████. The \$1██████████,000.00 grant was awarded to ██████████ University effective ██████████
██████████, 2011, and expires ██████████, 2013.¹ It was Dr. ██████████’s first award from NSF. Dr.
██████████ also has submitted a CAREER proposal which is pending (CBET-██████████).
OIG is currently investigating an allegation that Dr. ██████████ plagiarized over 200
lines of text, 1 figure, and 42 embedded references into her proposal.

THIS IS A POTENTIAL FELONY!!!

Multiple Proposal Submissions

- It is permissible to submit multiple proposals to do the same thing to different Federal agencies
 - But it is not permissible to submit the same proposal to multiple NSF units
- It is not acceptable to accept more than one award
- If you submit multiple proposals for the same or similar work, be careful to distinguish the uniqueness of each and, if appropriate, accept funding only once

Charging Twice for the Same Work

- *Chemical & Engineering News*, Feb. 13, 2012—Federal prosecutors have charged a leading materials scientist with wire fraud, making false statements, and money laundering. The researcher, Craig A. Grimes, formerly an electrical engineering professor at Pennsylvania State University, defrauded federal agencies of some \$3 million in research grants, the prosecutors say... Prosecutors also say Grimes applied for and accepted an ARPA-E grant for his solar work, while failing to disclose that the National Science Foundation had already funded the same research. Both agencies prohibit such grant duplication.
- Grimes was sentenced to 41 months in Federal prison

Inappropriate Use of Grant Funds

- Padding travel
- Commingling funds
 - Don't mix business and pleasure expenses
 - Don't mix grant funds and personal business expenses
- Charging for time not spent on a grant
- Billing items to your grant that shouldn't be billed to the grant
- Billing alcohol or entertainment to a grant
- Charging giveaways to a grant

Inappropriate Use of Funds

States News Service, August 29, 2014

Morgan State University Professor Sentenced To 3 Years In Prison In Scheme To Defraud The National Science Foundation And For Obtaining Kickbacks From Student Stipends

Fraudulently Obtained \$200,000 and Attempted to Obtain Another \$500,000 through a National Science Foundation Small Business Program

FOR IMMEDIATE RELEASE

August 29 , 2014

Baltimore, Maryland - U.S. District Judge Ellen L. Hollander sentenced Manoj Kumar Jha, age 47, of Severn, Maryland, today to three years in prison followed by three years of supervised release for wire fraud, mail fraud, falsification of records, and theft of government property in connection with a scheme to fraudulently obtain research grants from the National Science Foundation (NSF) and kickbacks from students' stipends. Judge Hollander also entered an order requiring Jha to pay \$105,726 in restitution.

Train and Verify

- Faculty and students should be trained—consequences should be made explicit
- Institutions need to perform oversight
- Institutions themselves need to operate in a culture of compliance

Falsification and Fabrication

**Falsified or fabricated
annual reports may
constitute a felony**

**Remember, Al Capone
went to jail for lying, not
for murder**

Need to Spend Monies Awarded

- NSF funds expire in 6 years
- Don't leave unspent money on the table
- NSF money must be spent on NSF research
- No-cost extensions must be requested before the expiration date of the award
- Cannot obtain a no-cost extension in order to get a supplement
- Must keep annual/final reports up to date
- Don't allow PIs to "bank" NSF funds

Winning Proposals

- Many proposals lack the necessary quality for an award
- PIs need to be rewarded for winning awards, not for submitting lots of proposals
- Mentoring and proposal-writing training are important, especially for young faculty
- Urge your faculty to take advantage of the many proposal-writing events CMMI conducts each year

Contents of Winning Proposals

- Winning proposals include:
 - A clearly written research (not developmental) objective
 - A well-designed plan to accomplish the stated objective
 - And also—
 - A statement about what motivates the proposed research
 - An argument that the PI can competently carry out the proposed research plan
 - A statement regarding the intellectual merit of the proposed research—the contribution to the field of science/engineering
 - A statement regarding the broader impact of the proposed research—the value to society of the proposed research (does not equate to outreach)
 - A reasonable and appropriate budget

Opportunities to Learn

- IMECE—Tuesday, 3:00-5:30
- CMMI CAREER Proposal Writing Workshop
 - Portland, OR, April 2-4, 2017
- Serve on NSF review panels
- Check recently funded awards
- Contact PD re: proposed research areas
- Contact PD after a declined proposal