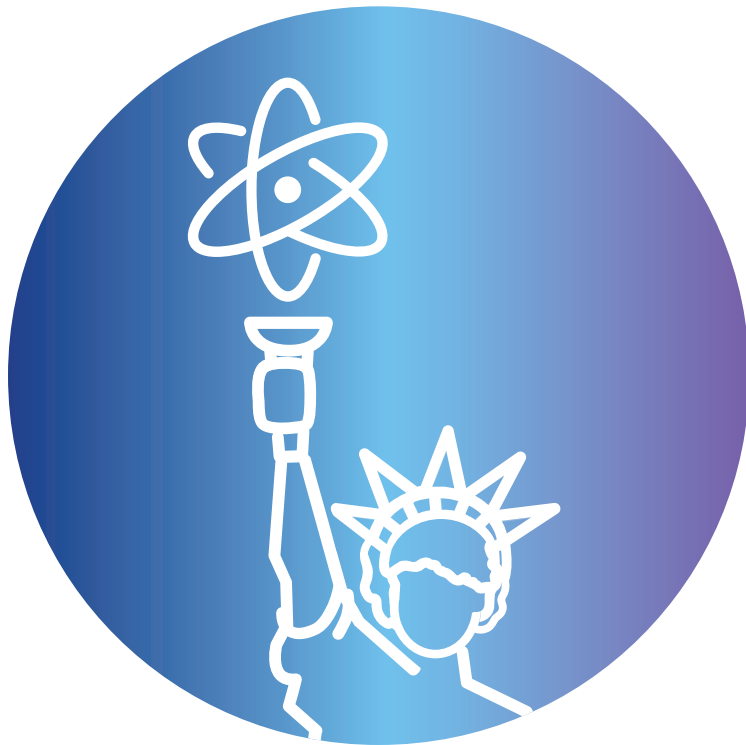


APS Conference for Undergraduate Women in Physics



JANUARY 12-14TH, 2018

NEW YORK, NEW YORK

HOSTED BY

BARNARD COLLEGE, PHYSICS

CITY COLLEGE OF NEW YORK, PHYSICS

COLUMBIA UNIVERSITY, PHYSICS AND ASTRONOMY



Table of contents

Table of contents	1
Resources	2
Schedule – overview	3
Schedule – detailed	
Friday, January 12 th	4
Saturday, January 13 th	6
Sunday, January 14 th	11
Map of conference	16
Map of Columbia and Barnard campuses	17
Map of City College of New York (CCNY) campus	18
History of physics in New York City	19
Conference sponsors	20
Local organizing committee	20

BARNARD

The City College of New York

 **COLUMBIA UNIVERSITY**
IN THE CITY OF NEW YORK

#cuwipnyc



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Resources

CUWiP website: <https://cuwip-nyc.github.io/#>

CUWiP email: cuwipnyc@gmail.com

CUWiP phone (emergencies only): (646) 926-4230

Help desks

Help desks for CUWiP attendees are located at Columbia, Barnard, and CCNY. The locations and hours they will be staffed are below.

Columbia: Theory Center, 8th floor, Pupin Hall

Friday, January 12th 1:30 pm – 7:00 pm

Sunday, January 14th 8:00 am – 2:30 pm

Barnard: Lobby of the Event Oval, Diana Center

Saturday, January 13th 8:00 am – 1:00 pm

CCNY: Lobby of Steinman Hall

Saturday, January 13th 2:00 pm – 6:00 pm

Quiet rooms

Quiet rooms for all to use are available at each campus during the time conference events are taking place there.

