



**PennCURF**  
CENTER *for* UNDERGRADUATE RESEARCH & FELLOWSHIPS

# FALL RESEARCH EXPO

Monday, September 15, 2025

5:00 – 7:00 pm

Houston Hall

*The University of Pennsylvania's Center for Undergraduate Research and Fellowships is the University's hub for undergraduate student research, as well as the launch pad for Penn students seeking to apply for nationally competitive scholarships and fellowships*

*Welcome to CURF's Research Expo!*

*Over 350 undergraduate researchers are eager to share their research with you. We hope you enjoy learning about the array of opportunities embraced by undergraduates at one of the world's leading research universities.*

**Visit us at [curf.upenn.edu](http://curf.upenn.edu) for more  
information about individual advising  
and peer support opportunities**

## ***Information Sessions and Workshops***

*Getting Started in Research*

*Finding a Good Fit Mentor*

*Fellowships: What Do I Need to Know?*

*Fulbright Scholarship Information Sessions*

*Graduate Study in the United Kingdom*

## ***Programs and Academic Initiatives***

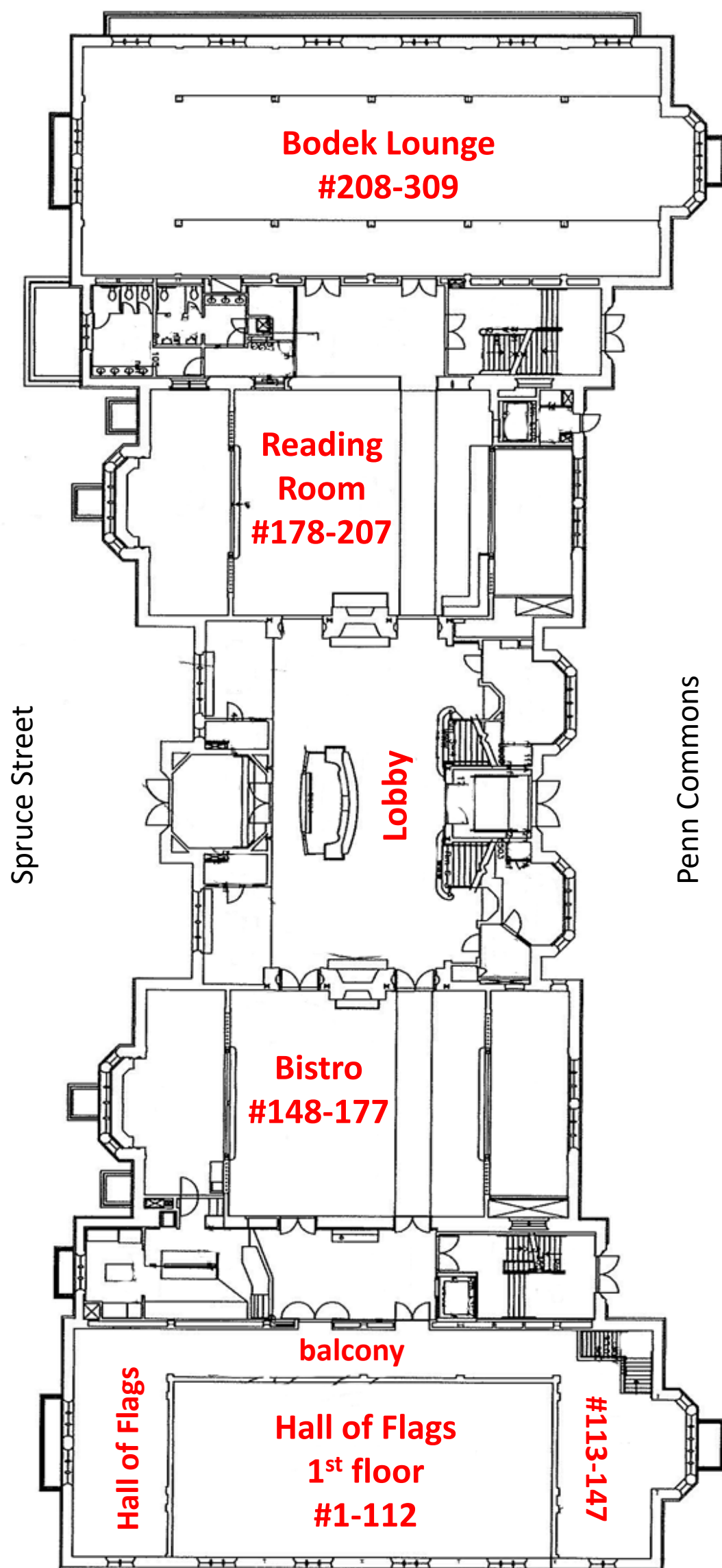
***The Penn Undergraduate Research Mentoring Program  
(PURM) matches students with faculty researchers from all  
twelve schools***

***Jumpstart for Juniors*** provides students the opportunity to  
gain invaluable investigative skills in the summer after their  
junior year

***The University Scholars Program*** provides support for in-  
depth research during their undergraduate career

***The Benjamin Franklin Scholars Program*** offers  
intellectually stimulating small seminars

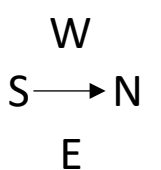
*and many more!*

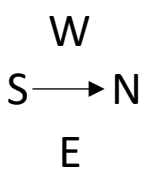
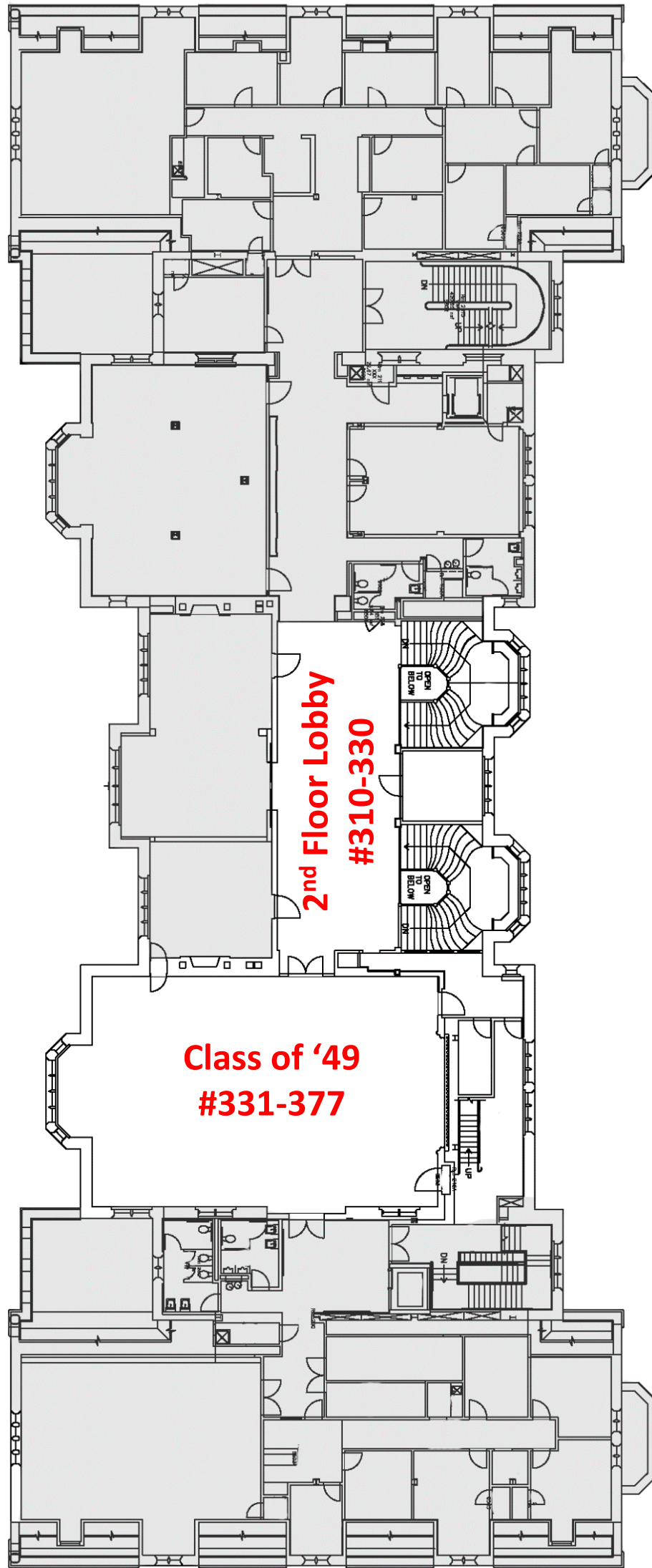


Spruce Street

Penn Commons

Posters  
#310-  
381 are  
upstairs

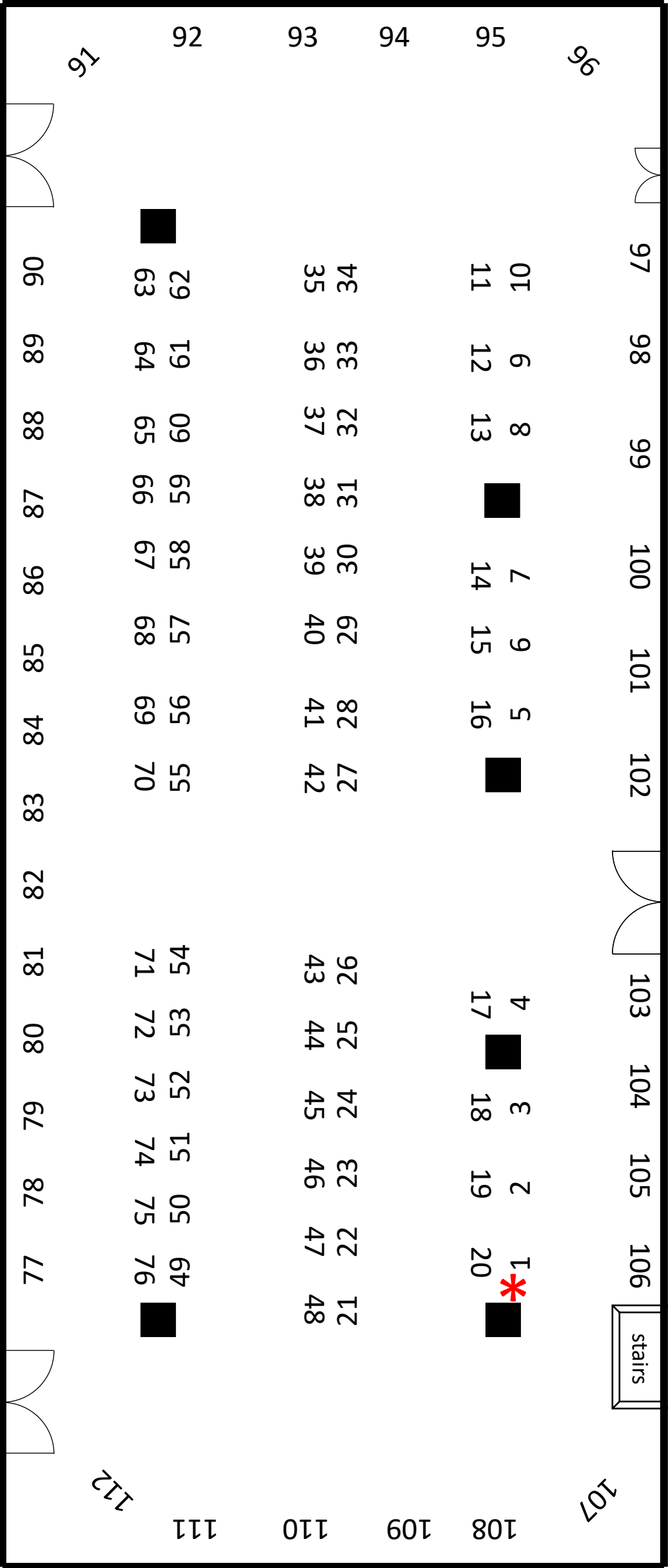
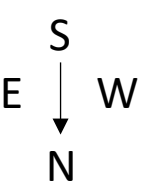




