The next issue of the Engineering Research Digest will publish on Wednesday, January 3, 2018.

Funding Opportunities
http://tees.tamu.edu/researchsupport/funding/

TEES Research Development – Proposal Development Assistance

Assistance for Junior Faculty
If you are junior faculty and would like help in submitting a proposal, please contact Dr. Laurie Garton at lsgarton@tamu.edu at least 4 weeks before your proposal is due. For the most assistance, please contact her 2-3 months in advance.

Also, see Junior Faculty Opportunities below.

If you are working on a multidisciplinary and/or multi-university proposal and would like to use the services of TEES Research Development, please contact Dr. Laurie Garton at lsgarton@tamu.edu at least four weeks prior to the due date and after successfully negotiating the white paper or preproposal stage.

LIMITED SUBMISSIONS
If you would like to receive all notices of limited submission opportunities, please email shelly.martin@tamu.edu. Note that if you are on this list, you will receive any and all announcements, whether or not they apply to you. All limited submission opportunities are also posted on the VPR’s site.

Limited Submission NIH Data Science Research: Personal Health Libraries for Consumers and Patients (R01) – Email of Intent Due January 5, 2018; Internal Proposal Due January 11, 2018

Qatar National Research Fund
National Priorities Research Program (NPRP) (link) – Two tracks: NPRP Clusters Due January 23, 2018; the total budget per cluster is up to US$ 5M for a duration of up to five years. The budget of each sub-project should not exceed US$ 1M – NPRP Standard Due January 30, 2018.

DOC
**NIST Summer Undergraduate Research Fellowship (SURF) Program** ([link](#)) – Applications Due February 12, 2018 – applying universities may nominate up to 8 undergraduates for participation. NIST anticipates that individual awards to institutions will range from $9,000 - $72,000 with approximately $1.8 million available for new awards.


**NIST Precision Measurement Grant Program (PMGP or Program)** ([link](#)) – Abbreviated Applications Due February 2, 2018; Invited Full Applications Due March 19, 2018 – Approximately $100,000 may be available to fund the first year of new multi-year awards, supporting at most two (2) projects, depending on the availability of funding, for up to three (3) years at up to $50,000 per year

**DOD**

**C4ISR, Information Operations and Information Technology System Research Synopsis 5** ([link](#)) – Due May 14, 2018 – Multiple awards are anticipated as a result of this BAA. The amount of resources made available under this BAA will depend on the quality of the submissions received and the availability of funds.

**DARPA I2O Office-wide BAA** ([link](#)) – Abstract Due July 12, 2018; Proposal Due August 31, 2018 – Multiple awards are anticipated. The level of funding for individual awards made under this solicitation has not been predetermined and will depend on the quality of the proposals received and the availability of funds.

**DARPA Microsystems Technology Office Office-wide Broad Agency Announcement** ([link](#)) – Abstracts May Be Submitted on Rolling Basis until August 10, 2018; Proposals May Be Submitted on Rolling Basis until September 13, 2018 – This BAA is primarily, but not solely, intended for early stage research (studies) that may lead to larger, focused, MTO programs in the future. Studies are defined as single phase efforts of short duration (< 12 months) costing less than $1,000,000.

**DARPA DSO Office-wide Broad Agency Announcement (BAA)** ([link](#)) – Executive Summary Due April 26, 2018; Abstract Due May 10, 2018; Full Due June 11, 2018 – DARPA anticipates multiple awards. The level of funding for individual awards made under this BAA will depend on the quality of the proposals received and the availability of funds.

**DARPA Innovative Systems for Military Missions** ([link](#)) – Due June 12, 2018 – Multiple awards are anticipated. The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds. In general, initial awards are anticipated to be for less than $1 million and less than 18 months duration, although options that follow the base effort may also be proposed.

**DOE**

**ARPA-E OPEN 2018** ([link](#)) – Concept Paper Due February 12, 2018 – ARPA-E may issue one, multiple, or no awards under this FOA. Awards may vary between $500,000 and $10 million.
IARPA-Wide Research BAA (link) – Due May 2, 2018 – Multiple awards are anticipated. Awards generally will be for a period of performance of 12 months or less. The amount of resources made available under this BAA shall depend on the quality of the proposals received and the availability of funds.

The Ministry of Electronics and Information Technology (MeitY), The Netherlands Organisation for Scientific Research (NWO) and the NWO Taskforce for Applied Research (SIA)

Call for Joint Proposals of the Indo-Dutch Joint Research Programme for ICT (link) – Due March 6, 2018 – For each project proposal, a grant of k€ 200 to k€ 500 can be applied for from NWO and MeitY of which circa 50% to be covered by NWO and circa 50% by MeitY. In addition, a maximum of k€ 50 per project proposal can be applied for from SIA.

