

8th Annual

QUAKER  
 DAYS UNDERGRADUATE  
**RESEARCH**  
**CONFERENCE**

April 13, 2017

presented by

**curf** *Center for Undergraduate Research  
& Fellowships*

 **Penn**  
*College Houses & Academic Services*



Welcome to Penn's eighth annual Undergraduate Research Conference!

Each year the Center for Undergraduate Research and Fellowships (CURF) together with College Houses and Academic Services welcomes students from across all four undergraduate schools to submit proposals for lectures and presentations in the fields that inspire them, allowing them to share the discoveries they have been making as they pursue the work of the academy. This year's conference features five-minute papers and 60-second lectures from a broadly diverse range of fields including bioengineering, art history, political science, chemistry, environmental science, astronomy and medicine.

Penn's Quaker Days offers the incoming class of 2021 a preview of the excitement they will experience as new students this fall. Part of the Penn experience is research at all levels of the University. If you are part of next year's incoming class, welcome! We hope this conference will give you a taste of the opportunities waiting for you at the University of Pennsylvania, including the support and resources that will be available to you right here at CURF and at home in the College Houses.

The logo consists of three vertical bars of varying heights and colors (blue, red, blue) to the left of the words "Conference Committee" in a large, black, sans-serif font.

## Conference Committee

### **Dr. Ann Vernon-Grey**

Associate Director for Undergraduate Research  
Center for Undergraduate Research and Fellowships (CURF)

### **Dr. Fayyaz Vellani**

Senior Critical Writing Fellow, Critical Writing Program;  
College House Fellow, The College House at Sansom West

### **Ryan Keytack**

Director of Four-Year Houses and Residential Programs  
College Houses and Academic Services

**Session One**  
**9:00 am–10:25 am**  
**5 Minute Papers**

- Austin Bream C'17 W'17** | Underground Environmentalism: The GDR environmental movement in the 1980s and beyond  
*Mentor: Bethany Wiggin (Germanic Languages and Literature)*
- Miranda Lupion C'17** | The keyboard is mightier than the sword: assessing the Kremlin's weaponization of Russian-language digital media  
*Mentor: Sara McGuire (International Relations)*
- Cristina Serban C'17** | Policy Recommendations for Migrant and Refugee Protection in Rabat  
*Mentor: Sara McGuire (International Relations)*
- William Saunders C'18** | Optimizing Difference Imaging to Identify Trans-Neptunian Objects using the Dark Energy Survey  
*Mentor: Gary Bernstein (Physics and Astronomy) University Scholars*
- Anya Hall E'18** | Local Magnetic Field Shift in Myocardial Hemorrhage Characterized by Magnetic Susceptibility  
*Mentor: Walter Witschey (Radiology) National Science Foundation Alliance for Minority Participation*

## 60-Second Lectures

- Ivana Kohut C'18** | Guantnamera: An Analysis of Maternal and Primary Healthcare Systems (PART TWO)  
*Mentor: Adriana Petryna (Anthropology)*  
*College House Research Fellow, Harrison College House*
- Daniel Thompson C'17** | Defrocking Cuba's Clergy: The Catholic Church's Struggle for Autonomy in Revolutionary Cuba, 1959-1961  
*Mentor: Ann Farnsworth-Alvear (History)*  
*Gelfman International Summer Fund*
- Linda Lin C'18** | Curating as Feminist Activism: Exhibitions on Women Artists and Feminist Art in the US: 1977-2007  
*Mentor: Christine Poggi (History of Art)*  
*College House Research Fellow, Rodin College House*
- Rachel Wilson E'19** | Solid Oxide Fuel Cells  
*Mentor: Ray Gorte (Chem. & Biomolecular Engineering)*  
*National Science Foundation, Louis Stokes for Minority Participation (AMP)*
- Sharika Bamezai C'18** | Hemodynamic Forces Regulate Heart Valve Development  
*Mentor: Mark Kahn (Perelman School of Medicine CVI Institute)*  
*Pincus-Magaziner Family Undergraduate Research Grant*
- Ramathi Bandaranayake C'18** | A Quantitative Study on Mathematics Anxiety as a Predictor of Grades in the National GCE O/L Math Exam in Sri Lanka  
*Mentor: Herbert Turner (Quantitative Methods Div.)*  
*Hassenfeld Foundation Grant*
- Nimansha Jain C'17** | Common variant near SNCA gene predicts motor phenotype, disease progression, and SNCA brain expression in Parkinson's Disease  
*Mentor: Alice Chen-Plotkin (Neurology)*
- Cecilia Wang N'19** | Handoffs and Transitions in Critical Care (HATRICC)  
*Mentor: Meghan Lane-Fall (Anesthesiology & Crit. Care)*  
*PURM - Penn Undergraduate Research Mentoring Fund*

