

July 23, 3:00-7:00pm, Lerner Hall Auditorium

CUPP SYMPOSIUM

PROFESSIONAL DEVELOPMENT • ADMISSIONS FAIR • POSTER PRESENTATIONS

PROGRAM AT A GLANCE

PROFESSIONAL DEVELOPMENT SESSIONS

Receive guidance from Columbia Admission Officers regarding the application procedures for Undergraduate and Graduate School:

College Admissions Session (for High School Students)

3:00-4:30pm | Room 555 (5th Floor) | With Sarah Campbell, Undergraduate Admissions and Financial Aid, Columbia Colleg & Columbia Engineering

Graduate Admissions Workshop (for Undergrad Students)

3:30-4:30pm | Room Satow (5th Floor) | With Jenny Choy, Graduate Admissions, Columbia Fu Foundation School of Engineering and Applied Science

PROFESSIONAL HEADSHOTS

4:30-7:00pm | North Lobby (1st Floor)

Take a professional headshot to elevate your CV and LinkedIn profile. Join the virtual queue at bit.ly/2024HeadshotsSignUp and you'll be notified via text message when it's your turn to show up in the North Lobby.

MINI ADMISSIONS FAIR

5:00-7:00pm | Lerner Hall Auditorium (1st Floor)

Meet with Admission Officers from Columbia University's Undergraduate and Graduate Schools, as well as from Columbia University Irving Medical Center.

See participating Columbia Schools on p. 2.

POSTER PRESENTATIONS

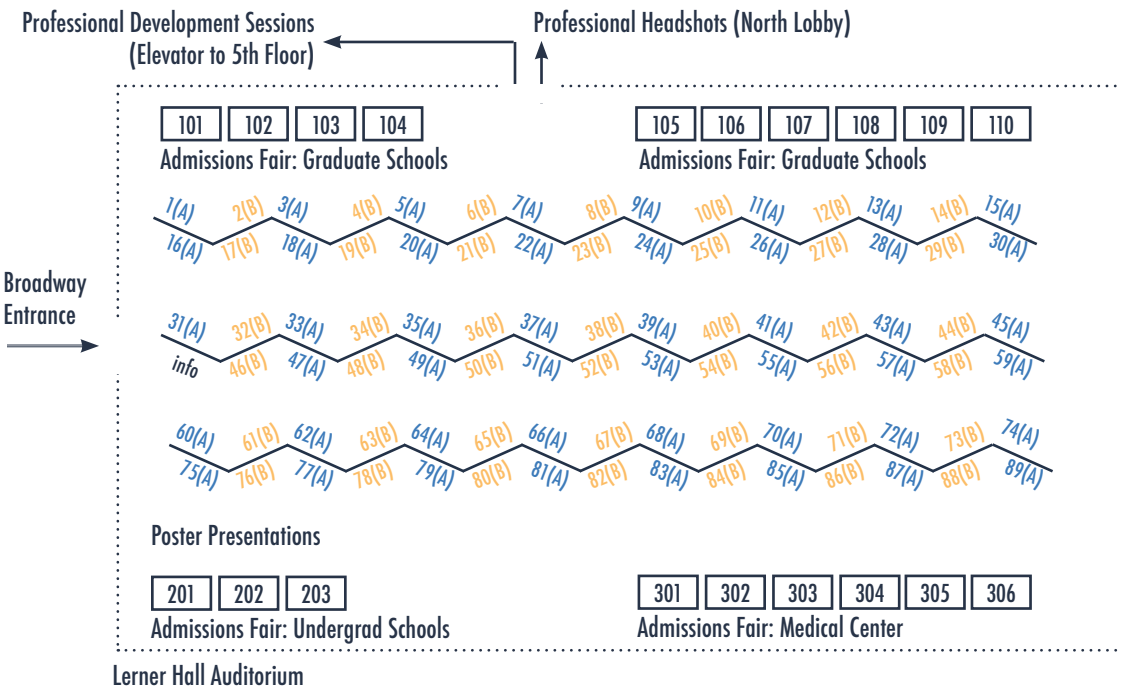
5:00-7:00pm | Lerner Hall Auditorium (1st Floor)

GROUP A: presenting 5:00-6:00pm | Lerner Hall Auditorium

GROUP B: presenting 6:00-7:00pm | Lerner Hall Auditorium

Discover insights from CUPP Scholars on their research at Columbia University. See presenting scholars and Pathways Programs on pp. 2-5.