Houston Hall  
Marketplace

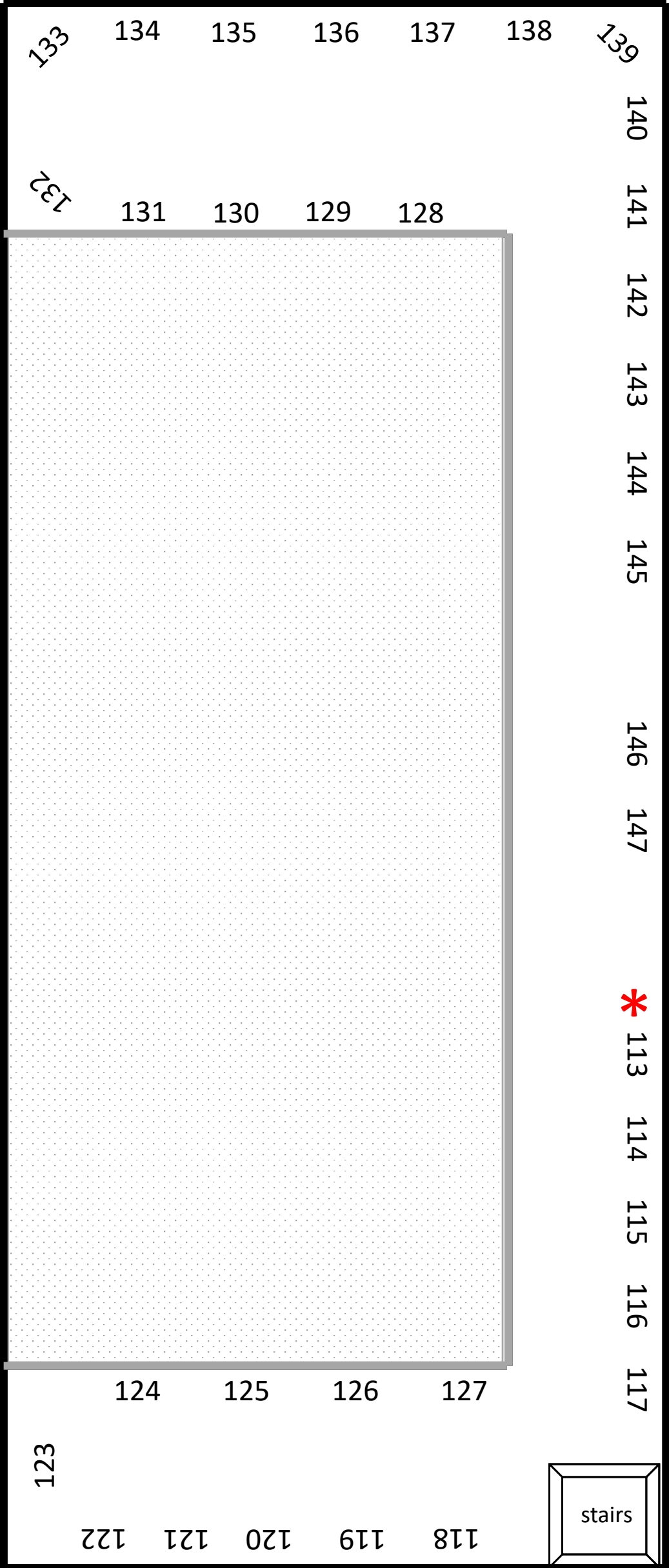
Welcome  
table

\* Posters  
proceed in  
numerical  
order from  
this starting  
location



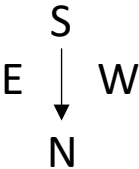
Hall of Flags  
1<sup>st</sup> floor

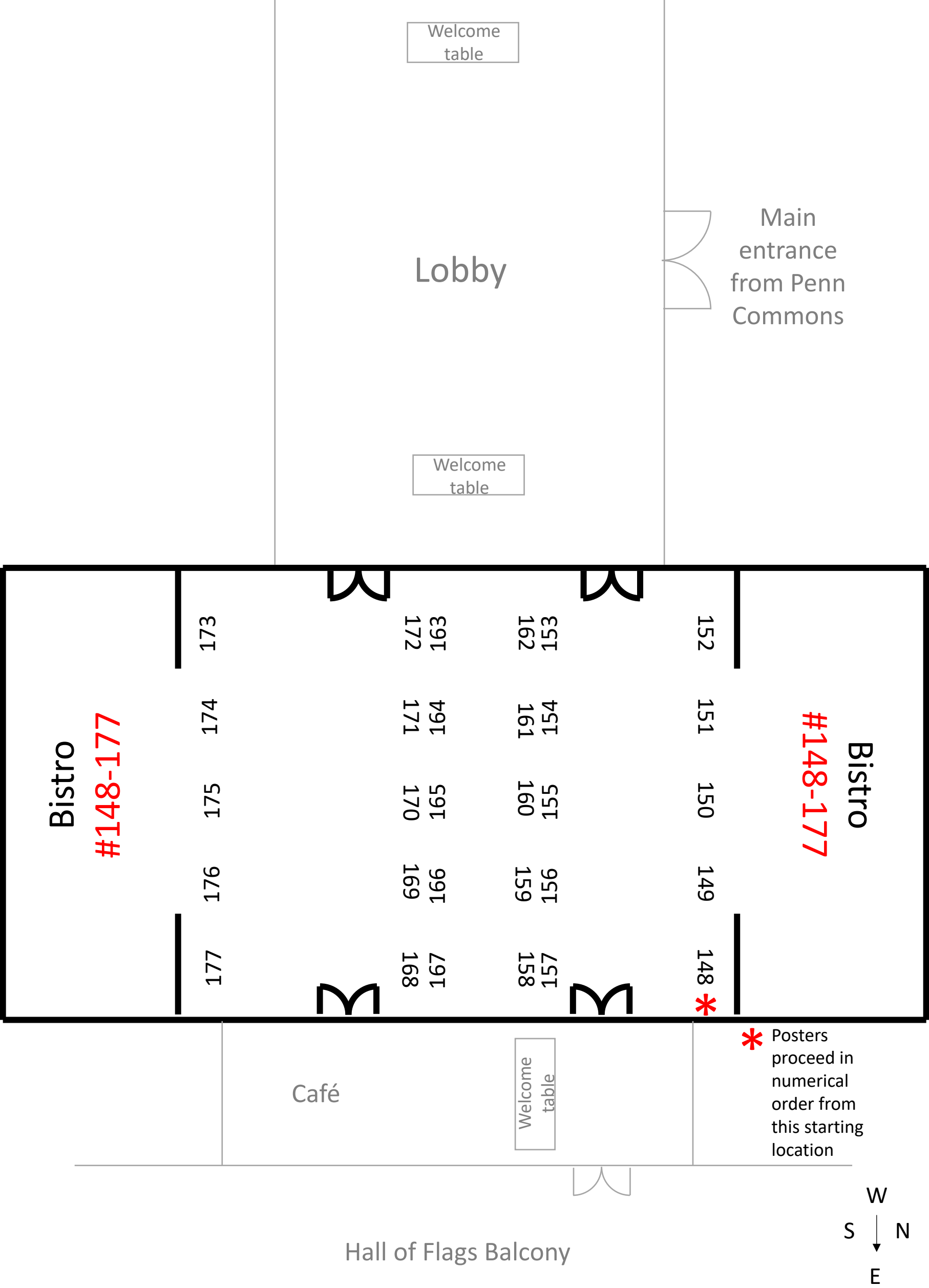
#111-112



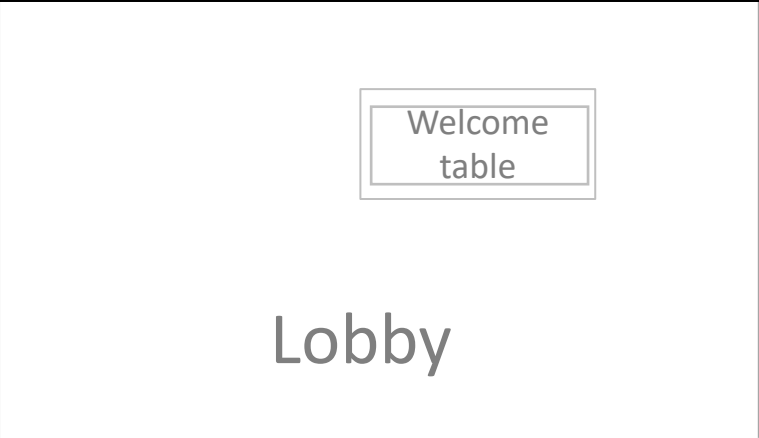
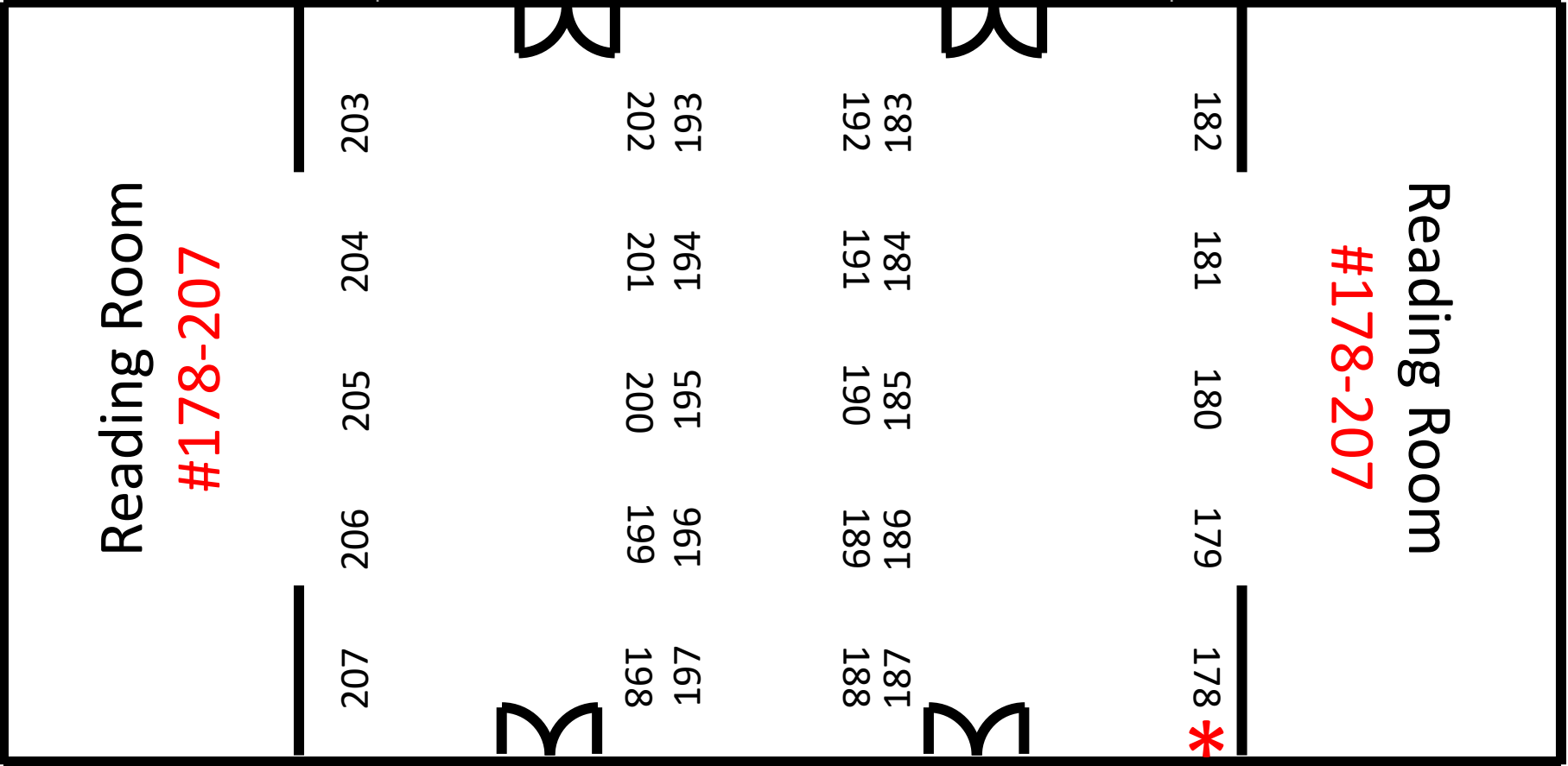
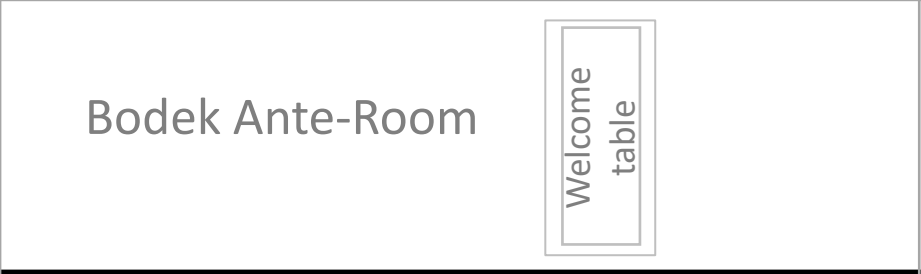
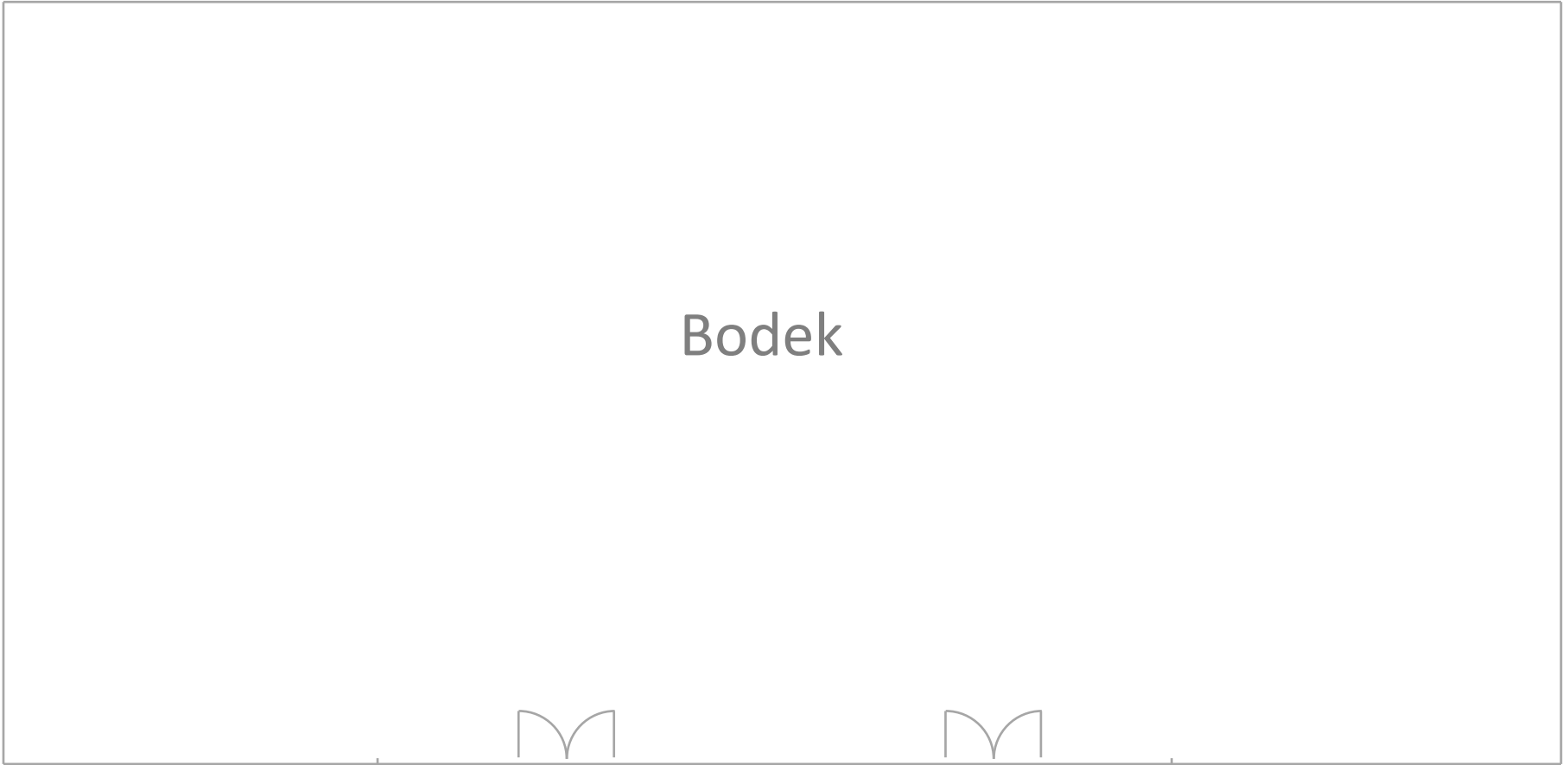
Hall of Flags  
2<sup>nd</sup> floor/balcony  
#113-147

