Research at the University of Pittsburgh

New Faculty Orientation – Sciences and Engineering

David A. Vorp, PhD
Associate Dean for Research
Swanson School of Engineering
Welcome to Pitt!
Your Success is the University’s success...

• What makes Pitt a great place to do research? (unofficial, non-exhaustive)
  • Outstanding facilities.
  • Great colleagues across campus.
  • Easy to collaborate across Departments, Schools and Universities.
  • Excellence in scholarship is valued.
Excellence in Research (partial)

- Computer Modeling
- International Studies
- Culture and Thought
- Aging
- Neuroscience
- Bioengineering
- Philosophy
- Corporate Governance
- Improving Our Schools
- National Preparedness
- Drug Discovery
- Translational Medicine
- Nanoscience
- Energy
- Global Health
- Business Decision Making
Research Centers and Institutes

- Over 250 Centers and Institutes
- Center for Energy
- Mascaro Center for Sustainable Innovation (MCSI)
- Petersen Institute for Nanoscience and Engineering (PINSE)
- Center for Research Computing (CRC)
- Clinical Translational Science Institute (CTSI)
- Brain Institute
- Learning Research and Development Center (LRDC)
- University Center for International Studies (UCIS)

Consider joining a Center/Institute!
PEOPLE AND PLACES FOR RESEARCH SUPPORT AT PITT
• Note: Schools of the Health Sciences research activities are administered under the Sr Vice Chancellor of the Health Sciences (currently Dr. Art Levine)
Important links are at:
https://www.svcresearch.pitt.edu/

Research Administration/Facilitation
Office of Sponsored Programs
Innovation Institute
Computing Services and System Development
Center for Research Computing
Office of Economic Partnerships

Research Compliance
Office of Trade Compliance (aka, Office of Export Controls)
Conflict of Interest Office
Environmental Health and Safety
Institutional Review Board
Research Conduct and Compliance Office
Office of Research  
http://www.research.pitt.edu/

- **Dr. Jennifer Woodward**– Vice Chancellor for Research Operations & Director  
jew7@pitt.edu ; 412-624-7400  
- **Functions:**  
  - Process proposals (~ 4000 processed in FY19)  
  - Process and activate awards  
  - Non-financial agreements (CDAs, MTAs, etc.)  
  - Process incoming and outgoing subawards  
  - Negotiate and/or sign corporate, clinical research, and foundation agreements
Office of Research
http://www.research.pitt.edu/

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- Functions (cont’d):
  - Pitt Electronic Research Information System (PERIS™) training
  - Conflict of Interest forms on file
  - Check on-line trainings up to date
  - Work with Department/School Administrators
  - Help Office of Export Controls for export controls issues
Office of Research
http://www.research.pitt.edu/

• Note:
  – Deadline: 4 business days before sponsor due date for ALL proposals (use of PERIS™ solution)
  – Work through your departmental/school research administration to ensure all internal requirements have been completed and that the OoR personnel assigned to your department/school are aware of the submission.
  – See OoR website for specific information on proposal types, letters of intent, funding opportunities, etc.
Office of Research: Electronic Initiatives

• Office of Research Portal
  ▪ Accessible via research.pitt.edu or peris.pitt.edu
  ▪ Will provide you with real-time, web-based access to information about your sponsored research.
    • Agreement negotiation status (myra.pitt.edu)
    • Current, pending and completed support – Investigators can use this to assist them, but it may not be comprehensive for this purpose.
Office of Research: Funding Opportunities

- **Ryan Champagne, Grants Development Coordinator** - rkc12@pitt.edu

- **Funding resources**
  - [http://www.pitt.edu/~offres/funding.html](http://www.pitt.edu/~offres/funding.html)

- **Comprehensive funding databases**
  - IRIS, COS Pivot, and InfoEd’s SPIN cover funding programs in all disciplines

- **Some programs allow only a limited number of submissions**
  - [http://www.pitt.edu/~offres/fundinglimtd.html](http://www.pitt.edu/~offres/fundinglimtd.html)
Guidance for New Researchers
Information on how to get your research started at the Pitt

Training Requirements for Conducting Research at Pitt
Training is mandatory for all personnel listed on a research protocol. The training requirements are determined by the type of research being conducted. Get guidance at:
http://www.rcco.pitt.edu/ResearchTrainingRequirements.htm
Institutional Review Board (IRB)  
http://www.irb.pitt.edu/

Designated to approve, monitor, and review biomedical and behavioral research involving humans.

