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20 projects selected for 2021 Seed Grant program

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Twenty projects will receive funding as part of the 2021 Pitt Seed Grant program. The program, now in its fourth year, provides startup funding to transformative projects that support the goals of Pitt's strategic plan.

"Once again this year, proposals for Pitt Seed Grant funding were exceptional," Provost Ann Cudd said. "That said, this year's selected projects — focused on transformative ideas in the social justice, equity and inclusion spaces — are particularly exciting, and I look forward to seeing the results of those efforts."

More than 70 total applications were received, including 59 from faculty and 15 from staff. Ninety volunteers from across Pitt participated in reviewing the applications. Their recommendations were reviewed and endorsed by Provost Cudd before being presented to and approved by Chancellor Patrick Gallagher.

The 20 projects and their primary applicants are:

The Pitt Cyber Range: Ahmed Ibrahim, faculty, School of Computing and Information

The Pitt Cyber Range, a sandboxed environment to simulate real attacks and defenses, will have a societal impact on a broad range of learners. It will be used 1) in the security courses offered by the School of Computing and Information, 2) by students in cybersecurity clubs to prepare for national competitions, 3) in outreach to underrepresented groups to provide an accessible and affordable way to increase diversity in the cybersecurity field and 4) to enhance and promote advanced cybersecurity education through a series of workshops for learners and educators across the country.

Building the Foundation of a Diverse Health Care Workforce: Andrea Hergenroeder, faculty, Pitt Interprofessional Center for Health Careers

Pitt's Interprofessional Center for Health Careers will connect with existing units on campus and build new programs that extend the University's excellence in health professions education to its undergraduate underrepresented minority (URM) students who aspire to health-related careers. Outcomes will include a 1) strengthened system of mentoring URM students into health-related careers, 2) a campus culture supportive of pre-health students from diverse backgrounds, 3) a more diverse pipeline of Pitt alumni entering graduate professional programs and 4) a transformed environment that results in Pitt becoming a recognized leader in preparing the array of health providers needed to ensure the health of underserved and diverse populations.

Screenshot Asia: Connecting Pittsburgh to 21st Century Film and Media: Charles Exley, faculty, Dietrich School of Arts and Sciences

The Screenshot: Asia Film Festival, starting October 2021, will bring together students, faculty and community members around a shared interest in Asia as a rapidly developing and essential part of the 21st century global economy and our region's shared love for contemporary film and media arts. The weeklong event will showcase films from northern Asia to the Middle East. Our themes, Global Asia (2021) and Inter/Media (2022), give us the flexibility to engage with local ethnic communities, Asian and Asian-American student interests, film lovers and the broader public eager to learn more about Asia while celebrating artistry, diversity and humanity through cinema.

The Neighborhood Academy Social Justice Education Initiative: David Herring, faculty, School of Law

The project engages students from the Schools of Law, Social Work and Education to teach students at the Neighborhood Academy, a high school where all students are Black and in serious financial need. Through its intensive college preparatory program, the Neighborhood Academy works to break the cycle of generational poverty. Pitt students will work with project faculty to develop and teach a social justice course focused on constitutional law and Black history for the academy's juniors and seniors. The course will be a homeroom from which students will implement actual social justice projects in the Pittsburgh community.

Creating a Culture of Inclusive Excellence to Promote Retention: Doris Rubio, faculty, Institute for Clinical Research Education

As Pitt embarks on a cluster-hiring initiative, it is imperative to change the University's culture to one of inclusive excellence. To do this, we will create a Getting Connected Series, open to all faculty of color, where we will focus on careers in academia, leadership and community building. We will also form Learning Communities with new faculty hires to explore the issues raised during the Getting Connected Series, practice new skills learned and address any challenges. By providing opportunity to meet the leadership, form communities and connect to the University, the program will contribute to creating an inclusive culture.

Serving Those Who Protect the Public: The Pitt Center for Emergency Responder Wellness: Eric Meyer, faculty, School of Health and Rehabilitation Sciences

Emergency response personnel (ERP) protect the public, despite occupational hazards that threaten their mental health. This center will be a clinical innovation hub that 1) delivers accessible, culturally adapted, evidence-based mental health interventions; 2) trains the next generation of health science students to work with ERP; 3) fosters the success of local

ERP peer support networks and 4) as a future goal, makes major contributions to the scientific understanding of post-trauma recovery processes. Goals for the seed phase are to establish a team, build collaborations with local ERP departments, demonstrate feasibility and initial clinical impact and compete for federal funding.