Café

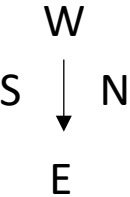


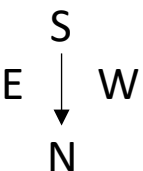






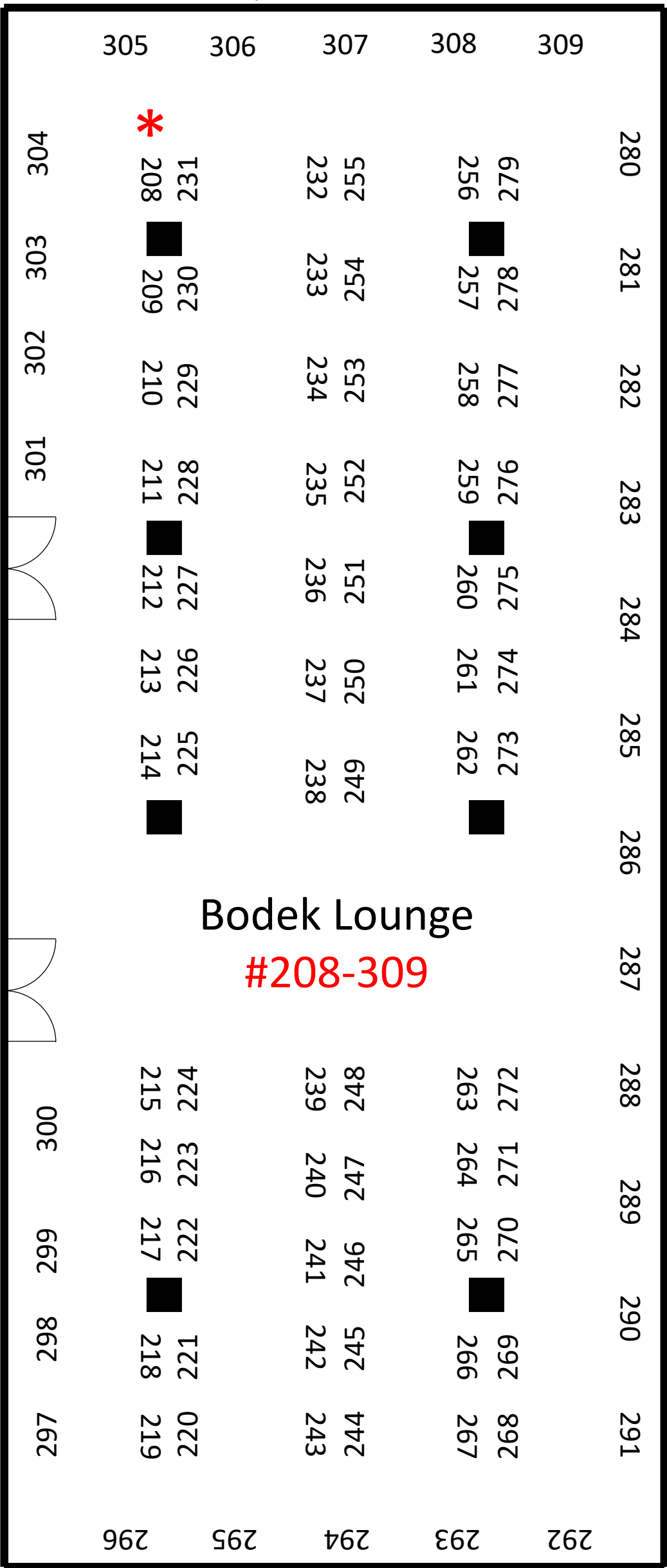
\* Posters proceed in numerical order from this starting location





## Bodek Ante-Room

Posters  
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numerical  
order from  
this starting  
location

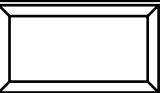
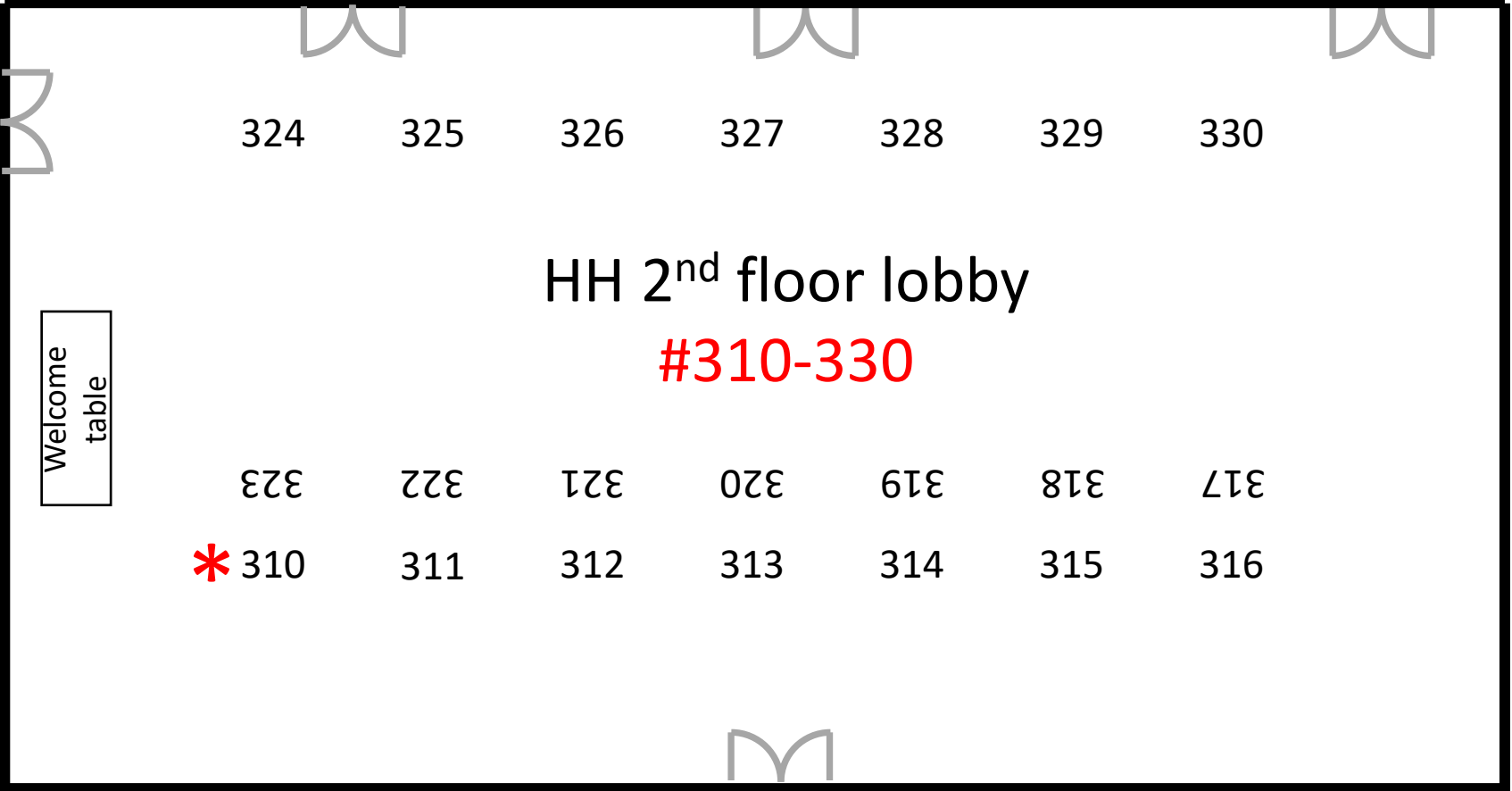


Class of '49

Brachfeld  
Room

Golkin Room

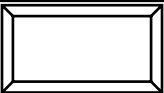
Ben  
Franklin  
Room



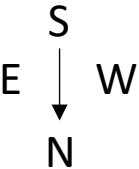
stairs



Posters  
proceed in  
numerical  
order from  
this starting  
location

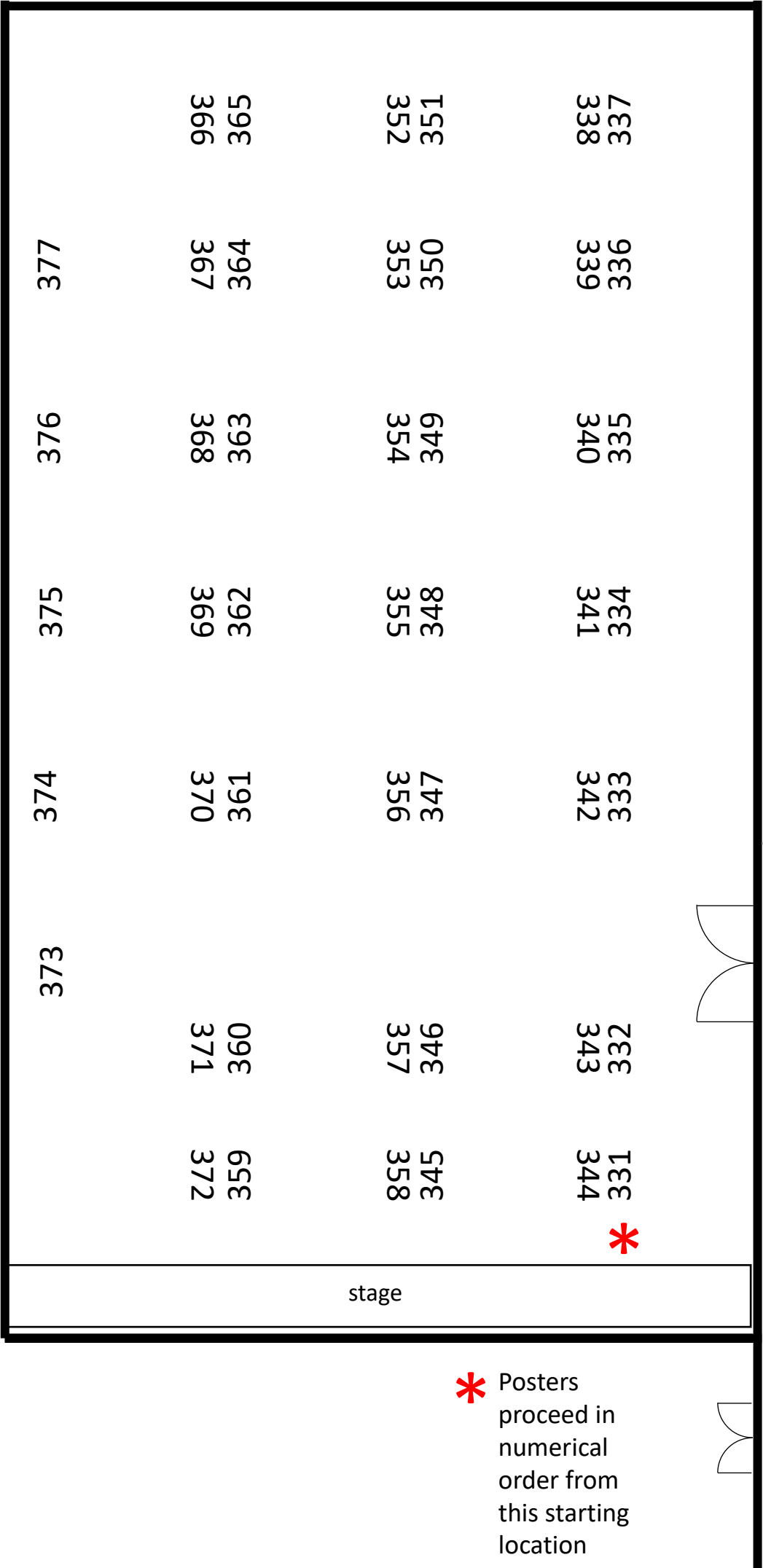


stairs



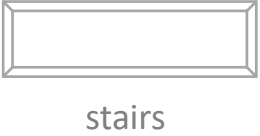
# Class of '49 on 2<sup>nd</sup> floor of Houston Hall

## #331-377

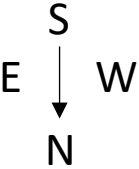


\* Posters proceed in numerical order from this starting location

Welcome table



HH 2<sup>nd</sup> floor lobby



## Poster Locations by Room

Hall of Flags, 1 <sup>st</sup> Floor (Posters 1-112).....	11
Hall of Flags, 2 <sup>nd</sup> Floor (Posters 113-147).....	17
Bistro (Posters 148-177) .....	19
Reading Room (Posters 178-207).....	21
Bodek Lounge (Posters 208-309) .....	23
Houston Hall 2 <sup>nd</sup> Floor Lobby (Posters 310-330) .....	28
Class of '49 (Posters 331-377) .....	29