MAP



MINI ADMISSIONS FAIR

Lerner Hall Auditorium | 5:00-7:00pm

Meet with admission officers from Columbia University's Undergraduate and Graduate Schools, as well as from Columbia University Irving Medical Center.

GRADUATE SCHOOLS

101 · Columbia Business School
102 · Columbia Graduate School of Arts and Sciences
103 · Columbia Law School
104 · Columbia School of International and Public Affairs
105 · Teachers College
106 · Columbia School of Professional Studies
107 · Columbia Climate School
108 · Columbia School of Social Work
109 · Columbia Journalism School
110 · Columbia Engineering

UNDERGRADUATE SCHOOLS

201 · Barnard College
202 · Columbia Undergraduate Admissions
203 · Columbia University School of General Studies

COLUMBIA UNIVERSITY IRVING MEDICAL CENTER

301 · Mailman School of Public Health
302 · Columbia School of Nursing
303 · Columbia Vagelos College of Physicians and Surgeons
304 · Programs in Occupational Therapy at Vagelos College
305 · Programs in Physical Therapy at Vagelos College
306 · Columbia College of Dental Medicine

POSTER PRESENTATIONS

Lerner Hall Auditorium | 5:00-7:00pm

Discover Insights from CUPP Scholars on their Research at Columbia University

GROUP A: presenting 5:00-6:00pm

GROUP B: presenting 6:00-7:00pm

PRESENTING SCHOLARS

1(A) · **Theophilus Acheampong** · SPURS · 5-6pm

Molecular Mechanisms of Cardiac Complications Associated with COVID-19

2(B) · **Patrick Ajayi** · SPURS · 6-7pm

Exploring Glial Cell Roles in Intracerebral Hemorrhage: Insights from an Inducible Mouse Model

3(A) · **Patrizia Lynnel Alpapara** · SPURS · 5-6pm

Comparing Smo Inhibition and Kras Inhibition in Pancreatic Cancer

4(B) · **Audrey Anigbo** · SPURS · 6-7pm

Automated Gait and Pose Analysis for Motor Phenotype Characterization in Parkinson's Mouse Models

5(A) · **Joselyn Auquilla** · SPURS · 5-6pm

Exploring the Opinion of NYCHA Residents on the Smoke-Free Housing Policy and its Connection to Smoking Products in New York City Housing Developments

6(B) · **Leah Berhanu** · SPURS · 6-7pm

Investigating Age-Delaying Benefits of Time Restricted Feeding in Drosophila Melanogaster

7(A) · **Dexter Chow** · SPURS · 5-6pm

Hacking the Protein Degradative Pathways to Distinctively Modulate Ion Channel Functional Expression

8(B) · **Somarr Elliott** · SPURS · 6-7pm

Exploration of the Impact of Seizures on Sleep Architecture in Mice Models

9(A) · **Soah Franklin** · SPURS · 5-6pm

Ultrastructural Diversity of Extracellular Vesicles in Human Biofluids Vary by Sample Type

10(B) · **Fatima Gbla** · SPURS · 6-7pm

Trafficking Regulation of Cav1.2 Channel by Targeted Deubiquitination

11(A) · **Seseel Gergis** · SPURS · 5-6pm

Developing Nanobody Modulators for Neuronal Sodium Channels

12(B) · **Meley Haile** · SPURS · 6-7pm

Expression of Molecular Markers of Touch Throughout the Spinal Cord

13(A) · **Brian Havens** · SPURS · 5-6pm

*Profiling the Effect of Macrophage-*IKK2* KO in Efferocytic Thymic Macrophages in a Dexamethasone Thymus Model*