Computational Genomics Training Program: Fangping Mu, faculty, Center for Research Computing

Recent years have seen rapid advances in high-throughput technologies in biology. Investment in high performance computing clusters, such as the HTC cluster managed by Center for Research Computing, have made computational resources increasingly accessible to interpret the results of such experiments. However, a pressing challenge that many research groups face is a lack of readily accessible bioinformatics expertise. Our aims are to 1) design and teach approximately 40 three-hour computational genomics hands-on workshops during the coming two years and 2) design and manage a web forum platform to allow Pitt researchers to pose questions and offer solutions to bioinformatics-related problems.

Infant Oral Health Education at the Pitt Community Engagement Center at Homewood: Jacqueline Burgette, faculty, School of Dental Medicine

Healthy Teeth, Healthy Me meets community needs in Homewood by providing education on oral health and connecting families with services to keep children's mouths healthy. Faculty and students from the Schools of Medicine, Nursing, Dental and Social Work provide this interprofessional oral health education at the University of Pittsburgh's Community Engagement Center in Homewood. This approach develops a collaborative workforce to improve child health while also addressing a community-inspired and community-informed need. Healthy Teeth, Healthy Me impacts not only the child's overall health, but the quality of life for families in the Homewood community.

Reading Interventions for Students with Exceptional Learning Needs: Jonathan Chitiyo, faculty, Special Education, Pitt–Bradford

This grant will support a research study to assess the efficacy of a unique reading intervention strategy to help students with learning disabilities and other students with exceptional learning needs with reading problems. The ultimate goal of the study is to inform the development of new methods courses for our current education curriculum to ensure our education majors learn, practice and apply relevant, research-based methods of teaching reading to students with special needs. Through this Pitt Seed project, Pitt-Bradford will strengthen our connections with the community as we expand what our education majors will bring to the teaching profession.

Early Bridge Program at Pitt-Greensburg: Kelli Maloy, faculty, English, Pitt–Greensburg

Since 2017, the Bridge program and its summer component, Early Bridge, have served at-risk students admitted conditionally to Pitt-Greensburg by offering support services to promote academic success. For the past four years, these students have completed a one-week intensive summer program prior to the start of the fall semester. However, low rates of persistence/retention, good standing, graduation and graduate-school enrollment indicate a strong need for more robust support. The grant funding will support the development of preparatory courses in algebra and composition comparable to 1.5-credit courses, which will be offered over a period of four weeks beginning in July 2021.

Creating a Diverse Cybersecurity Workforce: Leona Mitchell, faculty, School of Computing and Information

The cybersecurity skills gap remains a significant challenge in the industry. The increase of complex cyberattacks has escalated the need for qualified resources. Faced with this challenge, employers are searching for candidates outside of tech, but transitioning to cybersecurity from a non-tech field is difficult. Furthermore, today's cyber workforce is underrepresented; men outnumber women by three to one, and underrepresented groups make up less than 15% of the workforce. Our project aims to bridge this skills gap through a series of asynchronous boot camps, making cybersecurity education more accessible while helping to address the skills shortage in the industry.

Pitt Commons Social Capital & Professional Networking Evaluation: Lisa Belczyk, staff, Office of the Provost

Pitt Commons is an online platform designed exclusively for members of the Pitt community. Utilizing a blend of organic use and programming, the platform allows students, faculty, staff and alumni the opportunity to develop career networks, facilitate mentoring relationships and, ultimately, cultivate social capital, leading to enriched opportunities. Although we can analyze discrete interactions within platform usage, we do not have the ability to quantitate user outcomes or evaluate the effectiveness of digital engagement methods. This study will allow us to understand the current landscape of platform usage and align resources and interventions to encourage user behaviors for optimal outcomes.

Lusosphere through the World: Luis Vanfossen Bravo, staff, Center for Latin American Studies, University Center for International Studies

The Center for Latin American Studies and the European Studies Center at the University of Pittsburgh are jointly working to develop a program in Lusosphere Studies. For students who wish to pursue a career or perform research with an international dimension, or in the Lusosphere specifically, studying this history and the cross-regional relationships that now exist in the Portuguese speaking world would provide multiple opportunities. Such a program would be among the first of its kind in the United States and could become a central location for the study of Portuguese language and the Lusosphere cultures.

