



ENGINEERING RESEARCH INSTITUTE

JULY 2014 – JUNE 2015

Faculty Focused Research Support

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Overview

ERI continues to make steady progress in its mission to help COE faculty increase and diversify their research portfolios. We accomplish this by spotting pockets of faculty research excellence, identifying viable funding opportunities, engaging faculty to develop compelling and compliant proposals and helping them manage complex proposals.

Faculty engagement and proposals- Last year, we engaged 50 faculty teams to submit 30 proposals to 10 agencies and 3 companies, for a total of \$79,341,316. We are encouraged by the increase in the number of faculty stepping out of their comfort zones to lead large competitive proposals not only to NSF but many other federal agencies including DOC, DOD, DOE, DHS & NIH.

Centers of Excellence- ERI provides support to the existing Centers of Excellence and helped create four new ones through the Dean's ACRI strategic initiative program. We expect them to mature into world class centers over time:

- Advanced Thermal Technology – Prof. Yue Wu (CBE)
- Icing Physics & Anti-/De-icing Technology – Prof. Hui Hu (AE)
- Materials for Extreme Environments – Prof. Mufit Akinc (MSE)
- Multiphase Flow Research – Prof. Shankar Subramaniam (ME) & Prof. Rodney Fox (CBE)

ERI is leading the effort to re-invigorate the Wind Energy Center. We have developed a new brochure, streamlined web presence and are organizing an industry symposium in September 2015 to increase industry support and engagement.

ERI continues to lead the Pratt & Whitney Center of Excellence. Through its fourth year we have received over 1.63 million dollars. We are engaging new MSE faculty to P&W scientists for materials research.

PEGASAS was successfully transitioned to CCEE under the direction of Prof. Halil Ceylan.

The Nanovaccine Initiative has grown to 57 researchers from 18 institutions. The Initiative submitted \$36 million of proposals, and received a \$1.4 million NIH award.

Awards & Project Support- COE faculty received 13 awards totaling \$ 7,349,210. We provided project support to faculty teams in AerE, CBE, CCEE, ECpE, ME and MSE. We also manage limited submissions for COE, and offer editing services to the selected PI. The result was the College's first Bailey Award in several years.

Win More – Submit Less initiative – To improve the hit rate of our proposals, we held a brainstorming session with PIs who helmed large proposals. The key findings fell in three categories: PI time commitment, teambuilding & proposal development, and submission support. We are now developing implementation plans. In summary, we had a good year. If we can figure out ways to win more of our submissions, we are positioned to have a breakthrough year.

RESEARCH DEVELOPMENT

Research Development

ERI works at each stage of sponsored funding with the PI. ERI staff focus specifically on engaging with faculty to grow specific research areas of strength, to develop compelling responses to funding opportunities that lie outside faculty comfort zones and to develop competitive submissions.

The sections below describe key faculty engagement, proposal submissions, viable opportunities that the faculty decided to not bid (mostly due to lack of bandwidth), industry engagement, program awards and project management support.

KEY FACULTY ENGAGEMENT

ERI engages with many faculty through the year, the following is a list that resulted in tangible outcomes such as proposal submissions to federal agencies or industry:

- Akinc, Mufit (MSE)– ACRI Strategic Thrust (Materials for Extreme Environments), NAVY BAA
- Bond, Leonard (CNDE) – Pratt & Whitney, Additive Manufacturing – DOE America Makes
- Ceylan, Halil (CCEE) – PEGASAS, DOT FAA
- Chang, Morris (ECpE) – DOD DARPA, DOC 2015-NIST-NSTIC-01
- Cochran, Eric – DOE (ACRI Large Proposal Support), DOE EERE TABB
- Collins, Peter (MSE) – Pratt & Whitney
- Cui, Jun (MSE) – Pratt & Whitney
- Darr, Matt (ABE) – Machine Automation, Raytheon, Precision Agriculture
- Dickerson, Julie (ECpE) – NSF NRT
- Fox, Rodney (CBE) – ACRI Strategic Thrust (Multiphase Flow Research Center)
- Govindarasu, Manimaran (ECpE) – DHS S&T Critical Infrastructure Resilience Center, DOE CEDS
- Guan, Yong (ECpE) - Digital Forensic Science Center – DOC NIST (Research Development prior to Internal ISU competition loss), DOC 2015-NIST-NSTIC-01
- Hashemi, Nastaran (ME) – NIH
- Hu, Hui (AerE) – ACRI Strategic Thrust (Icing Research Center), Wind Energy
- Jiles, David (ECpE) – BRAIN Initiative
- Lu, Meng (ECpE) – DOE ARPA-E MONITOR
- Martin, Steve (MSE) – DOE, ARPA-E Open 2015
- Niehart, Nate (ECpE) – USDA NIFA (ACRI Large Proposal Support)
- Pandey, Santosh (ECpE) – DOD DTRA, DARPA
- Phillips, Greg (VetMed) – DOD DARPA, DTRA
- Rajan, Krishna (MSE) – DOD DARPA MDP, NSF
- Rivero, Iris (IMSE) –DOD CDMRP (ACRI Large Proposal Support)

RESEARCH DEVELOPMENT

- Soumik Sarkar – Rockwell Collins / Regents Innovation Fund
- Sri Sritharan (CCEE) – DOE EERE Tall Towers, Wind Energy
- Subramaniam, Shankar (ME) – ACRI Strategic Thrust (Multiphase Flow Research Center)
- Suraj Kothari (ECpE) – DARPA
- Takle, Gene (Agron/AerE) – MidAmerican Energy, Wind Energy
- Tang, Lie – DOE ARPA-E MONITOR
- Tekeste, Mehari (ABE) – John Deere / Regents Innovation Fund
- Tim, Udoyara (ABE) – Ecological Engineering & Sustainability
- Tyagi, Akhilesh (ECpE) – DOD DARPA, Northrop Grumman, Boeing, DOC 2015-NIST-NSTIC-01, Air Force, University Cyber Research Forum
- Vaswani, Namrata (ECpE) – Rockwell Collins / Regents Innovation Fund
- White, David (CCEE) – Caterpillar, Earthworks Engineering Research
- Williams, Chris (CCEE) – DOE EERE TABB
- Wlezien, Richard (AerE) – PEGASAS, NSF RED
- Wu, Yue (CBE) – ACRI Strategic Thrust (Transformative Research on Advanced Thermal Technology), DARPA MATRIX
- Yu, Chenxu (ABE) – NSF IDBR

PROPOSAL SUBMISSIONS IN FY15

ERI engaged with 50 teams to develop research ideas into cogent proposals by offering assistance in some of the following ways: developing the technical approach, identifying win strategies, writing compelling executive summaries, and developing broader impact statements, data management plans, realistic cost, schedule and program plans. The following 30 faculty proposals were submitted:

PI	Department	Sponsor	Proposal Amount	Status
Kothari	ECpE	DOD-DARPA STAC	\$4,648,672	Funded
Dickerson	ECpE	NSF-NRT	\$3,000,000	Funded
Tyagi	ECpE	Northrup-Grumman (DHS)	\$315,641	Funded
Ceylan	CCEE	DOT FAA	\$279,374	Funded
Vaswani (2 proposals for 1 project)	ECpE	RIF & Rockwell Collins	\$100,000	Funded
Hong	AeroE	ISU Bailey Award	\$100,000	Funded
Nikolau/Shao	BBMB/CBE	DOE-ARPA-e	\$5,138,948	Pending
Chang	ECpE	DOD-DARPA Brandeis	\$4,504,850	Pending