14(B) · **Megan Hickey** · SPURS · 6-7pm

Development of SARS-CoV-2 Specific B Cell Responses in Pediatric Tonsil Tissue

15(A) · **Kemka Ihemelandu** · SPURS · 5-6pm

Evaluating Machine Learning Models for Early Prediction of Endometriosis

16(A) · **Hannah Kerbyson** · SPURS · 5-6pm

Delineating Cancer Associated Fibroblasts Roles in Initiation and Progression of Esophageal Adenocarcinoma

17(B) · **Shaharia Khan** · SPURS · 6-7pm

Decoding Neural Dynamics in Mice Behavior Tasks Using Fiber Photometry

- 18(A)** · Jayden Lai · SPURS · 5-6pm
FCAR, FCRL3, and IL6R Levels in Serum of Pediatric IgAN and HSP Patients
- 19(B)** · Christian Lee · SPURS · 6-7pm
BACH2 Super-enhancer Hypermutation in the Pathogenesis of Diffuse Large B Cell Lymphoma
- 20(A)** · Selene Lin · SPURS · 5-6pm
pTDP-43 Phenotypical Differences in ALS Patient Brain Tissue
- 21(B)** · Lindy Lin · SPURS · 6-7pm
Effects of Exercise-induced Lactate in Hypothalamic POM-C Neuron Activation
- 22(A)** · Naoroz Mahmood · SPURS · 5-6pm
Investigation of the Neuronal Expression of SHH Coreceptors and Regulators in Vitro
- 23(B)** · Angel Brianna Martinez · SPURS · 6-7pm
Optimizing CRISPR-based Tools to Alter Methylation Levels in Mammalian Cell DNA
- 24(A)** · Helen Osunsanya · SPURS · 5-6pm
Greenspace Quality, Biodiversity, and Cognition: Influence of Local Plant Biodiversity on Memory and Cognition
- 25(B)** · Xavier Pina · SPURS · 6-7pm
Mechanosensory Basis of Chemical Defense Systems in Inquiline Rove Beetle Myrmecophiles
- 26(A)** · Margaret Pozo · SPURS · 5-6pm
Developing a Computational Method for Detecting Skin Pattern Change in Dwarf Cuttlefish
- 27(B)** · Lindsay Pramono · SPURS · 6-7pm
Opposing Roles of Notch 1 and Notch 2 In Metabolic Dysfunction-Associated Steatotic Liver Disease
- 28(A)** · Ana Ramos De Jesus · SPURS · 5-6pm
Elucidating the Role of Autophagic Dysfunction in a Knock-in Model of Huntington's Disease
- 29(B)** · Richard Ren · SPURS · 6-7pm
Treating Human Natural Killer Cells with An α -Mannosidase I Inhibitor Increases Phosphorylation of CD3 ζ and SYK in Response to Fc Receptor Ligation
- 30(A)** · Adama Sowe · SPURS · 5-6pm
Developing Split-Venus Tau Constructs to Examine Effects of Glucocorticoid on Tau aggregation in Alzheimer's Pathology
- 31(A)** · Susan Takang · SPURS · 5-6pm
Examining Intrinsic and Extrinsic Factors on Hematopoietic Stem Cell Aging
- 32(B)** · Claire Thayer · SPURS · 6-7pm
Investigating the Role of Secreted Frizzled-Related Protein 1 in Lung Development
- 33(A)** · Kale Tornwini · SPURS · 5-6pm
Examining the Role of GPR6 in Dopamine Dependent Striatal Synaptic Plasticity
- 34(B)** · Andrew Tran · SPURS · 6-7pm
Expression and Purification of WW4-HECT (Nedd4-2) and HECT-Targeting Nanobody
- 35(A)** · Madison Williams · SPURS · 5-6pm
Pipeline for High Resolution Imaging of Human Parainfluenza Surface Glycoproteins
- 36(B)** · Gonzalo Gutierrez · SPURS · 6-7pm
Engineering of Yeast Based Biosensors for 2,4-Dinitrotoluene Detection
- 37(A)** · Chiara Chanoi · Bridge to the PhD · 5-6pm
Deadly Force in Historical Perspective
- 38(B)** · Lisa Disalvo · Bridge to the PhD · 6-7pm
Weaving the Future: Innovations in Computational Fabrics for Enhanced Wearable Health
- 39(A)** · Lisa Disalvo · Bridge to the PhD · 5-6pm
Virtual Time Capsules: Preserving Community Stories with Augmented Reality
- 40(B)** · Mohammed Haque · Bridge to the PhD · 6-7pm
HTS Strain Optimization for the Columbia Stellarator eXperiment
- 41(A)** · Alex Montenegro · Bridge to the PhD · 5-6pm
Language Use in Major Depression: Analyzing Negative Autobiographical Memories Using LIWC-22
- 42(B)** · Shradha Ravikumar · Bridge to the PhD · 6-7pm
Microstructures of Binary Ice-Salt Systems Relevant to Ocean Worlds
- 43(A)** · Briana Robles · Bridge to the PhD · 5-6pm
Does Inhibiting Mitochondrial Motility Reduce Mitochondrial Biogenesis in Neurons in Vivo?
- 44(B)** · Michael Rodriguez · Bridge to the PhD · 6-7pm
Comparing the Halo Model Prediction for the Projected-fields kSZ Estimator with Websky Simulations
- 45(A)** · Eden Shaveet · Bridge to the PhD · 5-6pm
Using Social Media to Detect Foodborne Illness in New York City: Insights from Yelp Reviews and Short-Form Video Platforms
- 46(B)** · Anthony Ayala · YES in THE HEIGHTS · 6-7pm
Modulation of Hydrophobic Modification of Hyaluronic Acid-Based Hydrogels for Immunotherapeutic Delivery