Cultivating a Data Science Learning Community: Matt Burton, faculty, School of Computing and Information

This project will address the growing demand for informal data science training from students, faculty, postdocs and staff across disciplines at Pitt and build a sustained learning community. The demand for informal training offered by the School of Computing and Information and the libraries has outpaced capacity. To address this demand, this project will scale up informal data science training through guided and self-guided instruction with student workers. To complement informal instruction, the project will create a diverse and inclusive data science learning community that supports learners during and after workshops, hosts events and maintains a space for further informal learning and collaboration.

Social Listening for Institutional Resilience: Raymond Wrabley, faculty, Political Science, Pitt–Johnstown

Tens of thousands of conversations about our brand, community, students and programs are flowing all around us through digital channels, and yet the University often misses these conversations. Social listening technologies allow institutions to track and analyze digital conversations for actionable insights that can improve services; uncover new needs; and engage potential students, community stakeholders, staff and faculty to advance our mission. We propose to harness the power of social listening for a period of two years to enhance the capabilities of our admissions team, improve services to students and promote our role in bolstering the region's employment and reputation.

Fostering Civic and Cultural Competency Across the Disciplines Via Digital Game-Based Learning: Ronald Idoko, staff, Office for Equity, Diversity, and Inclusion

Conventional civic learning mediums at the University of Pittsburgh come with inherent barriers to broad student participation as they are communicated and facilitated disparately and often compete against prevailing academic/social commitments, making it impractical and implausible for most Pitt students to engage them accordingly. The COVID-19 pandemic has further impeded student access to these mediums with the requisite transition to remote engagement. This project aims to create a digitally accessible, gamified civic learning technology to aid Pitt students in fostering their civic and cultural competence and develop an objective, longitudinal assessment of their competence.

Active Accommodations for Laboratories: Rory Cooper, faculty, Human Engineering Research Laboratories

Students with disabilities face barriers while attending university courses that require hands-on laboratory activities. Typically, those students are forced to take a passive role rather than actively participating in the labs, which leaves them with a subpar education. This project will attempt to provide students with disabilities the necessary accommodations for them to actively participate in their lab activities along with their peers to the greatest extent possible.

Promoting PEERs: Creating an Inclusive Environment through Tiered Mentoring to Promote Diverse STEM Communities: Sarah Hainer, faculty, Biological Sciences, Dietrich School of Arts and Sciences

The lack of racial and ethnic diversity within academia, across STEM programs and within the Department of Biological Sciences at the University of Pittsburgh can be an isolating factor for historically underrepresented students, or persons excluded because of their ethnicity or race (PEERs). Stereotype threat, structural exclusion and a low sense of belonging can hinder performance in classes and decrease engagement in extracurricular activities including research. We propose to develop a tiered mentoring and professional career development program for graduate and undergraduate students who are historically excluded from STEM with the goals of 1) building a community with increased belonging, 2) increasing exposure to high-impact research experience, 3) increasing recruitment and retention of diverse student populations and 4) preparing students for positions in STEM, both within and outside of academia.

Wicked Problem Innovation: Community Development in Pittsburgh's Hill District and Hilltop Neighborhoods: Stephanie Dangel, faculty, School of Law

This Pitt Seed project will allow Pitt Law, Katz Business and other faculty, staff, students and alumni to work with local stakeholders to co-design a transformative Wicked Problem Innovation course on how universities should support marginalized communities in

addressing neighborhood development challenges. Seed funding will supplement University support with community consulting, provided by Pitt's Community Engagement Center in the Hill District, the UrbanKind Institute and a project coordinator. The initial pilot course will focus on addressing community development challenges in Pittsburgh's Hill District and Hilltop neighborhoods, including challenges in reconciling the sometimes-conflicting goals of racial equity, economic development and environmental sustainability.

Understanding, Building and Achieving Diversity and Inclusion Excellence in the University of Pittsburgh Entrepreneurial Ecosystem: Susan Cohen, faculty, Katz Graduate School of Business

Pitt aspires to foster research of impact and a culture of diversity, equity and inclusion (DEI). Yet, it is unclear how these aspirations are supported or achieved through Pitt's translational, tech transfer and commercialization activities. Literature suggests societally beneficial inventions often have small commercial markets, and entrepreneurs from underrepresented groups may be less successful in attracting funding, making it difficult to jointly maximize DEI, commercial value and societal impacts. We propose to study how DEI is incorporated and promoted in Pitt's entrepreneurial ecosystem to identify opportunities to reconcile trade-offs between societal impact and commercial value, and promote excellence in DEI.

— *From Pittwire*

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