## Hall of Flags, 1<sup>st</sup> Floor (Posters 1-112)

- 1. Rheem Abbas (College 2026)**  
Advisor: Ali Dinar  
*The Commodification of Culture: A Comparative Analysis of Global Cultural Heritage Tourism as a Means of Economic Reconstruction in Sudan*
- 2. Leila Abdel-Qader (College 2026)**  
Advisor: Aaron Alexander-Bloch  
*Associations Between MRI-Detected Brain Abnormalities and SWYC Scores in Premature Cohorts*
- 3. Sophie Abramovitz (Engineering 2027)**  
Advisor: Cynthia Sung  
*Multi-Actuation Tunable Stiffness Arm*
- 4. Ikechi Adele (Wharton 2027)**  
**Andrew Zheng (College 2028)**  
Advisor: Mary-Hunter McDonnell  
*Drivers of Evolving Approaches to Board Diversity Over Time*
- 5. Oluwatomisin Adenekan (Engineering 2028)**  
Advisor: Erin Conrad  
*Validating Persyst on Scalp EEG for Temporal Lobe Epilepsy Lateralization*
- 6. Rere Adeoye (College 2028)**  
Advisor: Modupe Coker  
*Cytokine Profiles and Oral Microbiome Shifts in HIV Youth with Persistent HPV Infection*
- 7. Erica Adu (College 2028)**  
Advisor: Geelsu Hwang  
*Development of Oral Biofilms on Tooth-Like Structures*
- 8. Nandini Agarwal (College 2028)**  
Advisor: Hamideh Parhiz  
*Assessing CD31 for Lung-Specific Targeting Lipid Nanoparticles*
- 9. Priya Agarwal (Engineering, Wharton 2026)**  
Advisor: Chamith Rajapakse  
*Machine Learning Prediction of Atypical Femur Fractures In Bisphosphonate-Treated Patients*
- 10. Marbella Aguilar (College 2026)**  
Advisor: Joseph Janicki  
*Bone Health in Children: A Multicenter Study of Bisphosphonate Utilization*
- 11. Reshana Ahamad (College 2027)**  
Advisor: Hajera Amatullah  
*Investigating the Role of Epigenetic Regulator UHRF2 in One Carbon Metabolism and Immune Function*
- 12. Angela Ai (College 2028)**  
Advisor: Marijana Vujkovic  
*Assessing the Independent and Joint Effects of GLP1R and GIPR on Liver Fat and BMI Using Mendelian Randomization*
- 13. Anirudh Akula (Engineering 2028)**  
Advisor: Arnold Mathjissen  
*Modeling Bacterial Transport Through Porous Environments With Software Simulation*
- 14. Daya Allon (College 2028)**  
**Angelina Cheng (Engineering 2028)**  
Advisor: John Trueswell  
*Semantic Seed EEG Study*
- 15. Faith Amolo (Nursing 2028)**  
**Veronica Baladi (College 2027)**  
**Wendy Hernandez (Nursing 2028)**  
Advisor: Sarah Kagan  
*Capturing Climate and Health Education Opportunities Across Penn's Campus*
- 16. Charlize Amper (College 2028)**  
Advisor: Lisa Schwartz  
*A Pilot Test of an Educational Video for Tumor-Normal Paired Genetic Testing in Pediatric Oncology: Acceptability and Implementation Barriers*
- 17. Phoebe Anagnos (College 2028)**  
**Sophia Wang (College 2028)**  
Advisor: Laia Mogas-Soldevila  
*Terrene 4.0*
- 18. Naseebullah Andar (College 2026)**  
Advisor: Rahul Kohli  
*Engineering and Cross-Species Profiling of AID Variants: Toward Enhanced Cytidine Deaminases*
- 19. Zaida Annan (College 2028)**  
Advisor: Audrey John  
*Investigating Phosphate Donor Preference of PFK9 in Plasmodium*

- 20. Chinechelum Anwunah (College 2027)**  
Advisor: Roy Hamilton  
*Lesion Location and Word Class Differences in TMS Response for Post-Stroke Aphasia*
- 21. Mesomachi Anyanwu (College 2028)**  
Advisor: Erika Holzbaur  
*Investigating the Effects of DISC1 on the Recruitment of Mitochondrial Trafficking Proteins in HeLa Cells*
- 22. John Arriola (College 2028)**  
Advisor: Colin Conine  
*Stress impacts tRNA Fragment (tRF) Expression and Function in C. elegans*
- 23. Sana Bakir (College 2028)**  
Advisor: Kemar Prussien  
*The Impact of Neighborhood Inequities on Engagement in Care among Adolescents and Young Adults with Sickle Cell Disease*
- 24. Nihar Ballamudi (College 2027)**  
Advisor: John Spiesberger  
*Using Machine Learning to Census Fin Whale Calls*
- 25. Nafisa Bangura (Engineering 2027)**  
**Angelica Dadda (Engineering 2027)**  
Advisor: Russell Composto  
*Evaluation of Asphalt Coatings' Impact on Urban Heat in Philadelphia*
- 26. Rodin Bantawa (College 2027)**  
**Jasleen Sidhu (College 2028)**  
Advisor: Megan Robb  
*Unstable Archives: The Microhistory of Sharaf un-Nisa*
- 27. Izabela Baran (College 2027)**  
Advisor: Chamith Rajapakse  
*Predicting Radius Fractures with Machine Learning*
- 28. Ashley Batey (College 2028)**  
Advisor: Aimin Chen  
*The Effect of Perfluorooctanoic Acid on Gestational Diabetes Mellitus/Impaired Glucose Tolerance*
- 29. Keagan Beeravolu (College 2027)**  
Advisor: Michael Lampson  
*Availability of DNA-Packaging Proteins Explains Rapid Expansion of Repetitive DNA*
- 30. Alondra Betancourt (College 2026)**  
Advisor: David Hill  
*Effects of Dietary Fatty Acids on Macrophage Organelle Function*
- 31. Rishi Bhandari (College 2027)**  
Advisor: Daniel Mindiola  
*From Nitrogen (N) to Antimony (Sb): Comparing Bonding in Terminal Group 4 Pnictide Complexes*
- 32. Nishanth Bhargava (College 2027)**  
Advisor: Siarhei Biareishyk  
*Self-Managed Enterprises and the French Left in the 1970s*
- 33. Tejas Bhatia (College 2028)**  
**Samantha Wickham (College 2028)**  
Advisor: Andrew Thompson  
*The Making of Modern Day MAGA Republicanism*
- 34. Aravind Bhola (Engineering 2028)**  
Advisor: Jordan Raney  
*DIW Printing of Conductive Soft Actuating Core-Shell Fibers*
- 35. Alexander Boyko (College 2027)**  
Advisor: Kathryn Wellen  
*Investigating the Role of Diet-Microbiome Interactions on Host Glucose Regulation*
- 36. Ivan Boyko (College 2028)**  
Advisor: Glenda Goodman  
*Listening to the Iroquois*
- 37. Alyce Bradshaw (Nursing 2028)**  
Advisor: Roger Kim  
*Assessment of a Radiomics-based Computer-Aided Diagnosis Tool for Pulmonary Nodules (ARCADES) Pragmatic Randomized Controlled Trial*
- 38. Matthew Breier (College 2026)**  
Advisor: Lori Bruce  
*Quod ali cibus est aliis fuat acre venenum: The Fluidity and Plasticity of Bioethical Interpretations Regarding Vaccination Mandates*
- 39. Sierra Brodhage (College 2028)**  
Advisor: Daniel Beiting  
*Transcriptional Analysis of Bats Affected by White Nose Syndrome Identifies an Anti-fungal Response Program and Potential Therapeutic Targets*

- 40. Vidhu Bulumulla (Engineering 2027)**  
Advisor: Deep Jariwala  
*Investigating AlScN Ferroelectric Partial Switching Using Piezoresponse Force Microscopy (PFM)*
- 41. Julian Caesar (College 2027)**  
Advisor: Lauren Kreeger  
*Development of the Morphology of Octopus Cell Dendrites*
- 42. Angela Cai (College 2026)**  
Advisor: Angela Gibney  
*Strong Unital Property of Vertex Operator Algebras*
- 43. Liangyu Cai (Engineering 2028)**  
**Derek Kong (Engineering 2028)**  
Advisor: Ian Campbell  
*Training LLMs to Think About Patients Across a Health System*
- 44. Randy Cai (College 2026)**  
Advisor: Alice Chen-Plotkin  
*Endogenous MIA Expression Levels Modulate Amyloid-beta Plaque Load and Compaction in 5xFAD Mouse Brains with Alzheimer's Disease Pathology*
- 45. Isael Campos Cano (College 2028)**  
**Natalia Cheng (College 2028)**  
Advisor: Fernando Lara  
*PRE/OPOSITIONS LAB: Exploring Architecture in Modern Society Through Theoretical Concepts of Its Creators*
- 46. Enya Cao (Engineering 2028)**  
Advisor: Igor Bargatin  
*Geometric Design of Kirigami-Inspired Metamaterials for Stretchable Space Antennas*
- 47. Jacob Cao (College 2026)**  
Advisor: Gary Wu  
*Dietary Carbohydrate Consumption Modulates Escherichia coli Adaptation in the Gut Microbiome*
- 48. Jaily Cardwell (College 2028)**  
Advisor: Sarah Tishkoff  
*Possible Selection on Loci Associated with Oculocutaneous Albinism in sub-Saharan African Populations*
- 49. Ada Cen (College 2028)**  
Advisor: Janis K Burkhardt  
*S1P-Directed Cytoskeletal Control of Dendritic Cell Migration*
- 50. Chloe Chan (College 2027)**  
**Aishwarya Shivaraman (College 2027)**  
Advisor: Cesar De La Fuente  
*A Meta-Analysis on the Diagnostic Utility of miRNA for Breast Cancer*
- 51. Ingrid Chan (College 2028)**  
Advisor: Dawn Mechanic-Hamilton  
*Adding a Language Module That Captures Speech Response Using mCAPP, A Remote App-Based Mobile Digital Cognitive Assessment Tool*
- 52. Sneha Chandrashekar (College 2028)**  
Advisor: Nicholas Balderston  
*Creation of a Whole Brain Connectivity-based Model for Individualized Targeting of PTSD Symptoms with TMS*
- 53. Ellis Charles (College, Engineering 2028)**  
Advisor: Evelyn Thomson  
*Di-Higgs to  $b\bar{b}\tau\tau$  decay and DNN Electron Identification*
- 54. Amanda Chen (College 2027)**  
Advisor: Ahmed Diab  
*Therapeutic Targeting of DNA Repair Mechanisms in HPV Positive Oropharyngeal Cancers*
- 55. Amaris Chen (Engineering 2028)**  
Advisor: Marc Miskin  
*ALD and PECVD SiO<sub>2</sub> as Thin Film Encapsulation for Bioelectronic Implants*
- 56. Belinda Chen (Nursing 2028)**  
**Linda Rong (Nursing 2028)**  
Advisor: Effy Yu  
*FACAI: Fostering Authentic Chinese American Intergenerational Connection Through a Game-Based Conversation Intervention*
- 57. Caitlyn Chen (College, Engineering 2026)**  
Advisor: Mark Allen  
*Oxygen Microsensors for In Vitro Prediction of Drug Resistance in Pancreatic Ductal Adenocarcinoma*
- 58. Ellen Chen (College 2028)**  
Advisor: Matthew Schindler  
*Advanced Neuroimaging of Neuroinflammatory Diseases*
- 59. Erin Chen (College 2027)**  
Advisor: Dustin Brisson  
*Tick Species Composition in Maple and Oak Forests of Pennsylvania in 2024*



- 60. Ian Chen (College 2026)**  
Advisor: Douglas Wallace  
*A Toxic Fragrance: Galaxolide Harms the Mitochondria in Human 293T Cells*
- 61. Shane Cheng (College 2028)**  
Advisor: Jason Van Batavia  
*Determining Upright Posture in Surgery: A Comparative Study in Ergonomics Exploring the Risk Factors for Musculoskeletal Strain*
- 62. Julia Chiang (College, Engineering 2027)**  
Advisor: Russell Composto  
*Investigating CoolSeal as an Urban Heat Solution in Philadelphia*
- 63. Siddharth Chitta (Engineering 2026)**  
Advisor: Evan Weber  
*Leveraging a  $\beta$ -catenin-TCF1 Fusion Protein to Promote Persistence in CAR T Cells*
- 64. Lauren Cho (College 2026)**  
Advisor: Ricardo Bracho  
*Resolution of the Ambiguously Disjointed Scene*
- 65. Amanda Choi (College 2028)**  
Advisor: Joseph Cichon  
*Investigating Anxiodepressive-like Behaviors in Dams and Offspring following Maternal Separation with Early Weaning*
- 66. Sristhi Chowdhury (Engineering 2027)**  
Advisor: Ronny Drapkin  
*CRABP2 is Overexpressed in HGSOE and Essential for Cell Viability*
- 67. Tingting Chung (College 2026)**  
Advisor: Yi-Wei Chang  
*Quantitative Imaging Analysis of Nuclear Viral Components Dynamics in Human Adenovirus Infection*
- 68. Ethan Cohen (College 2026)**  
Advisor: Nilam Mangalmurti  
*Extracellular mtRNA Activates TLR7*
- 69. Charlotte Comstock (College 2027)**  
Advisor: Paul Robinson  
*Root Causes of Crime*
- 70. Eric Cui (College 2027)**  
**Siddhant Mody (Engineering 2027)**  
Advisor: Michael Posa  
*Push Anything: General Planar Pushing with Sampling-Based Contact-Implicit MPC*
- 71. Samuel Dago Fernandez (College 2028)**  
Advisor: Joseph Cichon  
*Assessing the Translational Potential of a Thermally-Induced Chronic Pain Model in Mice*
- 72. Sadie Daniel (College 2028)**  
Advisor: Sara Jaffee  
*"Moving to Opportunity": Can Direct Rental Assistance Help Move People to Neighborhoods of Higher Opportunity?*
- 73. Koustav Datta (College 2026)**  
Advisor: Priya Sivaramakrishnan  
*Investigating Embryonic Lethality by Targeting ani-2 with RNAi in C. elegans Using the T444T Vector*
- 74. Roshni Datta (College 2026)**  
Advisor: Amelia Eisch  
*Investigating Reward-Context Memories Using a Machine Learning Model (SLEAP) in Male Mice: Implications for Addiction Treatment*
- 75. Srijani Datta (College 2027)**  
Advisor: Xiaowei (Sherry) Liu  
*Conditional Deletion of PTH/PTHrP Receptor 1 in Osteocytes Abolishes Lactation-Induced Alterations in Lacunar Space and Increases Bone Microstructure Deterioration*
- 76. Graci Davidson (College 2027)**  
Advisor: Allyson Mackey  
*The Role of Curiosity and Parent Stress in Children's Learning*
- 77. Pètra de Beer (College 2027)**  
Advisor: Danielle Cosme  
*Influences of Current and Future Climate Action Amongst Youth*
- 78. Ella Demoise (College 2028)**  
Advisor: Emily Becker-Haimes  
*Identifying Strategies to Sustain Peer Support for Suicide Prevention*
- 79. Madison Dennis (College 2028)**  
Advisor: Nathaniel Dymant  
*The Impact of Postnatal Sciatic Nerve Resection on Tendon Development and Structure*