Columbia: Rabi Room, Theory Center, 8th floor, Pupin Hall

Barnard: 514, Altschul Hall

CCNY: 2M-5, 2nd floor, Steinman Hall

Conference schedule – overview

Time	Event	Campus	Location
Friday			
2:00 – 6:00	Check-in	Columbia	Theory Center, Pupin
3:30 – 5:30	Coffee & snacks	Columbia	Carleton Commons, Mudd
4:00 – 6:00	Lab tours	Columbia	Various – see detailed schedule
6:00 – 6:15	Welcome address	Columbia	301, Pupin
6:15 – 7:00	Plenary 1: Nadya Mason	Columbia	301, Pupin
7:30 – 9:00	Dinner	-	Harlem Tavern
9:00 – 10:00	Ice-breakers	Columbia	Theory Center, Pupin
Saturday			
8:00 – 8:30	Breakfast	Barnard	Lobby of Event Oval, Diana Center
8:30 – 9:30	Breakout sessions 1	Barnard	Various – see detailed schedule
9:30 – 10:45	Networking and Graduate Program Fair & coffee break	Barnard	Event Oval, Diana Center
11:00 – 12:00	Breakout sessions 2	Barnard	Various – see detailed schedule
12:00 – 1:00	Lunch	Barnard	Event Oval, Diana Center
2:00 – 3:30	CUWiP plenary: Patricia Burchat	CCNY	Steinman Lecture Hall
3:30 – 4:00	Group photo	CCNY	See detailed schedule
4:00 – 5:00	Lab tours & coffee break	CCNY	Various – see detailed schedule
5:00 – 6:00	Panel Session	CCNY	Steinman Lecture Hall
6:00 – 6:30	Networking & mocktails	CCNY	Faculty Dining Room
6:30 – 8:00	Dinner & conference dinner speaker: Myriam Sarachik	CCNY	Faculty Dining Room
8:00 – 10:00	Activities	-	Various – see detailed schedule
Sunday			
8:30 – 9:00	Breakfast	Columbia	Carleton Commons, Mudd
9:00 – 9:45	Plenary 2: Kelle Cruz	Columbia	301, Pupin
9:45 – 11:00	Parallel student talks	Columbia	Various – see detailed schedule
11:00 – 12:00	Poster fair & coffee break	Columbia	Carleton Commons, Mudd
12:00 – 12:30	Closing & awards ceremony	Columbia	301, Pupin
12:30 – 1:30	Lunch	Columbia	Carleton Commons, Mudd

Schedule: Friday, January 12th

Check-in

2:00 – 6:00 pm

Theory Center, 8th floor, Pupin Hall, Columbia University

If you would like to participate in ice-skating or the movie on Saturday night, you must sign up at check-in.

Coffee & snacks

3:30 – 5:30 pm

Carleton Commons, Mudd Building, Columbia University

Lab tours

Tour 1: 4:00 – 5:00 pm

Tour 2: 5:00 – 6:00 pm

Each of the tours below will be conducted during the times for tour 1 and 2.

Astrophysics tour

Meeting spot: Groups 1,2,3 – Pupin Theory Center

1. Particle astrophysics: direct dark matter detection using liquid Xenon, lab led by Prof. Elena April
2. Experimental cosmology, lab led by Prof. Bradley Johnson
3. Galaxy formation and evolution, lab led by Prof. David Schiminovich

Condensed Matter (CM) & Atomic, Molecular, and Optical (AMO) tour

Meeting spot: Groups 1,3 – Northwest Corner Building Lobby (inside main entrance), Group 2 – Pupin Lobby (inside main entrance)

1. AMO: ultracold molecules, lab led by Prof. Tanya Zelevinsky
2. CM: atomic-resolution structural and electronic information of quantum materials, lab led by Prof. Abhay Pasupathy
3. CM and mechanical engineering: novel materials for a wide range of multidisciplinary efforts, lab led by Profs. Cory Dean and Jim Hone

Applied Physics & Biophysics tour

Meeting spot: Groups 1,2 – Carleton Commons, Mudd, Group 3 – Pupin Lobby (inside main entrance)

1. Biophysics: imaging and modeling biology at physical extremes, lab led by Prof. Ozgur Sahin
2. Plasma physics and fusion lab
3. Solid state: light-matter interaction in the subwavelength scale and implications for solid-state devices, lab led by Professor Nafang Yu

Welcome address

6:00 – 6:15 pm

301, Pupin Hall, Columbia University

Plenary talk 1: Nadya Mason, Professor of Physics, University of Illinois at Urbana-Champaign

6:15 – 7:00 pm

301, Pupin Hall, Columbia University

Introduced and moderated by Georgia Karagiorgi (Assistant professor, Columbia Physics)

Title: Life in the Academy: Trying to Make a Difference while Balancing Research, Teaching, Outreach and Family

Abstract: In this talk I will discuss my experiences as a condensed matter physicist. In addition to discussing my research, I will talk about my diversity advocacy, share challenges and opportunities for balancing life in the academy, and discuss the special challenges faced by women and minorities.