NIH

Synthetic Biology for Engineering Applications (R01 Clinical Trial Optional) (link) – Standard Due Dates: February 5, June 5, October 5 – The number of awards is contingent upon NIH appropriations and the submission of a sufficient number of meritorious applications. Award Budget: Application budgets are not limited but need to reflect the actual needs of the proposed project.

BRAIN Initiative: Development Optimization, and Validation of Novel Tools and Technologies for Neuroscience Research (SBIR) (R43/R44 Clinical Trial Not Allowed) (link) – Standard Due Dates: September 5, January 5, April 5 – According to statutory guidelines, total funding support (direct costs, indirect costs, fee) normally may not exceed $150,000 for Phase I awards and $1,000,000 for Phase II awards.

BRAIN Initiative: Development Optimization, and Validation of Novel Tools and Technologies for Neuroscience Research (STTR) (R41/R42 Clinical Trial Not Allowed) (link) – Standard Due Dates: September 5, January 5, April 5 – According to statutory guidelines, total funding support (direct costs, indirect costs, fee) normally may not exceed $150,000 for Phase I awards and $1,000,000 for Phase II awards.

Exploratory/Developmental Bioengineering Research Grants (EBRG) (R21 Clinical Trial Optional) (link) – Standard Due Dates: February 16, June 16, October 16 – The number of awards is contingent upon NIH appropriations and the number of meritorious applications selected for funding. Award Budget: Direct costs are limited to $275,000 over a two-year period, with no more than $200,000 in direct costs allowed in any single year.

NINDS Exploratory Neuroscience Research Grant (R21 Clinical Trial Optional) (link) – Standard Due Dates: February 16, June 16, October 16 – The number of awards is contingent upon NIH appropriations and the number of meritorious applications. Award Budget: Direct costs are limited to $275,000 over a two-year period, with no more than $200,000 in direct costs allowed in any single year.

NIBIB Trailblazer Award for New and Early Stage Investigators (R21 Clinical Trial Optional) (link) – Standard Due Dates: February 16, June 16, October 16 – The number of awards is contingent upon NIH appropriations and the submission of a sufficient number of meritorious applications. Award Budget: Application budgets may not exceed $400,000 direct costs over a maximum three-year funding period. No more than $200,000 may be requested in any single year.
BRAIN Initiative: Tools to target, identify and characterize non-neuronal cells in the brain (R01 Clinical Trial Not Allowed) – LOI Due 30 Days Prior; Application Due February 1, 2018 and October 4, 2018 – Issuing IC and partner components intend to commit an estimated total of $8M to fund 10 awards. Application budgets are not limited but need to reflect the actual needs of the proposed project.

Population-Based Model Organism Research for G x E Exploration in Complex Disease Outcomes (R01 Clinical Trial Not Allowed) – LOI Due December 31, 2017; Application Due February 1, 2018 – NIEHS intends to commit $4 million in FY 2019 to fund approximately 6 awards. Future year amounts will depend on annual appropriations. Application budgets are limited to $499,999.00 Direct Costs.

Synthetic Biology for Engineering Applications (R01) – Standard Due Dates: February 5, June 5, October 5 – Application budgets are not limited but need to reflect the actual needs of the proposed project.

National Cooperative Drug/Device Discovery/Development Groups (NCDDG) for the Treatment of Mental or Substance Use Disorders or Alcohol (U01 Clinical Trial Optional) – Due Dates: February 23, 2018, June 22, 2018, October 23, 2018 – Application budgets are not limited over the maximum five-year funding period, but must reflect actual needs.

National Cooperative Drug/Device Discovery/Development Groups (NCDDG) for the Treatment of Mental or Substance Use Disorders or Alcohol (U19 Clinical Trial Optional) – Due Dates: February 23, 2018, June 22, 2018, October 23, 2018 – Application budgets are not limited over the maximum five-year funding period, but must reflect actual needs.

Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Research Training Grant (Parent T32) – Standard Due Dates: January 25, May 25, September 25 – Application budgets are not limited over the maximum five-year funding period, but must reflect actual needs.

Ruth L. Kirschstein National Research Service Award (NRSA) Short-Term Institutional Research Training Grant (Parent T35) – Standard Due Dates: January 25, May 25, September 25 – Application budgets are not limited over the maximum five-year funding period, but must reflect actual needs.