- 47(A)** · **Lorraine Benn** · YES in THE HEIGHTS · 5-6pm
Gynecological Cancer Disparities Across NYC Zip Codes
- 48(B)** · **Kaila Fernandez** · YES in THE HEIGHTS · 6-7pm
An Aspect of Data Collection: Experience with Organizing Data from the EpiRbMx Study
- 49(A)** · **Raven Herring** · YES in THE HEIGHTS · 5-6pm
Underrepresentation of Black Women in Breast Cancer Research: The Case of Mammographic Density and Molecular Subtypes
- 50(B)** · **Nia Jenkins** · YES in THE HEIGHTS · 6-7pm
A Systematic Review of the Association Between the Measures of Structural Racism and Cervical Cancer Diagnosis and Treatment Across the Cancer Continuum Among Women Within the United States
- 51(A)** · **Ngozi Obi** · YES in THE HEIGHTS · 5-6pm
Structural Racism in Cervical Cancer Care: A Systematic Review of the Impact on Screening, Diagnosis, Treatment, and Survivorship Outcomes
- 52(B)** · **Daniella Uvaldo** · YES in THE HEIGHTS · 6-7pm
Using Cell-derived Nanovesicle Hydrogels as a Cancer Vaccine in Melanoma
- 53(A)** · **Sangam Bhati** · ACCOMPLISHED · 5-6pm
Concussions: Underlying Mechanisms and Their Effects on Different Body Systems
- 54(B)** · **Grace Haderaj** · ACCOMPLISHED · 6-7pm
The Impact of Multiple Sclerosis on Physical and Mental Health
- 55(A)** · **Victor Lai** · ACCOMPLISHED · 5-6pm
The Effects of Sleep Deprivation on Performance
- 56(B)** · **Abigail O'Connor & Jamie O'Connor** · ACCOMPLISHED · 6-7pm
Combating the Lack of Menstrual Health Information and Period Poverty
- 57(A)** · **Chloe Tan** · ACCOMPLISHED · 5-6pm
Prevalence, Risk Factors, and Possible Solutions to the Teen Vaping Crisis
- 58(B)** · **Dmitry Vysotskiy** · ACCOMPLISHED · 6-7pm
Heartful Harmony: An Art Centered Approach for Improvement of the Overall Well-Being
- 59(A)** · **XinRui Zhang** · ACCOMPLISHED · 5-6pm
Mental Health Awareness: A Health Liaison Intervention
- 60(A)** · **Alina Wang & Kathy Chen** · CSUREMM · 5-6pm
Predicting M&A Success in the US Retail Industry Based on Financial Metrics
- 61(B)** · **Claire Qu & Jacqueline Lyu** · CSUREMM · 6-7pm
Predicting M&A Success in the US Retail Industry Based on Stock Performance
- 62(A)** · **Elizabeth Casey & Alexandra Ehlinger** · CSUREMM · 5-6pm
Unemployment: How Consumer Expectations May Affect Vulnerable Workers
- 63(B)** · **Ruimian Zheng & Alena Chan** · CSUREMM · 6-7pm
Controlling Your Attitude is What Gets You To the Stars: Development of an Attitude Determination and Control System for CubeSats via Extended Kalman Filter
- 64(A)** · **Sandra Zelen, Kathy Xu, & Caroline Smyth** · CSUREMM · 5-6pm
Exploring the Influence of Subway Station Centrality on Public High School Performance in Manhattan
- 65(B)** · **Shiva Yeshlur, Amy X. Chen & Connie Pineda** · CSUREMM · 6-7pm
Developing a Superblock Model for Manhattan
- 66(A)** · **Tim Barron, Jarrett Reimers, & Andrew Yoo** · CSUREMM · 5-6pm
A Mathematical Model for Citi Bike's Rebalancing Crisis
- 67(B)** · **Milena Harned, Pranav Konda, Felix Liu, Nikhil Mudumbi, Eric Shao & Tony Xiao** · CMUSR · 6-7pm
Khovanov Homology and Quantum Error-Correcting Code
- 68(A)** · **Kay-La Blair** · E.E. Just Scholars · 5-6pm
Investigating the Impact of DNA Ligase on C-Circle Formation
- 69(B)** · **Maya-Jean Hilaire** · E.E. Just Scholars · 6-7pm
Early Childhood Growth After Pre-Pregnancy Metabolic and Bariatric Surgery
- 70(A)** · **Jordan Jackson** · E.E. Just Scholars · 5-6pm
Adhesion G Protein-coupled Receptor Latrophilin-3 (ADGRL3) Modulation of Dopaminergic Neurotransmission
- 71(B)** · **Jabari Mobley** · E.E. Just Scholars · 6-7pm
The Effect of Olfactory Fear Conditioning on the Main Olfactory Epithelium in Mice
- 72(A)** · **Layla Seaton** · E.E. Just Scholars · 5-6pm
Identification of CD36 and CD44 as Novel Surface Markers for Stress Reticulocytes
- 73(B)** · **Kiara Smith** · E.E. Just Scholars · 6-7pm
Expression of Disease-Causing Mutations in Drosophila Insulin Receptor DNA using 293FT cells
- 74(A)** · **William Manriquez** · LEAP NSF-REU · 5-6pm
Understanding and Modeling the Impact of Air-Sea Heterogeneity on Surface Fluxes