RESEARCH DEVELOPMENT

PI	Department	Sponsor	Proposal Amount	Status
Martin	MSE	DOE-ARPA-e	\$2,949,980	Pending
Sarkar	AerE	NSF NHERI	\$2,750,800	Pending
Govindarasu	ECpE	DHS-CPSSEC	\$1,981,636	Pending
Chang	ECpE	UNL (DOD-DARPA BRASS)	\$1,799,999	Pending
Cochran	CBE	NSF MRI	\$998,430	Pending
Hashemi	ME	NIH (helping MSE)	\$405,087	Pending
Tekeste (2 proposals for 1 project)	ABE	RIF & Deere	\$100,000	Pending
Govindarasu	ECpE	DOE-CEDS	\$13,089,470	Declined
Phillips/Pandey	VMPPM/ECpE	DOD-THoR	\$12,312,951	Declined
Cochran & Williams	CBE & CCEE	DOE-EERE-TABB	\$10,000,000	Declined
Tyagi	ECpE	DOD-DARPA CFAR	\$3,178,511	Declined
Rajan, K.	MSE	DOD-DARPA –MDP	\$2,478,387	Declined
Wlezien	AerE	NSF RED	\$2,000,000	Declined
Kothari	ECpE	DOD-DARPA	\$1,694,260	Declined
Lu & Tang	ECpE & ABE	DOE ARPA-E MONITOR	\$1,634,481	Declined
Rivero	IMSE	DOD-CDMRP-USMC	\$750,000	Declined
Yu	ABE	NSF IDBR	\$715,957	Declined
Takele	ERI	MidAmerican	\$403,882	Declined
Rajan	MSE	Pratt & Whitney	\$10,000	Withdrawn
Chang (Concept Paper)	ECpE	NIST-NSTIC	\$2,000,000	Concept Paper
Dong (Concept Paper)	CCEE	DOE EERE Vehicle Technologies Open FOA		Concept Paper

NO BIDS – VIABLE OPPORTUNITIES

20 opportunities in this time period were identified as viable and ERI worked with faculty teams to develop a response to the solicitations. It was eventually decided by the faculty not to pursue:

Acceleration of Distributed Generation from Wind Energy Systems – **DOE**

Additive Manufacturing – **DOE America Makes**

Advanced Manufacturing Technology Consortia Program – **DOC NIST**

RESEARCH DEVELOPMENT

Atoms-to-product – **DOD DARPA**

Biological Robustness in Complex Settings (BRICS) – **DOD DARPA**

Critical Infrastructure Resilience Center of Excellence—Center Partner - **DHS S&T**

Cyber Resiliency – **DOD AFRL**

DHS S&T Critical Infrastructure Resilience Center of Excellence – participant **DHS**

Distributed Wind Energy – **DOE EERE**

Generating Realistic Information, Development of Distribution & Transmission Algorithms – **DOE ARPA-E**

Human Performance Prediction – **DOD ARPA-I**

Materials & Processes for Rugged Electronics Foundational Engineering Problem – **DOD AFRL**

Near Zero Power RF and Sensor Operations – **DOD DARPA MTO**

Next Generation Software Defined Radio Frequency (SDRF++) Capability – **DOD AFRL**

Photovoltaic Reliability & Durability – **DOE ARPA-E**

Rugged Electronics – **DOD AFRL**

Safe Wave – **DOD DARPA**

Simplifying Complexity in Scientific Discovery – **DOD DARPA**

Solid-State Lighting Advanced Technology R&D – 2015 – **DOE EERE**

Using Neural Tools to Augment Prediction of Performance, Expertise, and Domain Knowledge – **IARPA**

INDUSTRY ENGAGEMENT

ERI helps connect industry-identified needs with COE faculty capabilities to develop research relationships that last far beyond individual research contracts, positioning the College to leverage long-term strategic roles in traditional and emerging technical disciplines. During the last year, we obtained over \$500,000 from industry. In addition to ongoing funded research from Pratt & Whitney, and Vermeer, ERI expanded relationship with the following companies:

- Rockwell Collins – Video Enhancement project with Professors Vaswani (ECpE) and Sarkar (ME)
- Northrop Grumman – Cyber security research funding to Professors Tyagi & Tirthapura (ECpE)
- MidAmerican – \$500K proposal for Wind Forecasting
- Caterpillar – Ongoing discussions for multi-year research funding
- John Deere – Virtual product development research project proposed to Regents Innovation Fund with Mehari Tekeste (ABE)
- Boeing – Hosted Balaguruna Chidambaram, R&T Cyber Security Manager in discussion to establish funded research in Cyber security

RESEARCH DEVELOPMENT

PROGRAM AWARDS

Thirteen proposals have been awarded in this time period for a total of \$7,349,210 significantly contributing to the College of Engineering diversification and expansion goals as well as the national recognition of ISU's Wind Energy Initiative.