- 80. Sana Dezhabad (College 2028)**  
Advisor: Natividad Robert Fuentes  
*Modeling T Cell Exhaustion in Jurkat Cells: Linking Membrane Fluidity to Dysfunction and Exploring Paths to Restoration*
- 81. Jonmejy Dhar (College 2027)**  
Advisor: Scott Canna  
*Assessing Human Cytotoxic T-Lymphocyte Killing Using a CD3/CD19 Bispecific Antibody*
- 82. Alexandra DiMauro (College 2027)**  
Advisor: Robyn Sanderson  
*Exploring Dark Matter Models Using Dwarf Galaxies as Cosmic Laboratories*
- 83. Vincent Dong (College 2027)**  
Advisor: Crystal Conn  
*Integrated Stress Response and Therapeutic Resistance in Prostate Cancer*
- 84. Kevin Du (Engineering 2027)**  
Advisor: Kristoffel Dumon  
*Surgical Airway Training in Virtual Reality*
- 85. Justin Duong (College 2027)**  
Advisor: John Spiesberger  
*Evaluating Parameterless Censusing Method for Detecting Whale Population Changes*
- 86. Haydr Dutta (College 2026)**  
**Destiny Uviles (Wharton 2026)**  
Advisor: Amy Hillier  
*Validating a Gender Screener to Support Young Children*
- 87. Hazel Ekeke (Nursing 2027)**  
Advisor: Beth Pineles  
*A Seat at the Table: Implementing Respectful Care Breakfasts to Enhance Maternity Care at an Urban Hospital*
- 88. Lara Elmanzalawi (College 2028)**  
Advisor: Todd Ridky  
*Loss of the Y Chromosome Alters UV Responses in Human Skin Cells: A Potential Mechanism for Sex Differences in Skin Cancer*
- 89. Suzan Elshamshery (College 2027)**  
Advisor: Visish Srinivasan  
*Application of 3D Segmentation for Cross-Sectional Area Measurement of Dural Venous Sinuses*
- 90. Emiola Enakhimion (College 2028)**  
Advisor: Ethan Goldberg  
*Chandelier Cell Dysfunction in a Mouse Model of Dravet Syndrome*
- 91. Yelda Erhan (College 2027)**  
Advisor: Klaus Kaestner  
*Role of Chromosome 7 Deletion in Type 1 Diabetes*
- 92. Elo Esalomi (Engineering 2028)**  
**Lucianne Servat (College 2027)**  
Advisor: Danae Metaxa  
*Demystifying AI/ML: Exploring How Teens Understand and Critique Systems*
- 93. Kiara Escudero (College 2028)**  
Advisor: Mechthild Pohlschröder  
*Phenotypic Characterization of Motility Mutants in *Haloferax volcanii**
- 94. Chidinma Esielem (College 2027)**  
Advisor: Shinjae Chung  
*Early Amyloid Pathology and Altered Sleep Architecture in 2.5-Month-Old 5xFAD Mice*
- 95. Lucia Espina Vazquez (College 2026)**  
Advisor: Amelia Eisch  
*Space Radiation Disrupts Small-World Architecture and Efficiency of Processing Networks Supporting Social Conflict Resolution*
- 96. Ariel Fader (College 2028)**  
**Collin Wang (College 2028)**  
**Ruitian Zhu (Wharton 2028)**  
Advisor: Katherine Milkman  
*A Megastudy to Increase First-Year College Student Success*
- 97. Jennie Fan (College 2027)**  
**Ana Sywulak-Herr (College 2027)**  
Advisor: Jessa Lingel  
*Histories/Geographies: Mapping Trans Philadelphia*
- 98. Izzy Feinfeld (College 2027)**  
**William Li (College 2027)**  
Advisor: Sebastián Gil-Riaño  
*The Aché People: An Epistemological Reconstruction on the Debate of Genocide*
- 99. Trini Feng (Engineering 2027)**  
**Darren Mo (Engineering 2027)**  
Advisor: Duncan Watts  
*Lab Tools for Integrative Experiments on Deliberation*

**100. Daniella Florencio (College 2028)**

Advisor: Katie Barott

*Exploring the Effects of Extreme Temperature Treatments on Model Cnidarian Larvae*

**101. Jacob Flores Zeranski (College 2028)**

Advisor: Eugene Khandros

*Validating BRD9's Role as an HBD/HBG Activator Through Acute Degradation*

**102. Kayla Fox (Engineering 2028)**

Advisor: Shujie Yang

*Precision, Uniformity, and Reprogramming of Microdroplets: Controlling Size, Composition, and Spatial Placement*

**103. Audrey Gang (College 2027)**

Advisor: John Wherry

*Optimization and In Vivo Application of an Inducible Split-Cas9 System*

**104. Gary Gao (College 2028)**

Advisor: Kimberly Bowes

*Building Rome Tegula Project*

**105. Aaliyah Garcia (Nursing 2027)**

Advisor: Renata Sanders

*Decision Phase of the ADAPT-ITT Framework: Insight From Scoping Review and Observations to for an Evidence-Based Intervention*

**106. Yenifer Garcia Bermudez (College 2026)**

Advisor: Gerald Campano

*Horizontalism in Community-Based Research: From Transnational Partnership to Classroom Empowerment*

**107. Shambhabi Gautam (Engineering 2027)**

Advisor: Zhaolan Zhou

*Asymmetry of MECP2 Expression in Mice*

**108. Abby Gemechu (College 2028)**

Advisor: Lauren Kreeger

*Structural Development of the Axon Initial Segment of Octopus Cells*

**109. Ioana Gidiuta (Engineering 2026)**

Advisor: Michelle Johnson

*Filtering and Optimal Control for Detecting Divergence in Infant Development*

**110. Muhammad Abdullah Goher (Engineering 2027)**

**Darren Mo (Engineering 2027)**

Advisor: Duncan Watts

*NOMAD: Network for Open Mobility Analysis and Data*

**111. Elsbeth Goltz (College 2027)**

Advisor: Kyla Ortved

*Chondroprotective Efficacy of EVs produced by IFN- $\gamma$  Primed Equine BM-MSCs in an in vitro OA Model*

**112. Angela Gomez (College 2026)**

Advisor: Gerald Campano

*Bridging Borders Through Art: Storytelling for Transnational Youth*

## Hall of Flags, 2<sup>nd</sup> Floor (Posters 113-147)

**113. Andrea Gonzalez Varela (Engineering 2027)**

Advisor: Chamith Rajapakse

*Diffusion Models for MRI Denoising*

**114. Ansh Gosain (College 2028)**

Advisor: David Lynch

*Impact of Frataxin Deficiency and Recovery on Synaptic Proteins in a Friedreich's Ataxia Mouse Model*

**115. Chinmay Govind (Engineering 2028)**

Advisor: John Spiesberger

*How to Locate Fin Whales with Machine Learning*

**116. Dhruv Goyal (Engineering 2027)**

Advisor: Sebastian Angel

*Using eBPF Hooks to Profile Linux File System Activity Across Benchmarking Workloads*

**117. Nira Goyal (College 2028)**

Advisor: Ran Barzilay

*JoyNet: Evaluating an AI-Powered Social Media Platform for Supporting Well-Being in Black Youth*

**118. Nicholas Gray (College 2027)**

Advisor: Renata Sanders

*Optimizing HIV Prevention in Young MSM: Tackling Individual Barriers and Substance Use Through Primary Care Integration*

**119. Kaitlyn Green (Nursing 2026)**

Advisor: Erle Robertson

*Investigating the Molecular Mechanisms of Brusatol Analogs in EBV Associated Malignancies via the PI3K Pathway*

**120. Alina Gu (College 2026)**

Advisor: Paul Lieberman

*EBV-Mediated Changes in Cell Surface Marker Expression Promote Inflammation and Neuroinvasion*

**121. Ege Gungor (Engineering 2028)**

**Kevin Song (Engineering 2028)**

Advisor: Fuchiang Tsui

*Extracting Social Determinants of Health from Clinical Notes using LLMs*

**122. Jessica Guo (College 2026)**

Advisor: Zoltan Arany

*Overexpressing the SLC16A12 Transporter Increases Survival in a Dilated Cardiomyopathy Mouse Model*

**123. William Guo (Engineering, Wharton 2026)**

Advisor: Jie Gao

*Truth Learning in a Social Network Under Random Decision Orderings*

**124. Gautam Gupta (Engineering 2028)**

Advisor: Liang Wu

*Studying the Nonlinear Optical Response of Transition Metal Phosphorus Chalcogenides*

**125. Suhani Gupta (Engineering 2028)**

**Ethan Ho (Engineering 2028)**

Advisor: Nathaniel Wei

*Effect of Surface Features on the Drag of a Tethered Sphere Flow Measurement Device*

**126. Akhila Guttikonda (College 2026)**

Advisor: Priya Sivaramakrishnan

*Humanization of Caenorhabditis elegans Using Extrachromosomal Array Approach for Generation of Disease Model Worms*

**127. Sreehita Hajeebu (College 2027)**

Advisor: Jessica Foster

*Delineating the Mechanism of Imiprodone Therapy in Diffuse Midline Glioma*

**128. Karina Hanna (College 2027)**

Advisor: Catherine Norise

*A Comparative Case Study of the Efficacy of High-Definition Transcranial Direct Current Stimulation and Modified Constraint-Induced Language Therapy in LvPPA and NaPPA*

**129. Orchie Hasan (College 2028)**

Advisor: Tobias Baumgart

*Specific Binding Behavior and Curvature Sensing of hisGFP*

**130. Stefan Hatch (College 2026)**

**Patrick Miller (College 2027)**

Advisor: Jessa Lingel

*Preliminary Findings on Community Internet – Philadelphia and Beyond*

**131. Kate He (College 2028)**

Advisor: E. James Petersson

*Development and Evaluation of Novel Targeted Near-infrared Imaging Agent for Neuroendocrine Tumors*

- 132. Brian Herman (College 2026)**  
 Advisor: Foteini Mourkioti  
*Acvr1R206H Induction Induces Periosteal Expansion Before Heterotopic Bone Formation in Fibrodysplasia Ossificans Progressiva*
- 133. Kamille Hernandez (College 2027)**  
 Advisor: Michael Beauchamp  
*Does Seeing the Talker's Face Let You Understand Speech Faster?*
- 134. Emmanuel Hernandez Castaneda (College 2028)**  
 Advisor: Susan Weiss  
*Construction and Characterization of a HCoV-OC43-EGFP Infectious Clone for Visualizing Coronavirus Infection*
- 135. Nicollette Hillman (College 2028)**  
 Advisor: Sara Jaffee  
*Evaluating Rental Assistance Programs and Parent-Child Dynamics: To What Extent Does Rental Assistance Impact Parent-Child Relationships?*
- 136. Celine Hong (College 2027)**  
 Advisor: Eric Brown  
*A Proteogenomic Approach to Identifying Sensitizers to ATR Inhibitors*
- 137. Sabine Hong (College 2026)**  
 Advisor: Marija Drndić  
*Uncovering the Structure of Cytochrome C Protein with Machine Learning*
- 138. Yerahm Hong (Engineering 2026)**  
 Advisor: Ethan Goldberg  
*Antisense-Oligonucleotide Gene Therapy for KCNC1-Related Epilepsy*
- 139. Niall Hosein (College 2026)**  
 Advisor: David Chenoweth  
*A Photoconvertible, Small Molecule DNA Binding Probe*
- 140. Henry Huang (Engineering 2028)**  
**Kevin Li (Engineering 2028)**  
**Ethan Yang (Engineering 2027)**  
 Advisor: Jianjing Kuang  
*Speech Production and Perception by Human and AI*
- 141. Tom Huang (Engineering 2028)**  
 Advisor: Robert Radway  
*Modeling of Coin Cell Discharge Characteristics for Low-Power Battery Optimization*
- 142. Madison Hughes (Engineering 2026)**  
 Advisor: Mark Yim  
*Methods for Onboard Imaging for Compact UAV*
- 143. Jackson Ibarra (College 2028)**  
 Advisor: Daniel Hashimoto  
*Uncharted Healthcare: Artificial Intelligence Literacy of Patients*
- 144. Amir Ibrahim (College 2028)**  
 Advisor: Yvette Sheline  
*The Effect of TMS on Emotion Regulation in Bipolar Disorder*
- 145. Carolina Ikuno (Engineering 2028)**  
 Advisor: Claire Mitchell  
*TRPML1's Role in the Gene Expression and Recruitment of Proteins in ESCRT-Mediated Lysosomal Membrane Repair and Autophagy*
- 146. Chinenye Ilodiana (College 2028)**  
 Advisor: Rebecca Hamm  
*Understanding AMETHIST@Penn: Using Implementation Science Research to Achieve Maternal Health Equity*
- 147. Peter Ilyin (Engineering 2028)**  
 Advisor: Gad Allon  
*Behavioral and Economic Differences Between EV & ICE Rideshare Drivers*