Speaker biography: Professor Nadya Mason received her bachelor's degree in physics from Harvard University in 1995 and received her doctorate in physics in 2001 from Stanford University, working in the group of Aharon Kapitulnik. Her thesis research was on phase transitions in two-dimensional superconductors.

Prior to joining the physics faculty at Illinois, Professor Mason was a Junior Fellow in the Society of Fellows at Harvard University, where she collaborated with Professors Charles Marcus and Michael Tinkham on projects related to both carbon nanotubes and nanostructured superconductors.

Professor Mason's research at Illinois focuses on how electrons behave in low-dimensional, correlated materials, where enhanced interactions are expected to give novel results. The research is relevant to a variety of technologies, including quantum communication, information storage, and qubit control in quantum computers.

Travel to dinner

7:00 – 7:30 pm

Dinner at Harlem Tavern

7:30 – 9:00 pm

2153 Frederick Douglas Boulevard (West 116th St)

Trivia & board games

9:00 – 10:00 pm

Theory Center, 8th floor, Pupin Hall, Columbia University

Schedule: Saturday, January 13th

Breakfast

8:00 – 8:30 am

Lobby of Event Oval, Lower Level, Diana Center, Barnard College

Breakout sessions

Session 1: 8:30 – 9:30 am

Session 2: 11:00 am – 12:00 pm

Each of the 6 breakout sessions will be held during session 1 and 2.

Undergraduate research

LL104, Diana Center, Barnard College

Faculty who run undergraduate research programs at Columbia, CCNY, and Barnard will tell you what they look for in students and how to succeed in a lab. Undergraduates currently working in labs will also be on the panel to share their experiences.

Moderated by Zsuzsa Marka (Research scientist, Columbia Physics)

Panelists

- Marilyn Gunner (Professor, CCNY Physics)
- Georgia Karagiorgi (Assistant professor, Columbia Physics)
- Briley Lynn Lewis (Undergraduate, Columbia Astronomy)
- Reshmi Mukherjee (Professor, Barnard Physics & Astronomy)
- Abigail Murphy (Undergraduate student, CCNY Physics)

Underrepresented in STEM

203, Diana Center, Barnard College

Hear from people across a wide spectrum of identities about their experiences in academia, programs and groups designed to support underrepresented groups, and more.

Moderated by Laura Kay (Professor & Chair, Barnard College Physics & Astronomy)

Panelists

- Mel Abler (Ph.D. student, Columbia Applied Physics)
- Cassidy Lundy (BRIDGE student, Columbia Biological sciences)
- Moiya McTier (Ph.D. student, Columbia Astronomy.)
- Kwame Osei-Sarfo (Director, BRIDGE to Ph.D. Program, Columbia)

Navigating professional spaces

501, Diana Center, Barnard College

Learn how to network and navigate professional spaces, including the world of academia. You will be guided through leadership development activities and given tips on how to find a mentor.

Moderated by Jaki Noronha- Hostler (Assistant professor, Physics, Rutgers Univ.)

Panelists

- Celia P. Lloyd (Assistant Vice President for CUNYfirst Integration)

Graduate school and fellowship applications

504, Diana Center, Barnard College

Hear from a panel of faculty and graduate students who have served on admissions committees, recently applied to graduate school, and/or won fellowships. The session will open with a brief introduction by each panelists followed by a moderated panel discussion. In the second half, the panel will open for questions.