(Awards designated with * were submitted in FY14 - Sponsor Decision and Award Received in FY15)

- Suraj Kothari – DOD DARPA STAC -\$4,468,672
- Sri Sritharan – DOE EERE Tall Towers (Wind Energy) – \$1,000,000* + \$250,000* Iowa Energy Center & Industry Cost Share obligated
- Nathan Neihart – USDA NIFA – \$491,919*
- Santosh Pandey & Gregory Phillips – DOD DTRA – \$500,000*
- Halil Ceylan - DOT FAA - \$279,374
- Wei Hong – ISU Bailey Award - \$100,000
- Namrata Vaswani & Soumik Sarkar (2 proposals for one project) – Rockwell Collins & RIF – \$100,000
- Ron Roberts (1) - Pratt & Whitney Center of Excellence - \$50,000
- Ron Roberts (2) - Pratt & Whitney Center of Excellence - \$50,000
- Ron Roberts (3) – Pratt & Whitney Center of Excellence - \$6,860*
- T. Gray - Pratt & Whitney Center of Excellence - \$29,385
- Joe Gray - Pratt & Whitney Center of Excellence - \$23,000

PROJECT MANAGEMENT

ERI works at each stage of sponsored funding with the PI, from identification of opportunities and pre-award proposal and budget development through post-award management of multi-million dollar awards including complex federal reporting requirements and ongoing team and milestone monitoring to ensure smooth execution of projects and research compliance. In FY15 ERI managed the following awards:

- Suraj Kothari (ECpE) – AFRL APAC – over \$3,828,000
- Sri Sritharan (CCEE) – DOE EERE Tall Towers – nearly \$1 Million
- Gene Takle (Aero E / Agron) – IAWIND - \$300,000
- Raj Aggarwal (ECpE) – Vermeer \$300,000
- Simon Laflamme (CCEE) – UI (IAWIND) - \$256,689
- Pratt & Whitney Center of Excellence – over \$1.3 Million
- PEGASAS FAA Center of Excellence – over \$889,000

Centers of Excellence / Strategic Initiatives

In order to grow collaborations and partnerships in high impact areas, the Dean's Accelerating Collaborative Research Initiative (ACRI) was launched successfully. We funded 4 initiatives described below. In addition we provided leadership and support to the cyber security and wind energy initiatives.

WORK WITH STRATEGIC INITIATIVE LEADERS TO ESTABLISH NEW CENTERS OF EXCELLENCE

During the last year, ERI managed the ACRI (Accelerated Collaborative Research Initiative) program to fund four new strategic initiatives. The progress during the last year is noted below:

- **Cyber Security:** Working with faculty across multiple departments/colleges for DOD research funding. So far, we have received over 6 million dollars from DARPA and other federal agencies.
- **Wind Energy (WE):** Worked with WE team to develop WEC vision. Going forward, ERI is leading the effort to increase engagement with industry and DOE. ERI is planning a Wind Industry Symposium on September 29 at ISU. Mr. José Zayas, Office Director of Wind and Water Power Technologies, Office of Energy Efficiency and Renewable Energy, US Department of Energy, is a confirmed Keynote Speaker. Five sessions will highlight current thrust areas: Forecasting, Tall Turbine Towers, Blade Manufacturing, Aeromechanics, Grid Integration. The day will wrap up with an Industry Panel Discussion and tours of ISU laboratories.
- **Pratt & Whitney Center of Excellence:** In its fourth year, we have received over 1.63 million dollars of funding from Pratt & Whitney. Last year, we received \$301,148. The focus of the center is to conduct research in non-destructive evaluation, materials for extreme environments and multi-phase flow.
- **PEGASAS:** Working with faculty, PEGASAS leadership and the FAA to secure and manage \$1,168,380 in funding. The ISU PEGASAS leadership transitioned to Prof. Halil Ceylan in CCEE at the end of fiscal year, with project management support also transitioning to CCEE.