## Bistro (Posters 148-177)

- 148. Paris Ivery (College 2027)**  
Advisor: Modupe Coker  
*Molar Eruption Timing as a Marker of Immune and Cognitive Disruption in Adolescents with Perinatal HIV*
- 149. Affan Jabbar (College 2027)**  
Advisor: Sara Jaffee  
*PHLHousing+: Effect of Cash-Based Rental Assistance on Households' Financial Stability*
- 150. Kaya Jain (Engineering 2028)**  
Advisor: Daeyeon Lee  
*Developing Shelf-Stable Formulations for RNA*
- 151. Yousuf Jamal (College 2027)**  
Advisor: Dustin Brisson  
*Presence of the Invasive Species *H. longicornis* in Oak and Maple Forests in Pennsylvania*
- 152. Sophia Jarrar (College 2026)**  
Advisor: Jeffrey Field  
*Utilizing AI Models to Map Oxidative Damage on Telomere DNA from Oxford Nanopore Generated DNA sequence*
- 153. Sophie Jatto (College 2026)**  
Advisor: Sara Cherry  
*Testing Candidate Alphavirus Entry Receptors in *Drosophila**
- 154. Kaitlyn Jin (Engineering 2028)**  
Advisor: George Kannarkat  
*Effects of Environmental Toxicants on  $\alpha$ -Synuclein Aggregation in Parkinson's Disease*
- 155. Gina Joo (College 2027)**  
Advisor: Parrish Bergquist  
*Examining the Political Impacts of Renewable Energy Development Under the Inflation Reduction Act*
- 156. Camille Jordan (College 2027)**  
Advisor: Katherine Theken  
*The Influence of Sex Hormones on Post-Operative Pain Following Third Molar Extraction*
- 157. Yein Jung (College 2028)**  
Advisor: Michael Lampson  
*Investigating Meiotic Drive Mechanisms: Kinetochore-Microtubule Attachments and Chromosome Segregation Bias*
- 158. Amanrai Kahlon (College 2028)**  
Advisor: Visish Srinivasan  
*Optimizing Surgical Trajectories to Periventricular Cavernous Malformations Presenting with Hemorrhage through a Contralateral Transcingulate Approach*
- 159. Arjan Kahlon (College 2026)**  
Advisor: Seema Bhatnagar  
*TAS1R3 in the Paraventricular Thalamus Modulates Cognitive Flexibility, Social Behaviors, and Stress Response*
- 160. Kayley Kang (College 2028)**  
**Angela Sien (College 2028)**  
Advisor: Rebecca Waller  
*Reading Between the Lines: Examining Associations Between Childhood Callous-Unemotional Traits and Vocal Markers*
- 161. Natalia Kawalec (College 2026)**  
Advisor: Anna Schapiro  
*The Role of Median Raphe Vglut3+ Neurons in Complex Associative Learning*
- 162. Chris Keum (College 2028)**  
Advisor: Xue Gao  
*Developing Prime Editing Platforms in Filamentous Fungus*
- 163. Sayyid Khalil (College 2027)**  
Advisor: Aaron Alexander-Bloch  
*Prevalence of Congenital Heart Defect & Incidental Brain MRI Findings in 22q11.2 Deletion Syndrome*
- 164. Arnav Khanna (Engineering 2028)**  
Advisor: Xue (Sherry) Gao  
*Engineering Compact Cas Systems for Disease Treatment*
- 165. Habiba Khirie (College 2027)**  
Advisor: Jennifer Goldschmied  
*Investigating Links Between Callous Traits and Slow-Wave Sleep*
- 166. Katherine Kiefer (College 2028)**  
Advisor: Christopher Cielo  
*Comparing Energy Expenditure, Body Composition, and Sleep Apnea in Infants with Micrognathia*

- 167. Emil Kielar (Engineering 2028)**  
 Advisor: Pratik Chaudhari  
*3D Reconstruction and Fruit Segmentation in Orchards*
- 168. Jaeyeon Kim (College 2027)**  
 Advisor: Aimin Chen  
*Investigating the Role of Prenatal PBDE Exposure on Sleep Duration at age 3 years*
- 169. John Kim (Engineering 2026)**  
 Advisor: Noor Momin  
*Identifying Arrhythmogenic Protein*
- 170. Yunha Kim (Wharton 2027)**  
 Advisor: Christopher Yoo  
*Engineering, Law, and Society: Defining the Relationship Between Innovation and the State*
- 171. Kristina Kitsul (College 2028)**  
 Advisor: Geoffrey Aguirre  
*Monitoring Eye Movements with Electro-Oculography*
- 172. Sepp Kohler (College 2027)**  
 Advisor: Aaron Alexander-Bloch  
*Demolitions and Childhood Blood Lead in Philadelphia*
- 173. Joe Kojima (Engineering 2027)**  
 Advisor: Joshua Dunaief  
*Iron-Induced Metabolic Remodeling in iPS-RPE Cells: Amino Acid and Energy Pathway Alterations*
- 174. Isabelle Kong (College 2027)**  
 Advisor: Christopher Yoo  
*The Challenges and Success Factors of Internet Connectivity Initiatives Around the World and Policy Implications*
- 175. Sherice Kong (College 2027)**  
 Advisor: Robert Carpick  
*Fracturing Graphene Steps via Atomic Force Microscopy*
- 176. Jacob Krassin (College 2026)**  
 Advisor: Defne Amado  
*Development of a miRNA De-targeting Strategy*
- 177. Matthew Kuo (Engineering 2026)**  
**Amish Sethi (Engineering 2026)**  
 Advisor: Mayur Naik  
*ESCA: Contextualizing Embodied Agents via Scene-Graph Generation*

## Reading Room (Posters 178-207)

**178. Yvonne Kuo (College 2026)**

Advisor: Christoph Eliebrecht  
*Investigating Gain-of-Function IKZF1 Effects on Asymmetric Cell Division and Cell Fates in CAR T Cells to Combat Post-Treatment Relapse*

**179. Eric Kuznetsov (College 2027)**

Advisor: Todd Ridky  
*Influence of Y Chromosome Loss on Keratinocyte Proliferative Lifespan and Senescence*

**180. Blake Landow (College 2026)**

Advisor: Tejvir Khurana  
*Development of CD55 Promoter Region-Based Assays to Treat Limb Girdle Muscular Dystrophy*

**181. Tony Le (College 2027)**

Advisor: Doris Wagner  
*Dissecting miR164-TFL1 Interactions in Floral Meristems*

**182. Daniel Lee (College 2027)**

Advisor: Mark Sellmyer  
*Induced SUMOylation of  $\alpha$ -Synuclein Fibrils via Trimethoprim-Linked E3 Ligase Constructs*

**183. Eric Lee (College 2026)**

Advisor: William Peranteau  
*In Utero Gene Editing for Treatment of Duchenne Muscular Dystrophy (DMD): Systemic Delivery of Lipid Nanoparticles and Therapeutic Base Editing*

**184. Hannah Lee (College 2027)**

Advisor: Eugene Khandros  
*Defining the Role of BAF Chromatin Remodeler Complex in Hemoglobin Transcription via Acute Degradation Experiments*

**185. Jiwoo Lee (College 2028)**

Advisor: Lisa Schwartz  
*Associates of Perceived Neurocognitive Functioning Among Adolescent and Young Adult Survivors of Childhood Cancer*

**186. Kaelyn Lee (College 2028)**

Advisor: Matthew Schindler  
*Longitudinal Neuroimaging of Paramagnetic Rim Lesions in MS*

**187. Nayoon Lee (College 2026)**

Advisor: Rafe McBeth  
*Toward an AI-Automated Radiation Therapy Workflow: A Dual-Model Approach to Target Volume Contouring and Dose Optimization in Intermediate-Risk Prostate Cancer*

**188. Zheng-Chi Lee (College 2028)**

Advisor: Leo Wang  
*Polymeric Device for the Diagnosis of Contact Dermatitis*

**189. Daisy Lehman (Nursing 2028)**

**Ananya Mukund (College 2027)**  
Advisor: Ragini Verma  
*Sex Differences in MRI-Based Imaging Biomarkers: A Systematic Review*

**190. Sage Leland (Engineering 2026)**

Advisor: Amelia Eisch  
*Understanding Restraint Stress and Subanesthetic Ketamine Modulation of Lateral Entorhinal Fan Cell Activity in a Mouse Model Using In Vivo Miniscope Imaging*

**191. Benjamin Lester (College 2026)**

Advisor: Dirk Trauner  
*Efforts Towards a Total Synthesis of Dodecahedrane*

**192. Kate Levensten (College 2027)**

Advisor: Lisa Mitchell  
*Assessing the Relationship Between Adult Literacy Programs and Children's Educational Outcomes*

**193. Charlotte Lew (Engineering 2027)**

Advisor: Robert Stuart-Smith  
*Additive Manufactured Wall*

**194. Debby Li (Nursing 2028)**

**William Xi (Nursing 2027)**  
Advisor: Effy Yu  
*Intervening with Chinese Immigrant Mothers Experiencing Postpartum Distress: A Pilot RCT Study*

**195. Jonathan Li (College 2028)**

Advisor: Leticia Martelete  
*Outbreaks and Anxiety: How Social Context, Resources, and Belief Systems Shape Responses to Infectious Disease Threats*



**196. Rena Li (College 2028)**

Advisor: Ethan Goldberg

*Effects of Electroconvulsive Therapy on Behavior and Physiology in a Mouse Model*

**197. Sarah Li (Nursing, Wharton 2028)**

**Sophia Rosales (Nursing 2027)**

Advisor: Antonio Davila

*The Development of an Assay to Monitor Mitochondrial Membrane Potential ( $\Delta\psi_m$ )*

**198. Caitlyn Limbert (College 2028)**

Advisor: Maria Basil

*Developmental Changes in CFTR Expression in Alveolar Type 2 Cells of the Postnatal Ferret Lung*

**199. Forrest Lin (Engineering 2027)**

Advisor: Kelly Sloane

*Transcranial Magnetic Stimulation as a Biomarker to Characterize Small Vessel Disease-Related Cognitive Decline*

**200. Hongkai Lin (College 2028)**

Advisor: Melike Lakadamyali

*Evaluating Nanobody Dissociation in Speed-Optimized DNA-PAINT for Low-Density Protein Imaging*

**201. Zixuan Lin (Engineering 2027)**

Advisor: Karen Winey

*Studying the Orientation of Gold Nanorods in Poly(2-vinyl pyridine) Polymer Brushes: Role of Grafting Density and pH*

**202. Andy Liu (Engineering 2026)**

Advisor: Tobias Raabe

*A Patient-Derived 3D Triple Co-Culture MASH Liver Model with Cell Type-Specific Genome Editing via LNPs*

**203. Evelyn Liu (College 2027)**

Advisor: Shinjae Chung

*Describing the Effects of TRPV1 Channel Absence on the Quality of Sleep*

**204. Grace Liu (Engineering 2026)**

Advisor: Emily Hartwell

*Sex-Specific Genetic Insights for Alcohol Use and Depression Comorbidity*

**205. Helen Liu (College 2028)**

Advisor: Jasmine Henry

*Careerist Orientations of and Perceptions by Penn Undergraduate Students*

**206. Ivy Liu (College 2026)**

Advisor: Ka Yee Lee

*Investigating Orientational Restraints in Molecular Dynamics Simulations of Peripheral Membrane Proteins*

**207. Natalia Liu Claros (College 2028)**

Advisor: Allyson Mackey

*Early Life Stress Slows Molar Eruption in Rats*

## Bodek Lounge (Posters 208-309)

### 208. Miguel Lobaco Rosas (College 2028)

Advisor: Ben Black

*Uncovering H4 Tail Interactions in Centromeric Nucleosomes*

### 209. Gianna Lodato (Engineering 2027)

Advisor: Nathaniel Wei

*Flow Conditioner Development for Turbulence Reduction in a Fan Array Wind Tunnel*

### 210. Jingyang Long (College 2028)

Advisor: Kathryn Davis

*Hemispheric Anatomical Volume Asymmetries Stratified by Seizure Onset Lateralization in Temporal Lobe Epilepsy Using 7T MRI*

### 211. Luisa Lopez (College 2028)

Advisor: Juan Alvarez

*Effect of Physiological Culture Conditions on SC-Islet Insulin Secretion*

### 212. Alex Lu (Engineering 2028)

Advisor: Gad Allon

*Behavioral Adaptation of Electric-Vehicle Uber Drivers Compared to Internal Combustion Engine Uber Drivers*

### 213. Cindy Lu (College 2026)

Advisor: David Merrick

*The Role of Fibro-Adipogenic Progenitor Cells in Supporting Skeletal Muscle Regeneration After Injury*

### 214. Anissa Ly (College 2027)

Advisor: Yvette Sheline

*Evaluating Vagus Nerve Stimulation Therapy for Treatment-Resistant Bipolar Depression: An 18-Month Analysis of Symptom Severity and Suicidality*

### 215. Eri Maeda (College 2027)

Advisor: Arina Chesnokova

*Who Gets the Appointment? A Menopause Secret Shopper Study*

### 216. Melody Mai (College 2028)

Advisor: David Raizen

*The Effect of Sickness-Induced Sleep and SIK Homolog KIN-29 on Glycolysis in C.elegans*

### 217. Vyvy Mai (College 2027)

Advisor: Aaron Alexander-Bloch

*Investigating Prematurity Through Radiology Reports*

### 218. Christina Makinde (College 2028)

Advisor: Brian Gregory

*Phenotypic Characterization of m6A Demethylase Mutations in A. Thaliana*

### 219. Natalie Mamaril (College 2027)

Advisor: Jessica Foster

*Targeting Chemokine Axes to Improve GD2 CAR-T Cell Homing and Efficacy in Pediatric Brain Tumors*

### 220. Moe Mansour (College 2027)

Advisor: Brock Kirwan

*P2: Power x Prestige*

### 221. Dania Maqbool (College 2027)

Advisor: Andria Johnson

*Adapting Community Liaison Models for the Educational NGO Sector: Lessons from Educate Lanka*

### 222. Qiarra Martin (College 2028)

Advisor: Thomas Kolon

*Impact of Varicocele on Sperm Parameters: A Retrospective Review of 44 Pediatric Cases*

### 223. Lise Chelsea Mbakop (College 2026)

Advisor: Elizabeth Lowenthal

*Infant Feeding Decision-Making Among Women Living with HIV in the United States*

### 224. Bruno Ndiba Mbwaye Roy (Engineering 2027)

Advisor: Manolis Roulis

*Stromal Architecture in Healthy Mouse Colon: A Squidpy + MERFISH Approach*

### 225. Delaney McDermott (College 2028)

Advisor: Julia Warren

*Establishing a Hoxb8 cell model of Severe Congenital Neutropenia*

### 226. Conner Meidt (College 2027)

Advisor: Marsha Lester

*Atmospheric Importance of Intermediate in Isoprene Oxidation (ISOPOOH)*

### 227. Nathalie Mejia (College 2027)

Advisor: Colin Ellis

*Evaluating the Effects of Driving Restrictions on Quality of Life for Individuals with Epilepsy*

