



DREXEL UNIVERSITY  
College of  
Engineering

---

**From Seed to Harvest:**  
**2023-2024 Donor-Sponsored Faculty Fellowship Showcase Agenda**  
Friday, May 10, 2024, 1:00PM – 3:30PM  
Hill Conference Room, LeBow Engineering Center Room 240

**1:00 pm - 1:10 pm: Opening Remarks (Dean Sharon Walker &  
Associate Dean of Research Jin Wen)**

**1:10 pm – 2:00 pm: New Fellow Recipient Presentations & Past Fellow Poster  
Pitches**

*Themes: Health, Wellness, and Medicine &  
Renewable Energy and Power*

New Fellow Recipient Presentations  
(15 mins per presentation including Q&A)

**Ania Baetica, PhD (Carleone Faculty Awardee)**  
*Control and engineer T cell fates with precision biomaterials*  
Collaborator: Xiao Huang, PhD

**Wes Chang, PhD (Longsview Fellow)**  
*Decoupling Ultrasonic Transmission of Heterogeneous, Composite Battery Electrode Layers  
Informed by Sparse Coding*  
Collaborator: Edward Kim, PhD

**Wei-Heng Shih, PhD (Longsview Fellow)**  
*Aqueous Non-toxic ZnS quantum dots as gene delivery vehicle for DNA vaccine*  
Collaborators: Elias El Haddad, PhD; Michele Kutzler, PhD; & Wan Y. Shih, PhD

Past Fellow Poster Pitches  
(1 min per pitch)

**Hao Cheng, PhD (Carleone Faculty Awardee)**  
*Engineering Living Materials for Antigen-specific Immune Tolerance*

Collaborator: Pooja Jain, PhD

**Peter Deak, PhD (Carleone Faculty Awardee)**

*Tolerogenic Dendritic Cells via Synergistic Drug Combinations to Treat Autoimmune Disease*

Collaborator: Pooja Jain, PhD

**Fei Lu, PhD (Longsview Fellow)**

*Superconducting Solid-State Circuit Breakers for Protection of HTS-Based Fusion System (S3CB)*

Collaborator: Goran Karapetrov, PhD

**Ahmad Najafi, PhD (Carleone Faculty Awardee)**

*A Multiphysics AI-assisted Design Framework to Tailor a Porous Swelling Orthopedic Implant*

Collaborators: Sorin Siegler, PhD & Steven Kurtz, PhD

**2:00 pm - 2:20 pm: Coffee Break & Poster Viewing**

**2:20 pm - 3:10 pm: New Fellow Recipient Presentations & Past Fellow Poster Pitches**

*Themes: Resource Stewardship and Sustainability & Smart Cities*

**New Fellow Recipient Presentations**

(15 mins per presentation including Q&A)

**Arvin Ebrahimkhanlou, PhD (Carleone Faculty Awardee)**

*Looking Underground: AI-based Digital Twins for Underground Excavation and Development*

Collaborators: Ivan Bartoli, PhD; Simi Hoque, PhD; Miguel Pando, PhD; & Nicholas Jushchyshyn, MFA

**James Lo, PhD (Longsview Fellow)**

*Application of Large Language Models (LLMs) for Knowledge Seeking in Building System Design and Operation*

Collaborator: Yuan An, PhD

**Josh Snyder, PhD (Longsview Fellow)**

*Grid-Scale Long-Term Energy Storage and Anthropogenic Carbon Remediation with an Aqueous Bicarbonate/Formate-Proton Battery*

Collaborator: Michel W. Barsoum, PhD

**Past Fellow Poster Pitches**

(1 min per pitch)

**Jason Baxter, PhD (Longsview Fellow)**

*A Circular Economy for Fiber Composites: From Wind Turbine Blades to Light Weight Concrete*

Collaborators: Amir Farnam, PhD & Grace Hsuan, PhD

**Megan Creighton, PhD (Longsview Fellow & Carleone Faculty Awardee)**

*2D Particles Against Mosquito-Borne Disease*

Colaborator: Ali Afify, PhD

*Bacterial Purification of Recycled Supply Streams Containing Acrylate Adhesive Contamination*

Collaborator: Ezra Wood, PhD

**Shannon Capps, PhD (Longsview Fellow)**

*Designing an Integrated Air Quality Monitoring Network at Drexel*

Collaborators: Zhiwei Chen, PhD; Jane Ellen Clougherty, ScD; Kapil Dandekar, PhD; & Michael Waring, PhD

**3:10 pm – 3:30 pm: Coffee Break & Poster Viewing**