- Review processes can be different across different disciplines (expedited, full, etc.)
Conflict of Interest

COI Home
2012 Provost’s and EVC’s Annual COI Memo (PDF)
(Word Version)

Pitt & UPMC Electronic
COI Filing System

2012 Guide for completing
University COI Disclosures

2012 Guide for completing
Joint UPMC/Pitt form

2012 COI Filing Process - Supervisor Responsibilities

2012 Management Reporting Form

2012 Data Summary Report for Faculty/Researchers

2012 Data Summary Report Designated Admin & Staff

http://www.coi.pitt.edu/directive.htm
Guidelines for Ethical Practices in Research

- [http://www.pitt.edu/~provost/ethresearch.html](http://www.pitt.edu/~provost/ethresearch.html)
- The set of guidelines provides a positively-oriented set of practical suggestions for maintaining integrity in research.
Matters of Ethical Concern in Research

1. Plagiarism

2. Data

3. Authorship and other publication practices

4. Conflict of Interest

5. Responsibilities of a research supervisor

6. Responsibilities to funding agencies

7. Special obligations in human subject research

8. Laboratory animals in research or teaching
Lots (and Lots!) of Required Training

Modules Listings

- Responsible Conduct of Research
  - Bloodborne Pathogen Training (Formerly RPF Module 9)
  - Chemical Hygiene Training (Formerly RPF Module 10)
  - Conflict of Interest (Formerly RPF Module 4)
  - Good Clinical Practice
  - HIPAA Researchers Privacy Requirements (Formerly RPF Module 6)
  - Human Embryonic & Fetal Stem Cell Research (Formerly RPF Module 5)
  - Human Subjects Research in Biomedical Science (Formerly RPF Module 2A)
  - Human Subjects Research in Social and Behavioral Sciences (Formerly RPF Module 2B)
  - IRB Member Education (Formerly RPF Module 12)
  - Research Integrity (Formerly RPF Module 1)
  - Research with Children (Formerly RPF Module 13)
  - Responsible Literature Searching (Formerly RPF Module 11)
  - Small Animals Research and Training
  - Use of Laboratory Animals in Research and Education (Formerly RPF Module 3)
Innovation Institute

• Dr. Evan Facher – Vice Chancellor for Innovation & Entrepreneurship & Director - efacher@innovation.pitt.edu

• Hub of commercialization at Pitt

• Mission: To facilitate the development of products and processes from University technology for the benefit of faculty, staff, students and the community.
Some Innovation Institute Services

- Education, counseling and assistance on intellectual property (IP) issues
- Protection of IP
- Assistance with Invention Disclosure
- Strategic planning for commercialization of your innovations
- Negotiation of contracts for licensing your innovations
- Management of post-license reporting revenue collection and royalty distribution
- Corporate engagement
Innovation Institute: FY18

**Innovation Commercialization**
- **363** Invention Disclosures
- **23** Startups
- **13** UPMC Alliance Agreements
- **98** U.S. Patents Issued
- **162** Licenses/Options
- **166** Startups Since Inception
- **322** Other Agreements

**Regional Economic Development**
- **75** New Companies Formed/Purchased
- **$18.6M** Amount of Financing or Equity Secured
- **1,209** Businesses Served
- **250** Member Companies
- **8,424** Hours of Business Consulting
- **65** People in Entrepreneurial Fellows Programs
- **556** Jobs Created or Retained
- **45** Community Power to Prosper Participants

**Financials**
- **$1.23B** Third-Party Investment in Pitt Startups (Cumulative Since 1981)
- **$7.2M** Revenue
- **$31.7M** Sales Increase
Research/Cost Accounting

Work with your Dept./School Admin

http://www.cfo.pitt.edu/rca/
SOME RANDOM FINAL TOPICS
Internal Grants: Momentum Funds

https://www.svcresearch.pitt.edu/pitt-researchers/initiatives/momentum-funds

Seeding Grants (up to $16,000 for one year with supplements of $2,000 available to projects integrating undergraduate research experiences) support the early stages of new projects for individual or groups of faculty. Awards are made in four tracks:

• Creative Arts, Performing Arts & Humanities
• Engineering, Technology, Natural Sciences, and Mathematical Sciences
• Health & Life Sciences
• Social Sciences, which includes Business, Policy, Law, Education, Informatics, and Social Work
• Preventing Sexual Misconduct (All faculty, including School of Medicine, are eligible to apply to this track)
Internal Grants: Momentum Funds

https://www.svcresearch.pitt.edu/pitt-researchers/initiatives/momentum-funds

Teaming Grants (up to $60,000 for one year) help multi-disciplinary teams plan and build capacity to successfully pursue large-scale external funding and must include faculty from at least three schools, as defined in the application materials.