- 75(A)** · **Amie Choe** · IICD SRP · 5-6pm
Optimizing Reference Cluster Mapping in Cross-Species Analysis Using Single-Cell Graph Convolutional Networks
- 76(B)** · **Sophie Gardiner** · IICD SRP · 6-7pm
Fluctuating Fitness in Heterogeneous Environments: Birth-Death and Death-Birth Models in Structured Populations
- 77(A)** · **Chenjishi Lin** · IICD SRP · 5-6pm
Establishing Cell Type Matching Equivalence in Reference Cluster Mapping through Transfer Learning
- 78(B)** · **Jun Lin** · IICD SRP · 6-7pm
Identifying Gene Combinations that Influence Epithelial to Mesenchymal Transition Using an Inducible Cas12a Knockout Screen
- 79(A)** · **Dassi Mayerfeld** · IICD SRP · 5-6pm
Comparing Accuracy of Optimal Transport and Machine Learning Methods for Reference Cluster Mapping in Cross-Species Analysis
- 80(B)** · **Abdullah Naqvi** · IICD SRP · 6-7pm
Genetically Engineering Antigen and Immune-Matched Patient-Derived Glioblastoma Neurospheres
- 81(A)** · **Yash Patel** · IICD SRP · 5-6pm
Gene Regulatory Network Inference Utilizing Transformers and Autoencoders
- 82(B)** · **Vanessa Rivas** · IICD SRP · 6-7pm
Understanding Heterogeneity in Large Transcriptomic Datasets using a Deep Generative Model
- 83(A)** · **Elliott Seo** · IICD SRP · 5-6pm
Decoding Tumor Evolution History from Mutational Data
- 84(B)** · **Kyle Tsai** · IICD SRP · 6-7pm
The Effects of Cumulative Mutations on Selection and Heterogeneity in the Structured Moran Process
- 85(A)** · **Eesha Alladin** · GSAS SRP · 5-6pm
Dynamics of Histone Post-translational Modification in Squamous Differentiation and Tumorigenesis
- 86(B)** · **Amanda Lopez** · GSAS SRP · 6-7pm
Upregulating Protein Production in Haploinsufficiency by Inhibiting 3' UTR Degradation
- 87(A)** · **Arwa Mehra** · GSAS SRP · 5-6pm
Betta Beginnings: A Developmental Atlas
- 88(B)** · **Sid Varmn** · GSAS SRP · 6-7pm
Role of Serotonergic Modulation of GABAergic Signaling in the Dorsolateral Periaqueductal Gray: Implications for Fear Response and Anxiety Disorders
- 89(A)** · **Ashley Nguyen** · LEAP NSF-REU · 5-6pm
Emulating Lagrangian Ice Crystal Evolution in Cirrus Clouds Using Machine Learning