CENTERS OF EXCELLENCE / STRATEGIC INITIATIVES

ACRI AWARDS – STRATEGIC INITIATIVES

- Shankar Subramaniam (ME) & Rodney Fox (CBE) – **Multiphase Flow Research:** Multiphase flow research for sustainable production of energy, chemicals and fuels; manufacture of advanced materials and pharmaceuticals; and development of novel devices and treatments for human health
- Hui Hu (Aero E) – **Icing Physics and Anti-/De-icing Technologies:** Icing physics & modeling; icing detection & characterization; aerodynamics of icing airfoils/wings; anti-icing coatings & surface engineering; novel anti-/de-icing research for icing mitigation & protection.
- Mufit Akinc (MSE) – **Materials for Extreme Environments:** Develop novel materials for a variety of extreme thermal & electrical environments as a function of intrinsic material properties and materials-environment interactions with system performance perspective.
- Yue Wu (CBE) – **Transformative Research on Advanced Thermal Technology:** Explore the fundamental science and develop technical breakthroughs for harvesting, storing, manipulating and recovering the low-grade heat.

PRESIDENTIAL INITIATIVE FOR INTERDISCIPLINARY RESEARCH – NANOVACCINE INITIATIVE

The Nanovaccine Initiative has grown to 57 researchers from 18 universities, research institutes, national laboratories, companies, and healthcare coalitions, coordinated by Iowa State University.

The Nanovaccine Initiative has completed year two of its three-year Presidential Initiative for Interdisciplinary Research \$1.2 million pursuit grant funding.

The Initiative submitted \$36 million of funding proposals in FY15. The Nanovaccine Initiative is collaborating with the new National Strategic Research Institute at the University of Nebraska to pursue DOD funding to develop an Ebola nanovaccine, nanotherapeutics for traumatic brain injury, and nanotherapeutics for neurodegeneration due to chemical exposure. Initiative PIs received a \$1.4 million NIH R01 award for biodefense pathogens research, and a \$50,000 Regents Innovation Fund award for Parkinson's disease research with two Ames companies.

The Nanovaccine Initiative has also made 22 internal and external grants for collaborative preliminary research, totaling about \$360,000, to produce preliminary data to strengthen external funding proposals. This preliminary research is being supported by \$100,000 of funding to core infrastructure for animal models, antigens, and nano-formulations.

In FY15, the Nanovaccine Initiative hired IMSE grad student Cheryl Khoo as a graduate administrative assistant, who is now handling event management, website maintenance, and budget tracking. Traffic to the Nanovaccine Initiative website (nanovaccine.iastate.edu) has increased almost seven-fold, from 373 unique page views in June 2014 to 2,577 views in April 2015. Other outreach and marketing activities included hosting 11 live (and live webcast) seminars on campus, hosting eight research-sharing webinars, and hosting 62 researchers at its August 2014 annual meeting and 67 at its May 2015 annual meeting.