Moderated by David Helfand (Professor & Chair, Columbia Astronomy)

Panelists

- Susan Clark (Postdoc, Institute of Advanced Study)
- Brian Cole (Professor, Columbia Physics)
- Elizabeth Culbertson (Ph.D student, Columbia Applied physics)
- Mary Putman (Professor, Columbia Astronomy)
- Deivid Riberio (Ph.D. student, Columbia Physics)

Mental wellness

502, Diana Center, Barnard College

What to do when your brain lies to you? In this workshop we present a research based understanding of the causes of mental stress and how to deal with them. We talk about stereotype-threat, imposter syndrome, self-care, and share our personal stories about mental health in academia and beyond. You will learn about resources and do activities that allow you to prioritize and take care of your mental health.

Moderated by Huda Qureshi (BRIDGE student, Columbia Applied physics)

Panelists

- Summer Ash (Director of Outreach, Columbia Astronomy)
- Anne Goldfield (Associate Director of Outreach, Columbia Counseling and Psychological Health)

Careers tangential to physics

LL103, Diana Center, Barnard College

Hear from women with undergraduate or graduate physics degrees about how they pivoted the skills they learned in school to work in industries including finance, consulting, data science, education, and more. Each panelist will give a brief introduction to their background and current work, with the rest of the time open for your questions.

Moderated by Shannon Greco (Science Education Program Leader, Princeton Plasma Physics Laboratory)

Panelists

- Sarah Campbell (Data scientist, Amazon)
- Greg Kaldor (Managing Director, Bank of America)
- Rodanthy Tzani (Supervision risk analytics manager, Federal Reserve Bank)
- Eliana Ward-Lev (Business analyst, McKinsey & Company)
- Stephanie Wortel-London (Director of education, New York Academy of Sciences)

Networking & Graduate Program Fair

Coffee & snacks

9:30 – 10:45 am

Event Oval, Lower Level, Diana Center, Barnard College

Companies with representatives at the fair include the American Association of Physics Teachers, Bank of America, Brookhaven National Laboratory, D. E. Shaw Research, Google, IBM, Life-Sci NYC, and OC&C Strategy Consultants

Physics and astronomy graduate programs with representatives present include those from Boston University, Brown, Columbia, City University of New York Graduate Center, Drexel, Harvard, NYU Tandon School of Engineering, Princeton, Rutgers, Southern Connecticut State, and Yale.

Lunch & topic tables

12:00 – 1:00 pm

Event Oval, Lower Level, Diana Center, Barnard College

There are lunch tables devoted to discussions on the topics listed below.

- **Applying skills acquired in physics to other fields**
 - Hosted by Emma Jablonski (Software Developer, D.E. Shaw research)
- **Astronomy/astrophysics as a career path**
 - Hosted by Mary Putman (Professor, Columbia Astronomy)
- **Exoplanets and Data Science**
 - Hosted by Ruth Angus (Postdoc, Columbia Astronomy)
- **Modeling the Universe**
 - Hosted by Tjitske Starkenburg (Postdoc, Center for Computational Astrophysics) and Greg Bryan (Professor, Columbia Astronomy)
- **Atomic, molecular and optical (AMO) physics**
 - Hosted by Stan Kondov (Postdoc, Columbia Physics)
- **Going from physics to the mathematical and computational sciences**
 - Hosted by Kyle Mandli (Professor, Columbia Applied Physics and Applied Mathematics)
- **How to give a compelling physics talk**
 - Hosted by David Helfand (Professor and Chair, Columbia Astronomy)
- **Using physics in the financial industry**
 - Hosted by Greg Kaldor (Managing Director, Global Equities, Bank of America) and Chidinma Iwueke (Associate, Global Research, Bank of America)
- **A physics career in industry**
 - Hosted by Kathryn Guarini (Vice President, IBM Research) and Heike Riel (IBM Fellow, IBM Research)
- **Alternatives Careers for STEM majors: work at National Labs**
 - Hosted by Vivian Stojanoff (Physicist, Brookhaven National Lab)
- **Strategies for thriving as a person-of-color in physics**
 - Hosted by Moiya McTier (Graduate Student, Columbia Astronomy)
- **LGBTQIA+ in physics**
 - Hosted by Mel Ablor (Graduate Student, Columbia APAM) and Charlotte Olsen (Graduate Student, Rutgers)
- **First generation & low income college students**
 - Hosted by Kirsten Blancato (Graduate Student, Columbia Astronomy)
- **Strategies that increase sense of belonging and confidence in low-diversity fields**
 - Hosted by Susan Meabh Kelly (Research Associate, NASA Goddard Institute for Space Studies)
- **Work life balance**
 - Hosted by Jacquelyn Noronha-Hostler (Assistant Professor, Rutgers Physics)
- **Graduate student life**
 - Hosted by Catie Raney (Graduate student, Rutgers)