NCATS Limited Competition: Exploratory CTSA Collaborative Innovation Awards (R21 Clinical Trial Optional) – Due Dates: March 29, 2018, July 30, 2018 – Application budgets may not exceed $275,000 direct costs over a maximum two-year funding period. No more than $200,000 in direct costs may be requested in any single year.

NIBIB Exploratory/Developmental Research Grant Program (R21) – Standard Due Dates: February 16, June 16, October 16 – Application budgets may not exceed $275,000 direct costs over a maximum two-year funding period. No more than $200,000 in direct costs may be requested in any single year.

**NSF**

The revised PAPPG (NSF 18-1) will be effective for proposals submitted or due, or awards made, on or after January 29, 2018. NSF conducted a webinar for the research community on Friday, December 8, 2017. Those who were unable to participate in the live webinar will be able to view a recording at: [https://nsfgrantsconferences.com/resource-center/#webcasts](https://nsfgrantsconferences.com/resource-center/#webcasts).
Dear Colleague Letter: RAISE on Enabling Quantum Leap: Transformational Advances in Quantum Systems (link)

National Robotics Initiative 2.0: Ubiquitous Collaborative Robots (NRI-2.0) (link) – Full Due February 20, 2018 – Foundational projects will range from $250,000 to $750,000 in total costs for up to three years. Integrative projects will range from $500,000 to $1,500,000 in total costs for up to four years.

Innovation Corps – National Innovation Network Teams Program (I-CorpsTM Teams) (link) – Proposal accepted anytime with an I-Corps Cognizant Program Officer’s invitation. – Anticipated Funding Amount: $12.75 million per year, pending availability of funds; Estimated Number of Awards: 255

Training-based Workforce Development for Advanced Cyberinfrastructure (CyberTraining) (link) – Full Due February 14, 2018 – Each CyberTraining award shall range from $300,000 to $500,000 per award and shall be up to 3 years in duration.

Partnerships for Research and Education in Materials (PREM) (link) – Full Due January 29, 2018 – Awards are anticipated to be $300,000 to $700,000 per year for up to 6 years pending the availability of funds and receipt of competitive proposals.

Spectrum Efficiency, Energy Efficiency, and Security (SpecEES): Enabling Spectrum for All (link) – Full Due January 18, 2018 – Approximately 13-16 awards are anticipated, each up to $750,000 total and up to 3 years in duration, subject to the availability of funds and quality of proposals received.

Scalable Parallelism in the Extreme (SPX) (link) – Full Due January 9, 2018 – Approximately $10,000,000 will be made available in FY 2018 to support up to 15-25 awards with durations of 2-4 years and up to $1,000,000 per award.

Cyberlearning for Work at the Human-Technology Frontier (link) – Full Due January 8, 2018 – Each project will be funded for a duration of 2 to 3 years and up to a total funding amount of $750,000.

Smart and Connected Communities (S&CC) (link) – LOI Due January 30, 2018, Full Due February 28, 2018. Anticipated funding amount: $19,250,000 up to 15 awards.

Partnerships for Innovation (link) – Due February 1, 2018. Anticipated funding amount: $16,750,000 up to 55 awards.

Dynamics of Coupled Natural and Human Systems (CNH) (link) – Due January 23, 2018. Anticipated funding amount: $12,000,000 available for 8 to 13 awards.

Enabling Discovery through Genomic tools (EDGE) (link) – Due February 1, 2018. Anticipated funding amount: $6,000,000 available for 10 awards per year.

International Research Experiences for Students (IRES) (link) – Track I, IRES Sites, up to $300,000 per award, 20-25 awards, Due January 30, 2018 and September 11, 2018; Track II, Advanced Studies Institutes, $150,000 per award, 10-12 awards, Due February 6, 2018 and September 18, 2018; Track III, New Concepts in International Graduate Experience, up to $1,000,000, 3-5 awards, Due February 13, 2018 and September 25, 2018.

Campus Cyberinfrastructure (CC*) (link) – Full Due January 30, 2018 – Estimated total program funding: $17,000,000 for multiple award types and sizes ($500,000 to $3,500,000 per award for 2 to 4 years).