ERI ENGAGEMENT BY DEPARTMENTS & CENTERS

ERI Engagement by Departments & Centers

(** denotes ERI services continue with project management or will continue if awarded)

AEROSPACE ENGINEERING

PROPOSALS

Funded

- Hong, Wei – ISU - Bailey Award - \$100,000
- Hu, Hui – ACRI – Icing Center - \$75,000 **

Pending

- Sarkar, Partha – NSF NHERI - \$2,750,800

Declined

- Takle, Gene – MidAmerican Energy - \$403,882
- Wlezien, Richard – NSF RED - \$2,000,000

FACULTY ENGAGEMENT

- Bond, Leonard - Additive Manufacturing
- Dai, Ran – DOD ONR YIP

AGRICULTURAL & BIOSYSTEMS ENGINEERING

PROPOSALS

Pending

- Tekeste, Mehari – Regents Innovation Fund / John Deere - \$100,000 **

Declined

- Tang, Lie – DOE ARPA-E MONITOR - \$1,634,481
- Yu, Chenxu – NSF IDBR: Type A - \$715,957

FACULTY ENGAGEMENT

- Darr, Matt – Raytheon, Precision Agriculture, ACRI formulation

ERI ENGAGEMENT BY DEPARTMENTS & CENTERS

- Tim, Udoyara – Ecological Engineering & Sustainability, ACRI formulation

CHEMICAL & BIOLOGICAL ENGINEERING

PROPOSALS

Funded

- Fox, Rodney – ACRI – Multiphase Flow Research - \$75,000 **

Pending

- Shao, Zengyi (CoPI) - DOE ARPA- E - \$5,138,948

Declined

- Cochran, Eric – DOE EERE TABB - \$12.5 million

FACULTY ENGAGEMENT

- Li, Wenzhen – Regents Innovation Fund
- Wu, Yue – DOD DARPA MATRIX

CIVIL, CONSTRUCTION, & ENVIRONMENTAL ENGINEERING

PROPOSALS

Funded

- Sritharan, Sri – DOE EERE Tall Towers - \$1 Million ** ; Iowa Energy Center & Industry Cost Share - \$250,000 **

Declined

- Williams, R. Chris – DOE EERE TABB - \$12.5 million

Project Management

- Ceylan, Halil – DOT FAA PEGASAS - \$728,453 **
- Ceylan, Halil – DOT FAA PEGASAS - \$279,374**
- Laflamme, Simon – University of Iowa (IAWIND) - \$256,689 **
- Smadi, Omar – DOT FAA PEGASAS - \$160,553 **

ERI ENGAGEMENT BY DEPARTMENTS & CENTERS

FACULTY ENGAGEMENT

- Dong, Jing – DOE EERE Vehicle Technologies Incubator – Concept Paper
- Sritharan, Sri – Wind Energy Initiative engagement, Siemens engagement on Tall Towers
- White, Dave – Caterpillar Research Agreement

ELECTRICAL & COMPUTER ENGINEERING

PROPOSALS

Funded

- Dickerson, Julie – NSF NRT - \$3,000,000
- Kothari, Suresh – DOD DARPA STAC - \$4,648,672 **
- Pandey, Santosh – DOD DTRA \$500,000
- Vaswani, Namrata – Rockwell Collins / Regents Innovation Fund \$200K **

Pending

- Chang, Morris – UNLV (DOD DARPA BRASS) - \$1,799,999
- Govindarasu, Manimaran – DHS CPSSEC - \$1,981,636
- McCalley, James – DOE ARPA-E - \$2,000,000
- Tyagi, Akhilesh – DOD DARPA CFAR - \$3,178,511
- Tyagi, Akhilesh – Northrop-Grumman (DHS Mobile Tech Security)- \$315,641

Declined

- Govindarasu, Manimaran – DOE CEDS - \$13,089,470
- Pandey, Santosh (CoPI) – DOD DARPA THoR - \$12,312,951
- Chang, Morris – DOD DARPA – Brandeis - \$4,504,850
- Chang, Morris – NIST NSTIC - \$2,000,000
- Lu, Meng – DOE ARPA-E MONITOR - \$1,634,481

Project Management

- Aggarwal, Raj – Vermeer - \$300,000 **

FACULTY ENGAGEMENT

- Ajarapu, V. DOE NODES
- Bigelow, Tim – Additive Manufacturing
- Chang, Morris – DOC 2015-NIST-NSTIC-01
- Chen, Degang – DMEA, Analog Trojan States, Near Zero Power