Travel to CCNY

1:00 – 2:00 pm

Buses leave from Broadway and W. 119th St.

CUWiP Plenary talk: Patricia Burchat, Gabilan Professor of Physics, Stanford University

2:00 – 3:30 pm

Steinman Lecture Hall, CCNY

Introduced and moderated by Laura Kay (Professor & Chair, Barnard College Physics & Astronomy)

Speaker biography: Patricia Burchat's research focuses on studies of the Universe at both the smallest and the largest scales, to probe two questions: What is the Universe made of? What are the laws of physics that govern the constituents of the Universe? She has held a number of leadership positions in experiments at accelerators that probe the elementary particles and the fundamental interactions. She is now part of a large international team of scientists preparing for analysis of data from the Large Synoptic Survey Telescope, which will provide the most extensive census of the Universe to date. She and her collaborators will use these data to investigate the nature of dark matter and dark energy, and the cosmological evolution of the Universe.

Patricia Burchat is a "first-gen" high school graduate. She received her Bachelors degree in Engineering Science at University of Toronto in 1981, and her PhD in Physics from Stanford in 1986. She was a postdoc and faculty member at UC Santa Cruz before returning to Stanford as a faculty member in 1995. At Stanford, she has served as Chair of the Physics Department and has been very active in introducing research-based pedagogy in the teaching of physics. She has received the Dean's Award for Distinguished Teaching and the Walter J. Gores Award for excellence in teaching, and was elected as Fellow of the American Association for the Advancement of Science and the American Physical Society. Patricia Burchat has played a leading role in the growth of the APS Conferences for Undergraduate Women in Physics.

Group photo for all CUWiP attendees

3:30 – 4:00 pm

Convent Avenue at 139th Street, CCNY

(bad weather: Lobby of Steinman Hall)

Tours & coffee break

4:00 – 5:00 pm

There are 4 parallel events during this time period.

With a major investment of more than a quarter billion dollars from the State of New York, two new science research buildings have recently come on line at CCNY – the CCNY Center for Discovery and Innovation (CDI) for CCNY's science research programs and the Advanced Science Research Center (ASRC) at the Graduate Center of CUNY. The following tours are available:

1. Physics research laboratories tour

Meeting spot: CUWiP Help Desk in Lobby of Steinman Hall

The physics research laboratories in the new CCNY-CDI Science Building, including quantum metrology, nanophotonics, biophysics, low-temperature physics, MBE facilities, and more

2. NanoFabrication facility tour

Meeting spot: CUWiP Help Desk in Lobby of Steinman Hall

The 5,000-square-foot NanoFabrication Facility for the design and fabrication of a wide range of micro and nanostructures in the ASRC building.

STEP UP for Women

Location: Steinman Lecture Hall, CCNY

Led by Miranda Bard (American Physical Society), Katuscia Cassemiro (American Physical Society), Catherine Garland (Uncommon Charter High School)

While nearly $\frac{1}{2}$ of the students taking physics in high school are women, only $\frac{1}{5}$ of the students interested in physics majors in college are women. How can you help to change this pattern? Physics education researchers have developed two high school physics class lessons that have been shown to increase the interest of high school women in physics careers. Join us to learn about this exciting program to help high school teachers encourage women to pursue physics careers and how you can help change the way high school students view their future in physics. Learn more at stepup4women.org.