CMMI Engineering for Civil Infrastructure (ECI) (link) – Full Due January 10-24, 2018 – PD 17-073Y
CMMI Engineering Design and System Engineering (EDSE) (link) – Full Due January 10-24, 2018 – PD 17-072Y

Notices of Intent/Requests for Information
Clean Energy Smart Manufacturing Innovation Institute (CESMII) Roadmap Project Request for Proposals (RFP) (link) – Responses Due January 31, 2018
DOE National Renewable Energy Laboratory Request for Information Regarding the U.S Department of Energy Collegiate Wind Competition (link) – Responses Due January 10, 2018
DARPA Gamma Request for Information (RFI) (link) – Responses Due January 12, 2018

Student/Postdoctoral Opportunities
Lawrence Livermore Engineering Fellowship Program at Texas A&M (link) – Application Due January 25, 2018 – Contact: Dr. Alaa Elwany, elwany@tamu.edu
Idaho National Laboratory Graduate Fellowship Program (link) – Application Due February 1, 2018 – INL Graduate Fellows will receive an annual salary of $60,000.
The Wistar Institute Caspar Wistar Fellows Program (link) – Applications Due January 29, 2018 – Fellows will be provided their own research space, resources and support needed to run their own labs and pursue their own independent research agenda. Fellows will be appointed for a three-year term with the possibility of extending an additional one to two years. Two Fellows will be recruited in 2018: one Fellow with a cancer focus that will join Wistar’s NCI-designated Cancer Center and one with a vaccine/immunology focus that will join Wistar’s Vaccine & Immunotherapy Center.
SAE Dan and Vicky Hancock Scholarship for Mechanical Engineering Excellence (link) – Applications Due March 15, 2018 – $5,500

Junior Faculty Opportunities

Young Investigator Programs
http://tees.tamu.edu/researchsupport/young-investigator-programs/

Young Investigator Programs are for junior faculty who are untenured, Assistant Professors. Resources are available including CAREER/YIP workshops and seminars, proposal assistance, writing resources, and junior faculty targeted funding opportunities.

Junior Faculty Targeted Funding Opportunities – This spreadsheet contains numerous funding opportunities for junior faculty in Engineering.
Young Investigator Awards – This spreadsheet lists early career and young investigator awards (general list).
Funding Opportunities

*DOE Early Career Research Program* ([link](#)) – Pre-Application Due January 25, 2018; Application Due April 4, 2018 – The largest award made under the previous seven versions of this FOA received no more than $960,000 over five years. However, the median award size is $750,000, with 80% of awards made for exactly $750,000 over five years.

Seminars/Events/Workshops

**Story Circles – Demo Day**
January 11, 2018 – 9:30 a.m. - 4:00 p.m. – MSC 2406 – This session is closed.
January 12, 2018 – 9:30 a.m. - 4:00 p.m. – MSC 1400 – Space is still available.
[Information on speaker here](#) and [Registration](#)
Contact Dr. Laurie Garton, lsgarton@tamu.edu, for more info.

**Junior Faculty Proposal Writing Academy – 2018 NSF CAREER and Other Young Investigator Programs**
February 22, 2018
8:00 a.m. - 2:00 p.m.
301 Rudder Tower
[Information and Registration](#)

**Junior Faculty Proposal Writing Academy – NSF CAREER Writing Groups Inaugural Meeting**
March 7, 2018
2:00 p.m. - 3:00 p.m.
Location TBA
[Information and Registration](#)

**Junior Faculty Proposal Writer's Academy – Filling Your Toolbox: NIH Proposal Writing Resources**
March 21, 2018
1:00 p.m. - 4:00 p.m.
3147 ILSB
[Information and Registration](#)

**Junior Faculty Proposal Writer's Academy – Research Data Management Workshop**
April 4, 2018
1:00 p.m. - 3:00 p.m.
Sterling C. Evans Library Annex
[Information and Registration](#)

Junior Faculty Proposal Writing Academy
The TEES Research Development group and the Division of Research’s Research Development Services office have partnered to create the Junior Faculty Proposal Writing Academy. For more information, please visit http://jfa.tamu.edu/.

Additional Resources

Facilities – A list of facilities for each department in the College of Engineering is available on the TEES Research Development website. Faculty can use this list in creating facilities statements for multi-PI proposals.

NSF Broader Impacts Expo List of Resources – A list of the organizations and resource representatives who participated in the NSF Broader Impacts Seminar and Expo.

Funding Opportunities Spreadsheet – A spreadsheet of funding opportunities from the past year’s newsletter.

Education/Broader Impacts – A list of resources available through EASA, College of Engineering, Texas A&M, and national resources.