### 228. Jan Mejia-Toro (College 2027)

Advisor: Julie Legate

*A Tolerant Approach to the Person-Case Constraint*

- 229. Arellys Merchan (College 2028)**  
**Michelle Yang (College 2028)**  
 Advisor: William Ewald  
*James Wilson and the American Revolution*
- 230. Isa Merriam (Engineering 2027)**  
 Advisor: Cherie Kagan  
*Colorimetric Leaf Moisture Sensors for Field Deployment*
- 231. Destiny Miller (College 2027)**  
 Advisor: Nathaniel Dymant  
*(Un)loading Achilles's Heel: Understanding How Mechanical Load Impacts Early Stages of Tendon Development*
- 232. Justin Miller (College 2026)**  
 Advisor: Talya Fishman  
*Spinoza's Ceremonies: Retaining the Appearance of Ancient Ways*
- 233. Sophia Mirabal (College 2027)**  
 Advisor: Geoffrey Aguirre  
*Mapping Temporal Statistics of Light Across the Visual Field Using Wearable Imaging*
- 234. Eshal Momin (College 2028)**  
 Advisor: Geelsu Hwang  
*Gold Nanoparticles as Antimicrobial Agents Against Oral Biofilms*
- 235. Bria Morgan (College 2028)**  
 Advisor: Sara Jaffee  
*Unpacking Stress: The Association Between Housing Assistance and Mental Health*
- 236. Elizabeth Murphy (Engineering 2028)**  
 Advisor: Michael Mitchell  
*Investigating the Role of Lipid Nanoparticle Surface Charge on mRNA Delivery to Ovarian Cancer*
- 237. Mustafa Mustafokulov (College, Wharton 2027)**  
 Advisor: Suradip Das  
*The Effects of Aging and Obesity on Neuromuscular Health*
- 238. Daniel Mysliwicz (College 2028)**  
 Advisor: Colin Ellis  
*Analyzing the Association Between Patient-Doctor Relationship and Mandatory Seizure Reporting*
- 239. Benjamin Nachod (Engineering 2026)**  
 Advisor: Michael Mitchell  
*Steroid-Incorporated Lipid Nanoparticles for Anti-Inflammatory Delivery of mRNA*
- 240. Shreya Nair (College, Engineering 2027)**  
 Advisor: Ben Stanger  
*Defining Mechanisms of RAS Signaling and Premalignant Senescence in Pancreatic Ductal Adenocarcinoma (PDAC)*
- 241. Eric Najera (College 2026)**  
 Advisor: Hardeep Dhillon  
*Immigration Law and Mexican Segregation Impact on Mexican Children: The Lemon Grove Incident (1931)*
- 242. Arav Nangia (College 2026)**  
 Advisor: Andrew Santiago-Frangos  
*Bioinformatically Identifying DNA Motifs Upstream of RNA-Adapting CRISPR-Cas Systems*
- 243. Ayanda Ndungu (College 2027)**  
 Advisor: Shaon Sengupta  
*The Role of the NK Cell-Intrinsic Clock in Host Response to Influenza Infection*
- 244. Quoc Ngo (College 2028)**  
 Advisor: Aimin Chen  
*What are the regulatory challenges and health risks of using e-cigarettes?*
- 245. Kevin Nhan (College 2028)**  
 Advisor: Melanie Pellecchia  
*Evaluating Social Communication Outcomes in Young Children Following Caregiver-Mediated Early Intervention*
- 246. Jasmine Ni (College 2027)**  
 Advisor: Daniel Wodak  
*Who Counts in One Person, One Vote? The Apportionment Debate*
- 247. Luke Ni (Engineering 2028)**  
 Advisor: Hersh Sagreiya  
*CT-Derived Kidney Volume: A Biomarker Defined by Clinical and Genetic Associations*
- 248. Rafael Nieto (College 2028)**  
 Advisor: Vikram Paralkar  
*Regulation of Ribosome Biogenesis by MYC in Acute Myeloid Leukemia*

- 249. Hannah Nieuwveld (College 2028)**  
**Nilla Orina (College 2027)**  
 Advisor: Gareth Roberts  
*Competing Cues in the Emergence of Animacy-Based Grammatical Gender Systems*
- 250. Dillon Nittoli (College 2026)**  
 Advisor: J. Nicholas Betley  
*A Cerebellar Memory of a Meal*
- 251. Tina Njike (College 2027)**  
 Advisor: Nathaniel Dymnt  
*Cytoskeletal-Nuclear Mechanotransduction Following Loss of Tension*
- 252. Kevin Obando (Engineering 2028)**  
 Advisor: Michael Lampson  
*Genetic and Epigenetic Mechanisms of Centromere Inheritance*
- 253. Diego Ocaranza Nuñez (Engineering 2027)**  
 Advisor: Eileen Shore  
*Mechanical Stress and Heterotopic Ossification Progression in Fibrodysplasia Ossificans Progressiva*
- 254. Jeffrey Oduman (Engineering 2028)**  
 Advisor: Daniel Feshbach  
*Extending 3D Dubins Paths for Inverse Kinematics in Origami-Inspired Arms*
- 255. Nosamudiana Omoigui (College 2028)**  
 Advisor: Dr. Laura Vella  
*Understanding the Importance of G Proteins in T Cell Activation*
- 256. Sarah Ortiz-Polanco (College 2026)**  
 Advisor: Crystal Conn  
*Translational Adaptation of Pancreatic Cancer Cells to Environmental Stress*
- 257. Amal Oubbari (Engineering 2028)**  
 Advisor: Abhisha Sawant Dessai  
*Role of LMNA in Gene Regulation*
- 258. Kate Paik (Engineering 2026)**  
 Advisor: Bomyi Lim  
*Allele Specific Quantification of Escape from X Chromosome Inactivation in Immune Cells*
- 259. Quindy Pan (College 2027)**  
 Advisor: Modupe Coker  
*Linking Oral Microbiome Composition to Gut-Derived SCFA Profiles and Neurocognitive Performance in HI and HUU Nigerian Youths*
- 260. Neel Pandula (College 2027)**  
 Advisor: Marie Guerraty  
*Characterizing the Downstream Effects of FOG2S657G on Contractility*
- 261. Amanda Pang (College 2026)**  
 Advisor: David Cormode  
*Doped Mn<sub>x</sub>O<sub>y</sub> Nanoparticle Contrast Agents for Redox-Triggered MR Imaging*
- 262. Marcell Papp (College 2027)**  
 Advisor: Andrew Rappe  
*Vacancy Formation Energies of Boron Doped Aluminum Nitride*
- 263. Michael Parella (Nursing 2028)**  
 Advisor: Emily Hartwell  
*Polygenic Risk for Substance Use and Its Associations with Comorbidities in the Penn Medicine BioBank*
- 264. April Park (College 2026)**  
 Advisor: Richard Rushmore  
*Choroid Plexus as a Potential Biomarker for Huntington's Disease*
- 265. Youbin Park (College 2026)**  
 Advisor: Jarod Zepp  
*Investigating a Secreted Protein During Lung Maturation*
- 266. Seema Parmar (College 2027)**  
 Advisor: Jennifer Ponce De Leon  
*"The Point is To Change It": Reflections on the 2025 Critical Theory Workshop*
- 267. Lily Parsels (Engineering 2028)**  
 Advisor: Aashim Bhatia  
*Neurological and Preoperative Applications of Apple Vision Pro in Pediatric Brain Tumors*
- 268. Rushil Patel (Engineering 2028)**  
 Advisor: Yuyan Cheng  
*Designing Gene Panels for High-Resolution Imaging by Xenium Analyzer*
- 269. Sheel Patel (College 2028)**  
 Advisor: Amy Kogon  
*A Data-Driven Analysis of White Coat Hypertension*
- 270. Ashna Paudel (College 2028)**  
 Advisor: Bonnie Ky  
*Comparing Cardiovascular Outcomes of Proton vs. Photon Therapy Treatments in Breast Cancer Patients*

- 271. Ian Peng (Engineering 2027)**  
 Advisor: Yuanwen Jiang  
*Implantable Bioreactor for Enhanced in vivo Extracellular Vesicle Immunotherapy*
- 272. Ysabella Perez (College 2026)**  
 Advisor: Shana Stites  
*Knowledge of Alzheimer's Disease (AD) Across Social Groups at Risk for Dementia*
- 273. Alexia Pham (College 2028)**  
 Advisor: Doris Wagner  
*Investigating the Role of EMF1 in Plant Polycomb Silencing*
- 274. Phuong Nghi Pham (Engineering 2028)**  
 Advisor: Deep Jariwala  
*The Thermal and Electrical Characterization of AlScN FeDs with AlOx Interlayers*
- 275. Allen Phuong (College 2028)**  
 Advisor: Marijana Vujkovic  
*GLP1R Signaling as a Neural Switch Governing Food vs. Smoking Preference*
- 276. Maryn Plache (Engineering 2028)**  
**Jeff Sun (College 2028)**  
 Advisor: Zahra Fakhraai  
*Investigating the Crystallization Kinetics of Acetaminophen Across Temperatures and Under Nanoconfinement*
- 277. Yash Rajpal (College, Engineering 2026)**  
 Advisor: Shu Yang  
*A Fabrication Process for Polyurethane Acrylate/PLA Microneedles for Drug Delivery*
- 278. Saket Ram (Engineering 2027)**  
 Advisor: Lukasz Bugaj  
*Using MeLTClust and ELPs as a Platform to Create Temperature-sensitive Cellular Circuits*
- 279. Norah Rami (College 2026)**  
 Advisor: Caz Batten  
*Interpreting Interpretation: Prosecuting and Identifying Treasonous Texts Under the British Raj*
- 280. Brandon Recce (College 2026)**  
 Advisor: Walter Zhang  
*Using Big Data to Measure the Impact of Economic Policy: Fracking in Texas*
- 281. Anjali Reddy (College, Engineering 2027)**  
 Advisor: Rakesh Vohra  
*Tipping the Scales: An Analysis of 'No Tax on Tips'*
- 282. Nina Rivera-Gonzalez (College 2028)**  
 Advisor: Christopher Long  
*Standardizing Higher Risk Distal Hypospadias Patients to Provide Optimal Patient Care*
- 283. Leyla Robertson (College 2027)**  
 Advisor: Edward Brodtkin  
*Social Anxiety Mediates the Effectiveness of Various Components of TUNE In: A Cognitive-Behavioral Based Social Skills Program for Autistic Adults*
- 284. Amanda Rodriguez (College 2026)**  
 Advisor: Hannah Feldman  
*Capturing the Carceral: Light, Form, and the Limits of Vision*
- 285. Jorge Rodriguez (College 2026)**  
 Advisor: Nicole Marino  
*Exploring Polypeptide-dependent mRNA Downregulation in Bacteria*
- 286. Marius Rutkowski (Engineering 2028)**  
 Advisor: Lukasz Bugaj  
*Comparing Oligomeric and Signal Motif ER Sequestration Strategies*
- 287. Mauricio Sanchez (College 2028)**  
 Advisor: Nick Betley  
*Divergent Appetite and Metabolic Outcomes of Acyl GIP Across Obesity Etiologies*
- 288. Carlos Santana (College 2027)**  
 Advisor: Dawn Mechanic-Hamilton  
*Monitoring Cognition in Patients Undergoing Anti-Amyloid Therapies with a Remote App-Based Digital Cognitive Assessment Tool*
- 289. Yosharelli Santillano-Granados (College 2028)**  
 Advisor: Kushol Gupta  
*Pank1a Expression and Ligand Behavior, Pank2 Variant Mapping*
- 290. Chiara Santoso (College 2027)**  
 Advisor: Manolis Roulis  
*Evolutionary Conservation of Fibroblast Programs Across Species via scRNA-seq*

- 291. Isabel Schickler (College 2027)**  
 Advisor: Joseph Rossano  
*Desensitization Strategies Targeting Antibodies Against Human Leukocyte Antigens in Pediatric Heart Transplant Candidates*
- 292. Khadija Seck (College 2026)**  
 Advisor: Iliana Kohler  
*Cognitive Assessment Adaptations in Low-Literacy Settings: Evidence from Longitudinal MLSFH Records*
- 293. Kai Segimoto (Engineering 2027)**  
 Advisor: Robert Radway  
*Object-Oriented Simulation of Non-Volatile Memory (NVM) Arrays with Pareto Frontiers*
- 294. Stacey Serrano (College 2028)**  
 Advisor: Christian Benitez  
*Examining the Associations Between Socioeconomic Status and Intertemporal Choice Using EEG*
- 295. Alok Shah (Engineering 2026)**  
 Advisor: Nikolai Matni  
*Rethinking the Inductive Bias of Optimization for Learning Under Distribution Shift*
- 296. Lily Shangloo (College 2027)**  
 Advisor: Kelly Sloane  
*Provider Recognition of Cognitive Impairment After Stroke*
- 297. Maria Shapson (College 2028)**  
 Advisor: Melanie Pellecchia  
*Organized CHAOS: Caregiver Coaching in Early Intervention*
- 298. Bassel Shawareb (College 2026)**  
 Advisor: Jennifer Orthmann-Murphy  
*Determining the Response of Cortical Astrocyte Layer Markers to Demyelination*
- 299. Charles Shen (College 2027)**  
 Advisor: Alice Chen-Plotkin  
*Colitis-Induced Mice Exhibit Increased Alpha-Synuclein Expression Independent of ApoA1 in a Feeding Model of Parkinson's Disease*
- 300. David Shon (College 2026)**  
 Advisor: Christoph Ellebrecht  
*Rethinking T-Cell Cytotoxicity: Effector Pathway Contributions to CAR T-Cell Function*
- 301. Hannah Shumsky (College 2026)**  
 Advisor: Shaon Sengupta  
*The Effect of the Clock in Axin2+ Cells on Lung Repair and Regeneration*
- 302. Yastika Singh (Engineering 2028)**  
 Advisor: Eric Marsh  
*Investigating AP3B2 Behavioral Phenotypes in a Mouse Model for Epileptic Encephalopathy*
- 303. Sonia Singhal (College 2028)**  
 Advisor: Mariella DeBiasi  
*Role of the Alpha 5 Receptor Subunit in Alcohol Consumption*
- 304. Abigail Smith (College 2028)**  
 Advisor: Kyla Ortved  
*Retrospective Study of Surgical Management of Carpal Bone Slab Fractures (Excluding C3) Repaired Using Lag Screw Fixation In Horses (2008-2025)*
- 305. Kayleen Smith (Engineering 2027)**  
 Advisor: Cynthia Sung  
*Liebau-Inspired Soft Swimmer Robot*
- 306. Talia Smith (College 2026)**  
 Advisor: Sunny Shin  
*The Roles of Caspases-8 and -10 in the TLR4-induced Innate Immune Response in Human Macrophages*
- 307. Cristiah Denise Somoray (College 2028)**  
 Advisor: Aman Husbands  
*Comparative Analysis of HD-ZIP III Transcription Factors in Arabidopsis thaliana and Brachypodium distachyon*
- 308. Pranav Sompalle (College 2027)**  
 Advisor: Jeanmarie Perrone  
*Validation of a Novel Deep Learning Tool in the Analysis of Clinically-obtained Wound Photographs to Classify Xylazine Wounds and Iteratively Refine Infection Likelihood*
- 309. Taejun Son (College 2028)**  
 Advisor: Vikram Paralkar  
*Impact of CEBPA Degron on rRNA Transcription Factors*

