# GRADUATE STUDENT SYMPOSUM SCHEDULE

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter(s)</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Welcome</td>
<td>Dr. Dan Linzell; Associate Dean for Graduate and International Programs Dr. Lance C. Pérez, Dean</td>
<td>Opening Remarks</td>
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<tr>
<td>Keynote</td>
<td>Dianna Long</td>
<td>The Green Machine: Bacterial strain design for kids</td>
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<tr>
<td>Break</td>
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<tr>
<td>Sessions</td>
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<tr>
<td>Time</td>
<td>Presenter(s)</td>
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<tr>
<td>10 AM – 10:15 AM</td>
<td>Sydney Caparaso</td>
<td>Developing a multicompartment in vitro co-culture model of neuroimmune interaction in intervertebral disc degeneration</td>
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<tr>
<td>10:15 AM – 10:30 AM</td>
<td>Nipuna Chamara A H M</td>
<td>Evaluation of a Novel IoT Sensor Node for Infield Real Time Crop Monitoring</td>
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<td>10:30 AM – 10:45 AM</td>
<td>Caleb White</td>
<td>The effect of socio-economic factors on the management and performance of drinking water systems</td>
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<tr>
<td>10:45 AM – 11:00 AM</td>
<td>Luz Sotelo</td>
<td>Ultrasonic Nondestructive Evaluation in Metal Additive Manufacturing: History and Convergence</td>
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<tr>
<td>11:00 AM – 11:15 AM</td>
<td>Ehsan Zamani</td>
<td>Fighting against antibiotic-resistant bacteria</td>
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<tr>
<td>11:15 AM – 11:30 AM</td>
<td>Mohammad Ali Takallou</td>
<td>Peripheral Artery Disease Diagnostics Using Wearable Accelerometer Device</td>
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<tr>
<td>11:30 AM – 11:45 AM</td>
<td>Salome Perez</td>
<td>Mining Binary Data to Battle Cybersecurity Attacks</td>
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<td>Lunch</td>
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<tr>
<td>Keynote</td>
<td>Courtney Keiser</td>
<td>Medical Device Innovation: Developing Mechanically Optimized Vascular Bypass Grafts</td>
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<tr>
<td>Design Competition</td>
<td>Aidan Larsen, Michael Lee, Riaz Mohammed, and Thivani Senathiraja</td>
<td>Grand Engineering Challenge: Develop Carbon Sequestration methods</td>
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<td></td>
<td>Cameron Entzminger, Youra Moeun, and Trenton Tulloss</td>
<td>Hand Ninja to Fight Covid-19</td>
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<td>Andrew Donesky, Courtney Keiser, and Katie Mowat</td>
<td>Filtering for the Future: Innovative Filtering Technologies</td>
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<tr>
<td>Break</td>
<td>2:30 PM – 2:45 PM</td>
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<tr>
<td>Pitch</td>
<td>2:45 PM – 3:45 PM (5 Mins per Speaker)</td>
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<tr>
<td>Presenter(s)</td>
<td>Adil Alsiyabi</td>
<td>Harnessing sunlight to convert CO2 into biodegradable plastic</td>
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<tr>
<td>Topic</td>
<td>Aria Wisnu Tarudji</td>
<td>Extending the therapeutic window of traumatic brain injury treatment</td>
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<tr>
<td>Presenter(s)</td>
<td>Brandi Brown</td>
<td>Hydrogen Biofuel Production from a Versatile Bacterium Using Agricultural Waste</td>
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<td>Topic</td>
<td>Youra Moeun</td>
<td>Mechanotransduction of hepatocytes drives hepatocytes-stellate cell communication during liver fibrosis development</td>
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<td>Presenter(s)</td>
<td>Riaz Ur Rehman</td>
<td>Point-of-care diagnostic sensors for atherosclerosis based on low shear stress of blood flow</td>
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<td>Topic</td>
<td>Amir Monemianesfahani</td>
<td>Microfluidic Gradient Generator with Embedded Microchambers for High Throughput Biological Assays</td>
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<tr>
<td>Presenter(s)</td>
<td>Shuaiqi Shen</td>
<td>Exploiting Feature Interactions for Malicious Website Detection with Overhead-accuracy Tradeoff</td>
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<td>Topic</td>
<td>Mark Kathol</td>
<td>Investigating the relaxase behavior and replication functionality of the mobilization protein mobV in the plasmid pBR1</td>
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<td>Presenter(s)</td>
<td>Arafat Alam</td>
<td>Numerical simulation of cellular concrete under low-velocity impact using SPH and FEM</td>
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<td>Topic</td>
<td>Xiang Zhang</td>
<td>Direct Selective Laser Sintering of Hexagonal Barium Titanate Ceramics</td>
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<td>Break</td>
<td>3:45 PM – 4:00 PM</td>
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<tr>
<td>Group 1</td>
<td>4:00-4:15 Ivon Acosta</td>
<td>Development of Single Walled Carbon Nanotube Platforms to Quantify Extracellular Nitric Oxide Concentration Changes with Cancer</td>
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<td>4:15-4:30 Amir Monemianesfahani</td>
<td>Characterization of the Strain Rate-Dependent Mechanical Response of Single Cell-Cell Junctions</td>
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<td>4:30-4:45 Mohammad Mazharul Islam</td>
<td>Optimization of biological systems: The legacy of engineering complex processes</td>
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<tr>
<td>Group 2</td>
<td>4:00-4:15 Abhijeet Prasad</td>
<td>Gating Large, Disordered Network of Nanoparticle Necklaces at Room Temperature Exhibits Critical Behavior of Charge Transport</td>
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<td>4:15-4:30 Evan Curtis</td>
<td>Characterization of Traumatic Brain Injury using Magnetic Resonance Imaging</td>
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<td>4:30-4:45 Md Humaun Kobir</td>
<td>A Hybrid Graph Theory Model for Flaw Formation Prediction in Laser Powder Bed Fusion – Distortion and Recoater Crash Prediction</td>
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<td>4:45-5:00 Niaz Bahar Chowdhury</td>
<td>Stress Response Study of Zea mays Root by Incorporating Omics information with Genome-Scale-Metabolic-Modeling</td>
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<tr>
<td>Group 3</td>
<td>4:00-4:15 Jennifer A. Arcila Castillo</td>
<td>Ion adsorption on gold electrode studied by laser differential reflectivity</td>
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<td>4:15-4:30 Henry Gonzalez</td>
<td>Beneficial effects of injected air into subsurface drip irrigation (SDI) on plant growth using runoff from a feedlot</td>
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<td>4:30-4:45 Brandon Faltin</td>
<td>Old, New, and Nanotechnology: A Concrete Story</td>
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<td>4:45-5:00 Kimberly Stanke</td>
<td>Direct Contact with Astrocytes Drives Metabolic Reprogramming in Glioma Cells</td>
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