Coffee

Location: Lobby of Steinman Hall

Panel: Careers in physics

5:00 – 6:00 pm

Steinman Lecture Hall, CCNY

Moderated by Andrea Derdzinski (Ph.D student, Columbia Astronomy)

Panelists

- Catherine Garland (Physics and engineering teacher, Uncommon Charter High School)
- Jehanne Gillo (Director of the Facilities and Project Management Division, Office of Nuclear Physics, US Department of Energy.)
- Clara Moskowitz (Senior Editor, Scientific American)
- Rachel Rosen (Assistant Professor, Columbia Physics)
- Theanne Schiros (Assistant Professor, Science and Mathematics, FIT and Research Scientist, Columbia MRSEC)

Networking & mocktails

6:00 – 6:30 pm

Faculty Dining Room, North Academic Center, CCNY

Dinner

6:30 – 8:00 pm

Faculty Dining Room, North Academic Center, CCNY

Conference dinner speaker: Myriam Sarachik, Distinguished Professor of Physics, CCNY

Speaker biography: Myriam Sarachik's experiments at low temperatures have covered many topics, including: superconductivity, disordered metallic alloys, metal-insulator transitions in doped semiconductors, hopping transport in solids, properties of strongly interacting electrons in two dimensions, and spin dynamics in molecular magnets. She received the 1995 New York City Mayor's Award for Excellence in Science and Technology, a 2004 Sloan Public Service Award, the 2005 Buckley Prize in Condensed Matter Physics, was named the 2005 LOREAL-UNESCO for Women in Science North American Laureate and received an honorary degree from Amherst College in 2006. She is a member of the National Academy of Sciences, a Fellow of the American Academy of Arts and Sciences, a Fellow of the American Physical Society, a Fellow of the New York Academy of Sciences, and a Fellow of the American Association for the Advancement of Science. She served as President of the American Physical Society in 2003.

Activities

8:00 – 10:00 pm

Planetarium

Meeting point: Foyer of Faculty Dining Room, North Academic Center, CCNY

Retro planetarium show

Ice-skating

Lasker Rink in Central Park, enter at W. 110th St and Malcom X Blvd

Movie at AMC Magic Johnson Theater

2309 Frederick Douglass Blvd (W. 125th St)

Schedule: Sunday, January 14th

Breakfast

8:30 – 9:00 am

Carleton Commons, Mudd Building, Columbia University

If you are presenting a poster later in the day, please hang the poster in your designated spot during this time.

Plenary talk 2: Kelle Cruz, Assistant Professor of Physics & Astronomy, Hunter College

9:00 – 9:45 am

301, Pupin Hall, Columbia University

Introduced and moderated by Summer Ash (Director of Outreach, Columbia Astronomy)

Title: My methodical approach to finding professional success and personal happiness

Abstract: I would like to share with you the methods that I have used to identify my dream job as an academic scientist and to guide my personal and professional choices. I will present this framework in a way which individuals could potentially adapt to their own situation and life goals. The framework is adaptable for all career paths and it just so happens that in my case, being a professor was the best solution given my constraints. I will further describe some of the philosophies which have helped me to find both success and happiness as a woman in a patriarchal profession.

Speaker biography: Professor Kelle Cruz is an Associate Professor of Physics and Astronomy at the Hunter College and a Research Associate at the American Museum of Natural History (AMNH). Her research focuses on the observational study of very low mass stars and brown dwarfs. She uses space- and ground- based telescopes and large surveys to identify age indicators in these objects.

She has mentored numerous undergraduate women who have continued in academic science, three of whom were awarded NSF graduate research fellowships.

She received both her Bachelors and PhD from the University of Pennsylvania, where she was an NSF Graduate Research Fellow. Prior to joining the Hunter faculty, she was an NSF Astronomy and Astrophysics Postdoctoral Fellow at AMNH and a Spitzer Postdoctoral Fellow at Caltech.

She is passionate about open science practices and resource sharing among scientists. She is the founder and Editor-in-Chief of the AstroBetter blog and wiki and serves on the Coordination Committee of the Astropy Project, the core software suite for Astronomy in the Python programming language.