ERI ENGAGEMENT BY DEPARTMENTS & CENTERS

- Dobson, Ian - DHS S&T Critical Infrastructure Resilience Center
- Geiger, Randy – DMEA, Analog Trojan States
- Govindarasu, M., DHS S&T Critical Infrastructure Resilience Center, DOE
- Jacobson, Doug – DOC 2015-NIST-NSTIC-01
- Kamal, Ahmed – DOD BAA-AFRL-RIK-2015-0005
- Kim, Sang – DOD ARO White Paper
- Kimber, Anne - WEI, DOE NODES
- McCalley, Jim - WEI, DOE NODES, DOE DE-FOA-0001357
- Qiao, Daji – DOC 2015-NIST-NSTIC-01
- Tirthapura, Srikanta – Northrop Grumman, – DOC 2015-NIST-NSTIC-01
- Tyagi, Akhilesh – DOD Air Force, University Cyber Research Forum,
- Wang, Zhengdao – DOD BAA-AFRL-RIK-2015-0005
- Yong, Guan - Digital Forensic Science Center – DOC NIST (Research Development prior to Internal ISU competition loss), – DOC 2015-NIST-NSTIC-01

INDUSTRIAL & MANUFACTURING SYSTEMS ENGINEERING

PROPOSALS

Declined

- Rivero, Iris – DOD CDMRP - \$750,000

FACULTY ENGAGEMENT

- Dorneich, Michael – DOT FAA PEGASAS
- Frank, Matt – Manufacturing Cyber Security, Boeing
- Gilbert, Steven - DOT FAA PEGASAS
- Hu, Guiping – DOD ONR YIP
- Peters, Frank – Wind Energy Initiative

MATERIALS SCIENCE & ENGINEERING

PROPOSALS

Pending

- Martin, Steve – DOE ARPA-E Open 2015- \$3,277,755

Declined

- Rajan, Krishna – DOD DARPA MDP - \$2,478,387

ERI ENGAGEMENT BY DEPARTMENTS & CENTERS

Withdrawn

- Rajan, Krishna – Pratt & Whitney Center of Excellence - \$10,000

Project Management

- Napolitano, Ralph – Pratt & Whitney Center of Excellence - \$26,334 **

FACULTY ENGAGEMENT

- Bowler, Nicola – Composite Materials Strategic Initiative
- Bratlie, Kaitlin – DOD
- Collins, Peter – Pratt & Whitney
- Cui, Jun – Pratt & Whitney
- Hong, Mingyi – DOD DARPA YFA
- LeSar, Richard – Pratt & Whitney

MECHANICAL ENGINEERING

PROPOSALS

Funded

- Sarkar, Soumik – Rockwell Collins / Regents Innovation Fund - \$200K **
- Subramaniam, Shankar – ACRI – Multiphase Flow Research - \$75,000 **

Pending

- Hashemi, Nastaran – NIH - \$405,087

FACULTY ENGAGEMENT

- Hashemi, Nastaran – ONR YIP
- Montazami, Reza – DARPA, VAPR
- Oliver, Jim – Northrop Grumman, IARPA Insider Threat
- Winer, Eliot – Northrop Grumman, IARPA Insider Threat

ERI ENGAGEMENT BY DEPARTMENTS & CENTERS

CNDE

PROPOSALS

Funded

- Roberts, Ron – Pratt & Whitney Center of Excellence – 2 projects total \$100,000 **
- Gray, Joseph – Pratt & Whitney Center of Excellence – \$23,000 **
- Gray, Timothy – Pratt & Whitney Center of Excellence – \$29,385 **

FACULTY ENGAGEMENT

- Barnard, Dan - Additive Manufacturing
- Bond, Leonard – Additive Manufacturing – DOE America Makes
- Koester, Lucas – Additive Manufacturing (Postdoc)

OTHER

PROPOSALS

Funded

- Phillips, Greg (V MPM) – DOD DTRA - \$500,000

Project Management

- Takle, Gene (Agron/AeroE) – University of Iowa (IAWIND) - \$300,000 **

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