PRESENTING COLUMBIA UNIVERSITY PATHWAYS PROGRAMS

- SPURS** · Summer Program for Undergraduate Rising Stars | Posters **1(A)** to **36(B)**
- Bridge to the PhD** · Bridge to the PhD Program in STEM | Posters **37(A)** to **45(A)**
- YES in THE HEIGHTS** · Youth Enjoy Science: Training in Health Equity, Highlighting Environmental Inequities, & Growing Neighborhood Teachers and Students | Posters **46(B)** to **52(B)**
- ACCOMPLISHED** · Adolescents Caring for Community by Promoting Literacy on Insurance, Stroke, Health Education, Emergencies, and Dementia | Posters **53(A)** to **59(A)**
- CSUREMM** · Columbia Summer Undergraduate Research Experiences in Mathematical Modeling | Posters **60(A)** to **66(A)**
- CMUSR** · Columbia Math Undergraduate Summer Research | Poster **67(B)**
- E.E. Just Scholars** · Ernest E. Just Biomedical Research Scholars | Posters **68(A)** to **73(B)**
- LEAP NSF-REU** · Learning the Earth with Artificial Intelligence and Physics Summer REU Program | Posters **74(A)** & **89(A)**
- IICD SRP** · Irving Institute for Cancer Dynamics Summer Research Program for Undergraduates | Posters **75(A)** to **84(B)**
- GSAS SRP** · Graduate School of Arts and Sciences Leadership Alliance Summer Research Program | Posters **85(A)** to **88(B)**

STAY IN TOUCH



Columbia University Pathways Programs

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