Scaling Grants (up to $400,000 for two years) enable multi-disciplinary teams to competitively scale their research efforts in targeted pursuit of large-scale external funding and must include faculty from at least three schools.
Undergraduate Research

• UG research is valued at Pitt!
• Humboldtian model of higher education
  – i.e., a holistic combination of research and studies
• Nearly half of science and engineering undergraduates participate
• About 3,000 undergraduates are working on research projects at any one time
INGENiUM
Undergraduate Research
at the Swanson School of Engineering
Special Initiatives

• **School-level initiatives**
  – Grants Development Office
  – Proposal Pre-Reviews
  – Database of Successful Proposals
  – Funding Opportunity Searches
  – Specialized Forms and Templates
  – Outreach/Broader impacts

• **Strategic Corporate Research Efforts** -
  [https://oep.pitt.edu/](https://oep.pitt.edu/)
February 16, 2015

Dear University Community,

As a major public research university we strive to make a positive impact through knowledge. One important aspect of that impact is our capacity to move research results from the laboratory or clinic into new or improved products and services in the marketplace. Our success in translating research results into practice not only accelerates the beneficial aspects of our research, but also has a major positive impact on our region’s economy. This is an important role for a university in today’s knowledge-driven economy. Since I arrived here at the University of Pittsburgh, many of you have shared with me your sense that this is one area in which we have an opportunity to do better. We are rightfully proud of our growing leadership at the frontiers of research, but we should also play a leading role in translating that knowledge into use.

There are three major reasons why this is so important to Pitt:

- **Commercialization of research results is a key form of research impact.** Research seeks to advance human knowledge of the world around us, and we rightly celebrate achievements that make new discoveries and advance our understanding. However, knowledge can also be translated into new products and services that benefit our society. Our potential to impact this more practical product of research should be no less than our ability to have a scholarly impact.

- **Commercialization creates economic growth and opportunity.** Since the end of World War II, the greatest source of economic growth for the United States has been from the investments we have made in research and development. One of the major public benefits provided by Pitt is the source of new ideas, new intellectual property, and talent that continue to reshape Western Pennsylvania.

- **The business sector is a key participant in research and development.** In fact, in the United States, while the majority of research is conducted at universities, approximately two-thirds of all research and development funding is provided by the private sector, primarily by research-intensive companies. Therefore, we need to work with business both for research support, and for collaboration in research activities.

To maximize our impact—to make a difference—we need to embrace this role and strengthen it. In short, innovation, entrepreneurship, and partnership have to be as key to Pitt’s culture as is our commitment to teaching, research excellence, and community service. From my discussions with you over the past several months, I know that the Pitt community is ready. We will begin by focusing on these major areas:

- **Reduce internal barriers to University involvement with businesses by focusing on more effective risk management, not risk avoidance.** The University is a public, non-profit institution and is not a business. It is vital that our distinctive mission and role are not lost when we partner with other organizations, and especially with businesses. However, these risks can’t be a barrier or an excuse not to partner. We simply have to manage them more effectively.

- **Support and celebrate faculty and student efforts in this area.** The ingenuity and creativity essential to innovation lie with our faculty, our students, and our staff. We must support, nurture, and value these types of efforts alongside other activities such as scholarship, teaching, and research.

- **Expand our partnership “toolkit.”** Working at the intersection of basic research and applied
“Mandate” from Chancellor Gallagher
(From letter to University community Feb 2015)

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• “We will begin by reducing internal barriers to University involvement with businesses by focusing on more effective risk management, not risk avoidance. These risks can’t be a barrier or an excuse not to partner. We simply have to manage them more effectively.”

• “We will expand our partnership “toolkit.” Working at the intersection of basic research and applied commercial work will require us to be effective at forming and managing effective partnerships with other institutions, with businesses and employers, and with the community. We must excel at partnerships and be the “go to” university.”
The Energy Innovation Center
Swanson School of Engineering

Energy Innovation Center
Center for Energy laboratories to conduct applied research

- **GRID Institute**
  - Dr. Greg Reed
  - Electric grid research

- **Energy Storage Technologies Lab**
  - Dr. Prashant Kumta

- **High-Temperature Corrosion Testing Lab**
  - Dr. Brian Gleeson
  - Fee-for-service facility moved from Iowa State University

7/21/2020
So, Welcome to Pitt!

- It’s all about **Academic Excellence**

  *Professor H. Borovetz*

- **Your success is the entire University’s success!**

**QUESTIONS?**

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