## Houston Hall 2<sup>nd</sup> Floor Lobby (Posters 310-330)

### 310. Sebastian Sookram (College 2026)

Advisor: Damaris Lorenzo  
*Cytoskeletal Regulation of Muscle Bioenergetics*

### 311. Ashley Spence (College 2028)

Advisor: Claire Mitchell  
*Effects of A2E and Blue Light Treatment on ARPE-19 Cells*

### 312. Anya Stewart (Engineering 2027)

Advisor: Andrew Richardson  
*Assessing Novel Object Recognition in Rodents Wearing a Wireless Recording Neural Prosthetic*

### 313. Ellie Suh (College 2028)

Advisor: Maria Basil  
*Effects of NOTCH Signaling on the Progenitor Function of iRASC to Differentiate into Other Airway Epithelial Cells*

### 314. Rishi Raghav Suresh (Engineering 2027)

Advisor: Victoria Fang  
*Establishing the Presence of Tertiary Lymphoid Structures in Pilonidal Sinus Disease*

### 315. Diana Taghehchian (College 2028)

**Suchi Patel (Wharton 2028)**  
Advisor: Zarina Ali  
*Project G.R.E.E.N. O.R.*

### 316. Alicia Tan (Engineering, Wharton 2028)

Advisor: Cynthia Sung  
*SALP Swimmer Directional Control Design*

### 317. Liam Tan (College 2027)

Advisor: Glenda Goodman  
*Sonic Traditions, Aural Language, and the Struggle for Understanding in Early Native American Treaty Councils*

### 318. McKenzie Tebo (Engineering 2028)

Advisor: Michelle Johnson  
*Categorization of Infants at Risk of Brain Injury through Upper Extremity Toy Interactions*

### 319. Stephen Thomas (College, Wharton 2026)

Advisor: Andrew Edmondson  
*Flow Cytometry Assessment of Repurposed Drug Treatment Efficacy in PIGN-CDG*

### 320. Dongli (Tony) Tian (College, Engineering 2027)

Advisor: Cherie Kagan  
*Post-Assembly C-ALD Graded Shelling of Quantum Dots for Optoelectronic Applications*

### 321. Luke Tong (Engineering 2027)

Advisor: Steve Zdancewicz  
*Opportunistic Parallelism for Scripting Languages*

### 322. Lionel Torres (College 2027)

Advisor: Daniel Hashimoto  
*Patient Healthcare AI Literacy and Knowledge*

### 323. Ariana Treat (College 2027)

Advisor: Andrew Santiago-Frangos  
*Identification of Regulatory DNA Sequence Motifs for Archaeal CRISPR-based Adaptive Immunity*

### 324. Clement Tsao (College 2028)

Advisor: Jacques deLisle  
*China's Use of United Nations Resolution 2758 to Promote It's One China Principle*

### 325. Mariam Tskitishvili (College 2028)

Advisor: Robyn Sanderson  
*Modeling the Kinematic Evolution of Stars in the Local Bubble over 14 Million Years*

### 326. Jason Tu (College 2027)

Advisor: Jacques deLisle  
*China's Use of "Foreign-Related Rule of Law" to Promote Its International Interests*

### 327. Sara Ugbana (College 2027)

Advisor: Allyson Mackey  
*Individual Differences in Motor Learning in Children*

### 328. Shivani Umesh (College 2028)

Advisor: Geelsu Hwang  
*Nanoparticle-Based Anti-Biofilm Therapy for Oral Health: In Vitro Analysis*

### 329. Krish Upadhyay (College 2028)

Advisor: Kathryn Davis  
*Aperiodic and Periodic Spectral Abnormalities Discriminate Epileptogenic Tissue Across Sleep Stages*

### 330. Victoria Valdivia (Engineering 2028)

Advisor: Aimin Chen  
*The Effect of Perfluorohexane Sulfonic Acid (PFHxS) and Perfluorooctanesulfonic Acid (PFOS) on Elevated Glucose Levels in Pregnant Women from the HOME Study*

## Class of '49 (Posters 331-377)

### 331. Chantal van Dongeren (Engineering 2028)

Advisor: Li Shen  
*Toward ApoE4 Modulation in Alzheimer's Disease: Generative Drug Discovery with Structure-Based Diffusion Modeling*

### 332. Ella Vance (College 2027)

Advisor: Paul Robinson  
*Seminar in Criminal Law Theory: Root Causes of Crime*

### 333. Diego Rogelio Varela Lugardo (College 2026)

Advisor: Irina Marinov  
*Silica Availability & Productivity Across the Southern Ocean Biomes*

### 334. Victor Vazquez (College 2027)

Advisor: Liang Wu  
*Second Harmonic Generation (SHG) Measurements on AgCrP<sub>2</sub>Se<sub>6</sub>*

### 335. Juan Ricardo Vázquez Gallegos (Engineering 2028)

Advisor: Riccardo Gottardi  
*Effects of Donor Age and Sex on Stemness Marker Expression of Periosteum-derived Progenitor Cells (PPCs)*

### 336. Maxim Veksler (Engineering 2028)

**Kun Kei Xiao (Engineering 2028)**  
Advisor: Marc Miskin  
*Modeling Robotaxis of Microrobots in Thermal Gradients*

### 337. Julian Velazquez (College 2027)

Advisor: Caroline Jones  
*Juvenile White-Handed Gibbons (*Hylobates lar*) Social Development*

### 338. Ella Waldman (College 2028)

Advisor: Lauren Kreeger  
*Investigating Acetylcholine Receptor Expression in Octopus Cells During Postnatal Development*

### 339. Edwynn Wang (Engineering 2028)

Advisor: Hersh Sagreiya  
*Automated Segmentation of Optic Nerve Structures in Ultrasound for Width Measurement*

### 340. Justin Wang (College 2026)

Advisor: Peter Klein  
*Targeting Leukemia Cells Through Mitophagy Inhibition with Antisense Oligonucleotides*

### 341. Lauren Wang (College 2028)

Advisor: Melanie Pellecchia  
*The Use of Qualitative Research in Studies of Caregiver Coaching for Children With Autism Spectrum Disorder*

### 342. Winnie Wang (College 2026)

**Ansh Jakatimath (College 2026)**  
Advisor: Johanna Greeson  
*The Role of Family Literary and Psychosocial Development in Female Poverty in Rural Morocco*

### 343. Zachary Wang (College 2026)

Advisor: Cheikh Babou  
*The Empire's African Rearguard: The King's African Rifles in the Late British Empire*

### 344. Avia Weber (College 2026)

Advisor: Valeriya Kamenova  
*Coding for Influence: US and China's Technology and AI Development Assistance*

### 345. Yifan Wei (College 2028)

Advisor: Eric Marsh  
*In vivo Single-Unit Recordings in a Mouse Model for Epileptic Encephalopathy*

### 346. Gabe Weng (Engineering 2028)

Advisor: Li Shen  
*Predicting ASD from Daily Activity and Light Exposure Patterns*

### 347. Dominic Willadsen (College 2026)

Advisor: Andrew Rappe  
*Passivating Surface Defects in Perovskite Quantum Dots*

### 348. Liam Wimmer (College 2028)

Advisor: Dustin Brisson  
*Tracking Parasites in Little Brown Bats: A Study in Host Health and Disease Ecology*

### 349. Kate Wong (College 2027)

Advisor: Frances Jensen  
*Complexities of Amyloid Beta Pathology, Tau Spread, and Seizure Interactions in a Tau-seeded Alzheimer's Disease Mouse Model*



**350. Milo Writer (College 2028)**

Advisor: Aaron Alexander-Bloch  
*Characterizing Neurodevelopmental Psychopathology and Brain Growth Trajectories in Neurofibromatosis Type 1*

**351. Averie Wu (College 2028)**

Advisor: Zhaolan (Joe) Zhou  
*Tracking CDKL5 Protein Localization at Subcellular Levels in the Brain*

**352. Juliet Wu (College 2027)**

Advisor: ChiaKo Hung  
*No-Strings Attached: Predictors of Unrestricted Funding in Arts and Culture Nonprofits*

**353. Megan Xie (College 2028)**

Advisor: Adam Wolpaw  
*Evaluating Changes in Expression of GD2 with Transition from Tumors to 2D and 3D Culture*

**354. Richard Xiong (College 2026)**

Advisor: Amita Sehgal  
*Investigation of the Role of Serine Endopeptidases on Sleep in Drosophila*

**355. Haocong Xu (Engineering 2028)**

Advisor: Shujie Yang  
*Tuning the Edge: Design and Optimization of a 3D-Printed Acoustic Mixer*

**356. Chloe Yan (Engineering 2028)**

Advisor: Michael Mitchell  
*Applying Machine Learning to Optimize mRNA Delivery Utilizing Lipid Nanoparticles: A Pilot Study*

**357. Zihan Yang (College 2026)**

Advisor: Dolores Albarracín  
*Seen and Judged: The Moderating Effect of Perceived Identity on the Impact of Behavioral versus Attitudinal Information*

**358. Andrew Yao (Engineering 2028)**

Advisor: Timothy Machado  
*Enhancing Orofacial Muscle Tracking with Deep Learning*

**359. Emma Yao (College 2027)**

Advisor: Syd Kreitzman  
*Spin Dynamics and Polarization Transfer from  $^8\text{Li}$  to  $^1\text{H}$  in  $\beta$ -NMR*

**360. Janelle Yeboah (College 2028)**

Advisor: Mecky Pohlschroder  
*Reticulin 1 (RTN1) Expression in Platelets: A Potential Contributor to Developmental Differences in Platelet Function*

**361. Avi Yendru (College 2028)**

Advisor: Seema Anandalwar  
*Is It Too Little Too Late? Calcium Use in Trauma Induced Hemorrhage*

**362. Alan Ying (College 2027)**

Advisor: Joseph Cichon  
*Determining Whether Psilocybin's Drug-induced Experience is Necessary for its Antidepressant-like Activity in Rodents*

**363. Daniel Yoon (College 2028)**

Advisor: Evelyn Thomson  
*Search for Stealth SUSY in Squark Pair Production With Kinematic and Event Shape Variables*

**364. Dylan York (Engineering 2027)**

Advisor: Russell Composto  
*Quantification and Visualization of Percolation in Polymer Nanocomposites using Computational Reverse-Engineering Analysis for Scattering Experiments (CREASE)*

**365. Xinkai Yu (College 2026)**

Advisor: Lyle Ungar  
*Systematic Evaluation of LLM Negotiation in Simulated Real-World Scenario*

**366. Yue Yu (College 2028)**

Advisor: Jun (Jay) Zhu  
*Quorum Sensing Signals Drive Interspecies Dynamics in Dysbiotic Microbiomes*

**367. Shirley Yuan (College 2027)**

Advisor: Kenneth Margulies  
*Contractile Function in Engineered Heart Tissues*

**368. Albert Zeng (College 2028)**

Advisor: Dylan Small  
*The Effects of Blast Exposure on Veteran Mortarmen*

**369. Hei Yu (Maggie) Zeng (College 2028)**

Advisor: David Fischer  
*Neuron-Specific Enolase is Predictive of Cerebral Recovery in Post-Cardiac Arrest Disorders of Consciousness: A RECOVER Cohort Study*

**370. Alicia Zhang (College 2027)**

Advisor: Sarah Tishkoff

*Investigating Tanning Response Across African Populations: Genetic and Non-genetic Analyses of Melanin Index Differences*

**371. Lyuxin Zhang (College, Engineering 2026)**

Advisor: Eric Wong

*Transformers Learn Mixture-of Experts Regression In Context*

**372. Yi Lu Zheng (Engineering 2028)**

Advisor: Cynthia Sung

*Active Buoyancy Unit for Soft Underwater Swimmer*

**373. Zinnia Zheng (College 2028)**

Advisor: Letícia Marteleto

*Gendered Vulnerability: Zika, COVID-19, and Domestic Violence in Pernambuco*

**374. Kevin Zhou (College 2026)**

Advisor: Michael C. Milone

*Evaluating the Effect of CD3 $\zeta$  ITAMs on Tonic Signaling of SS1-28 $\zeta$  CAR-T Cells*

**375. Zihao Zhou (Engineering 2026)**

Advisor: George Park

*Linear Analysis of Temporal Stability in Parallel Shear Flows*

**376. Grace Zhu (College 2027)**

Advisor: Yi Xing

*Characterizing Subtype-specific Alternative Splicing Events in Pediatric High-Grade Gliomas*

**377. Selina Zou (Engineering 2027)**

Advisor: Samantha McBride

*Optimizing Subsampling Methods for Microplastic Analysis*