**Session Two**  
**10:30 am–12:00 pm**

**5 Minute Papers**

- Armen Bagdasarov C'18** | Motor Behavior as a Qualitative Difference in the Spontaneous Production of Co-Speech Hand Gestures by Adults with ASD  
*Mentor: Robert Schultz (Departments of Pediatrics and Psychiatry)*
- Lauren Brunsdale C'17** | Evaluating Landscape and Vegetation Change Using Remote Sensing in the Ventura River Watershed, California  
*Mentor: Jane Dmochowski (Earth and Environmental Science)*  
*Penn Undergraduate Climate Action Grant*
- Simon Sangmin Oh E'18** | ImpactScore: A Novel Credit Score for Social Impact  
*Mentor: Jeremy Tobacman (Dept. of Business Economics and Public Policy)*  
*Wharton Research Scholars*
- Ogul Uner C'17** | Investigating Molecular Compensation in SAP97 Neuronal Knockout Mice  
*Mentor: Robert Kalb (Neurology)*  
*College Alumni Society Research Grant*

**60-Second Lectures**

- Ryan Leone C'19 W'19** | Reducing Cognitive Deficits After Traumatic Brain Injuries in Multi-Trauma Incidents  
*Mentor: Jose Pascual (Surgical Critical Care and Emergency Surgery)*
- Samantha Snyder C'18** | Wrongful Convictions Study  
*Mentor: Charles Loeffler (Criminology)*  
*PURM - Penn Undergraduate Research Mentoring Fund*

## 60-Second Lectures *continued*

- Blake Pittell C'17** | China's Influence on Hollywood  
*Mentor: Guobin Yang*  
*College Alumni Society Research Grant*
- Eash Aggarwal C'20** | Accounting for short-term variability in human memory  
*Mentor: Michael Kahana (Psychology)*
- Isabella Viney C'19** | Acetyl-CoA's story in the nucleus: a possible link between ATP citrate lyase and DNA damage  
*Mentor: Kathryn Wellen (Cancer Biology)*
- Jacqueline Nikpour N'17** | School Nurses: A Key Link to Building Healthy Communities  
*Mentor: Susan Hassmiller*  
*Robert Wood Johnson Foundation*
- Akansha Jain C'17** | Unorthodox binding sites formed by  $\alpha 5$  and  $\beta 3$  subunits in  $\alpha 4\beta 2^*$  nicotinic acetylcholine receptors for treating smoking addiction  
*Mentor: Jon Lindstrom (Department of Neuroscience)*  
*College Alumni Society Research Grant*



# College House Research Program

Penn's College House Research program exists to promote undergraduate research in the College Houses. Each College House selects a College House Research Fellow who is given academic and monetary support to pursue an 18-month research project of their own design, actively mentored by faculty and staff in the College Houses and the Center for Undergraduate Research and Fellowships. The Research Fellows also present informal research events in their Houses and present their findings at Penn's Annual Undergraduate Research Conference during Penn Previews.

## Goals of the Program

- To involve more undergraduates in original research
- To provide instruction on how to put together a fellowship or research proposal
- To increase student contact with faculty inside and outside of the College Houses
- To build intellectual community within and across the Houses
- To give students tools for success that they can use inside and outside of the classroom (not only writing and research, but also public presentation/speaking, peer mentoring, and event planning)





# The Center for Undergraduate Research and Fellowships

The Center for Undergraduate Research and Fellowships helps Penn undergraduates pursue independent research through personal research consultations and administration of competitive research grants. As one of the world's leading research universities, Penn has a broad array of faculty conducting cutting-edge research in all disciplines. CURF helps Penn undergraduates become involved in research by helping you identify resources, narrow your search, and shape your initial inquiries so you can find appropriate faculty mentors and research funding.

CURF also serves as the University of Pennsylvania's information clearinghouse and primary support office for students and alumni considering applying for major grants and fellowships. CURF provides advice and guidance to students exploring these possibilities through Information Sessions, Workshops, and Special Events that educate potential candidates about award requirements and opportunities. CURF aims to demystify these opportunities to help students determine the most appropriate awards for which to apply.