Proposers Days/Webinars
(All times Central unless otherwise noted)

DARPA Ocean of Things Aims to Expand Maritime Awareness across Open Seas Proposers Day
January 4, 2018
DARPA Conference Center, 675 N. Randolph Street, Arlington, VA
Information and Registration – Participants must register for the Ocean of Things Proposers Day through the registration website by December 27, 2017 at 12:00pm EDT.

Seminars/Events/Workshops for All Faculty
http://tees.tamu.edu/researchsupport/events/

Story Circles – Demo Day
January 11, 2018 – 9:30 a.m. - 4:00 p.m. – MSC 2406 – This session is closed.
January 12, 2018 – 9:30 a.m. - 4:00 p.m. – MSC 1400 – Space is still available.
Information on speaker here
Information and Registration
Contact Dr. Laurie Garton, lsgarton@tamu.edu, for more info.

TAMU DOR Writing Successful Proposals (All Faculty)
March 1, 2018
1:00 p.m. - 4:00 p.m.
Location TBA
Information and Registration
**CAREER Proposal Writing Workshop 2018 hosted by NSF CMMI**
March 25-27, 2018
Charlotte, NC
[Information and Registration](#) – Application deadline is January 8, 2018.

**TAMU DOR Demystifying the NSF: NSF Funding Opportunities, Proposal Preparation, and Review Process**
March 28, 2018
1:00 p.m. - 4:00 p.m.
Location TBA
[Information and Registration](#)

**TAMU DOR NSF Broader Impacts – All Faculty**
April 11, 2018
1:00 p.m. - 2:30 p.m.
Location TBA
[Information and Registration](#)

**2018 Science of Team Science (SciTS) Conference**
May 21-24, 2018
Moody Gardens Hotel and Conference Center, Galveston, TX
[Information and Registration](#) – Registration coming soon. Workshop Submission Deadline: February 5, 2018; Abstract Submission Deadline: March 20, 2018

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**Research News**

**Using Machine Learning to Uncover Genetic Mutation Mechanism**

Our genes contain recipes to make proteins that build and regulate our bodies. Our genetic information is stored in our DNA. Genetic mutations occur when there is a permanent alteration, inherited or acquired, in the DNA sequence. The mutations may lead to protein malfunction often causing diseases or counteracting medicines. In contrast to big data on disease-related mutations, very limited knowledge exists about how genetic mutations may affect our health.

A researcher in the Department of Electrical and Computer Engineering at Texas A&M University and the TEES-AgriLife Center for Bioinformatics and Genomic Systems Engineering is developing computational frameworks to study the mechanisms by which disease-related genetic mutations can cause health problems.

Assistant Professor Dr. Yang Shen has received the Maximizing Investigators' Research Award (MIRA) for Early Stage Investigators (ESI) for his research project titled, “Unraveling Molecular and Systems-Level Mechanisms of Human Disease-Associated Protein Mutations,” from the National Institutes of Health. The $1.67 million project will span over five years.

To view the complete story, please visit the [website](#).
Donnell Works to Demystify Engineering Entrepreneurship

There is more to engineering than working in a lab and solving equations, and Jim Donnell, professor of practice in the Texas A&M University Department of Mechanical Engineering, is working to educate and broaden the horizons of engineering students through entrepreneurship. “I am so driven to unlock the mysteries that engineering students have around business. There’s a different (vocabulary) but it really isn’t as difficult as they fear it to be,” Donnell said. “This [course] can help break through that barrier and help them better understand the concepts which may escape them currently.”

Donnell said entrepreneurship is a broad and vague term that many narrowly define as applying only to those who are interested in starting their own company. For him, the term encompasses much more than that.

To view the complete story, please visit the website.

Charoenphol Receives Grant to Pump New Research into Fight Against Cardiovascular Disease

Heart disease is the leading cause of death in the United States. Dr. Ploy Charoenphol, research assistant professor with the Department of Mechanical Engineering at Texas A&M University, is working to help reduce that statistic, and has recently received a grant to aid her in that endeavor.

“If you take the high risk of death from cardiovascular diseases, there’s a need to improve current diagnosis and treatment,” Charoenphol said.

Charoenphol recently received a scientist development award, a three-year grant for $231,000 from the American Heart Association. Her research will focus on seeking alternative but effective ways to diagnose and treat symptoms that may lead to heart disease and stroke through a project titled, “Engineering a multistage delivery system for intravascular administration of contrast agents in cardiovascular diseases.”

To view the complete story, please visit the website.

Prepared by TEES Research Development under the auspices of the Associate Agency Director for Strategic Initiatives and Centers. For questions, email researchnews@tees.tamu.edu.