She is currently serving on the Board of the American Astronomical Society. Prior to being elected to the Board, she served as the Chair of the Committee on Employment from 2010-2017. She also recently started ScienceBetter Consulting, a small business dedicated to serving the needs of the scientific community.

Parallel student talks

9:45 – 11:00 am

The abstracts are available in the abstract book included in the welcome packet or online at <https://cuwip-nyc.github.io/events/#studentTalks>. The talks in each session are listed below.

Session 1: Particle Physics

Location: 424, Pupin Hall, Columbia University

1. Esha Rao, “An Investigation of the Measurement of Jet Shape Dependence on Jet Mass using Pythia”
2. Rebecca Kowalski, “Research with the CMS Experiment at the Large Hadron Collider”
3. Bernadette Haig, “Diagnostic Evaluation of NuMI Hadron Monitor Ion Chambers”
4. Maine Christos, “Studying the Quark Gluon Plasma Through RpA Analysis”

Session 2: Biophysics

Location: 325, Pupin Hall, Columbia University

1. Hannah Ford, “Place Fields to Grid Fields: A Model of Firing Fields Associated With Spatial Navigation”
2. Kimberlyn Bailey, “Decline of long-range temporal correlations during sustained wakefulness in the human brain”
3. Marissa Vaccarelli, “Improving Current Models of Prosthetic Hands Using Three Dimensional Printing”
4. Julia Zeh, “Humpback Whale (*Megaptera novaeangliae*) Song and Non-Song Social Calls in the New York Bight”

Session 3: Applied Physics

Location: 313, Pupin Hall, Columbia University

1. Alexis Mulski, “Microhexcavity Plasma Panel Detectors”
2. Christina Migliore, “Properties of large amplitude Alfvén waves in a magnetized, order-unity β laboratory plasma”
3. Gabrielle Roberts, “GKP Codes and Quantum Error Correction”
4. Nasim Mirzajani, “Spectroscopic Investigation of Tunneling Mediated Proton Transfer”

Session 4: Astronomy

Location: 414, Pupin Hall, Columbia University

1. Anna Coerver, “DA 495: An Aging Pulsar Wind Nebula with Possible TeV Gamma Ray Counterpart”
2. Katherine Melbourne, “Exploring the Effect of Stellar Magnetic Activity on Exoplanet Detection”
3. Valerie Avendano, “Magneto-Optical Materials for Faraday Isolators in Future Gravitational-Wave Detectors”
4. Michele Henkel, “Simulating Pulsar Signals to Search for Low-Frequency Gravitational Waves”

Session 5: Astronomy & Space Physics

Location: 307, Pupin Hall, Columbia University

1. Darci Collins, “Near Infrared Observations of the Solar Atmosphere”
2. Shifra Mandel, “The High-Energy X-ray Spectra of Two Recently Discovered X-ray Transients in the Galactic Center”

3. Anastasia Spiridonova, "Sources of systematic uncertainties in Spectral Energy Distribution fitting: stellar libraries and metallicity."
4. Grace Genszler, "Numerical Analysis of Periodic Motion of Electrodynamic Tethered Dumbbell Satellite Systems"

Session 6: Condensed Matter

Location: 224, Pupin Hall, Columbia University

1. Morgan Daly, "Monte Carlo Simulations of Topological Magnetic Materials"
2. Klea Dhimitri, "High – Temperature Superconductivity of NbTi"
3. Julia Wei, "The Synthesis and Characterization of SnTe Nanowires"
4. Amara Jaeger, "Infrared Nano-Optics of Quantum Materials"

Session 7: Condensed Matter

Location: 222, Pupin Hall, Columbia University

1. Sara Anjum, "Investigating the electric characteristics of graphene electro-optical modulators"
2. Jingjing Pan, "Topological photonics"
3. Lindsay Gray, "Characterization of Indium Tin Oxide (ITO) PET Films for the Development of an Image Quality Tool (IQT)"
4. Olivia Long, "Charge State Readout of Nitrogen Vacancy Centers in Diamond"

Poster session & coffee

11:00 am – 12:00 pm

Location: Carleton Commons, Mudd Building, Columbia University

The poster abstracts are available in the abstract book included in the welcome packet or online at <https://cuwip-nyc.github.io/events/#studentTalks>. The poster titles and authors are printed below.

1. Maxwell Rosen, "An information-theoretic approach to study fluid-structure interactions"
2. Kaylyn Holmes, "Implementation of a Feedback System for a Parity-Time (PT) Symmetric Pair of Musical Strings"
3. Amanda Prescott, "Vertical Axis Wind Turbine Generator Subsystem"
4. Mayumy Cordova Lozano, "Joining of Low-module Thermoplastics for Dental Implants"
5. Isabelle Bunge, "Constructing a Noise Eater"
6. Camille Liotine, "Analysis of Quasi-Axisymmetric Stellarator Model Performance"
7. Samuel McClung, "Study of the Performance of Coupled Micro-Optic Laser Gyroscopes"
8. Rachel Blow, "Study of sound resonance in a cylindrical cavity"
9. Tamia Williams, "Characterizing the Role of Arts Education on the Physics Identity of Black People"
10. Sofia Mvokany, "Quantum dots in 2-D TMDC materials"
11. Rahma Leil, "Comparing the stability of blue light emitting materials"
12. Brian Chen, "Ion and Mass Transport Characterization of (Poly(MM-co-PFSA)) for Electrochemical Energy Conversion"
13. Amber Storey, "How Does Polymer Structure Affect Fragility?"
14. Maria Patrone, "Exoplanet and Kepler Object of Interest Research at Bridgewater State University"
15. Snigdha Sethuram, "Evaluating half-mass & half-light radii of galaxies at various redshift to understand cosmological mergers"
16. Juliette Stecenko, "Analyzing the Clustering of Lyman Alpha Emitting Galaxies at $z=3.1$ "

17. Lita de la Cruz, “Gravitational wave memory from core-collapse supernovae”
18. Sidney Gonzalez, “Examining Joy’s Law”
19. Syeda Nasim, “Grinding Down Stars and Stellar Remnants Into Accretion Disks”
20. Danielle Rowland, “Exploring Satellite Galaxy Rotation Curves in the SAGA Survey”
21. Nicole Hess, “Common Proper Motion on observed KOI Binary Stars”
22. Cady van Assendelft, “Development of microfluidic attractor masses to test gravity at micron distances”
23. Osase Omoruyi, “Inferring the Astrophysical Population of Binary Black Holes from their Mass Distribution”
24. Isabella Trierweiler, “Shaping the solar system through planetesimal collisions”
25. Cierra Coughlin, “Electromagnetic Counterparts of Advanced LIGO Binary Black Hole Merger Events”
26. Melissa Schmitzv, “Competing Ideas in Quantum Measurement: The Search for a Perfect “Theory of Everything””
27. Lige (Caroline) Zhang, “ProtoDUNE beam simulation and reconstruction, beam data handling”
28. Michelle Baird, “ADVACT Detector Analysis”
29. Aisling Power, “Investigating the Mechanical Response to Stress in Coronary Arteries”
30. Milena Chakraverti-Wuerthwein, “Neural Dynamics of Food and Hunger in *C. elegans*”

Closing remarks & award ceremony

12:00 – 12:30 pm

301, Pupin Hall, Columbia University

Award for undergraduate research – poster (3)

Award for undergraduate research – talk (3)

Lunch

12:30 – 1:30 pm

Carleton Commons, Mudd Building, Columbia University

Boxed lunches will be available.

End of conference

Conference map



APS CUWiP at NYC 2018 Conference Map



Hotels

- ① Aloft Hotel
- ② Newton Hotel

Conference Buildings

Columbia University Campus

- ③ Pupin Hall
- ④ Carleton Commons, Mudd

Barnard College Campus

- ⑤ Diana Center

City College Campus

- ⑥ Steinman Hall
- ⑦ NAC - Faculty Dining Room

Events

- ⑧ Harlem Tavern
- ⑨ Laser Rink
- ⑩ AMC Theatre

Subway

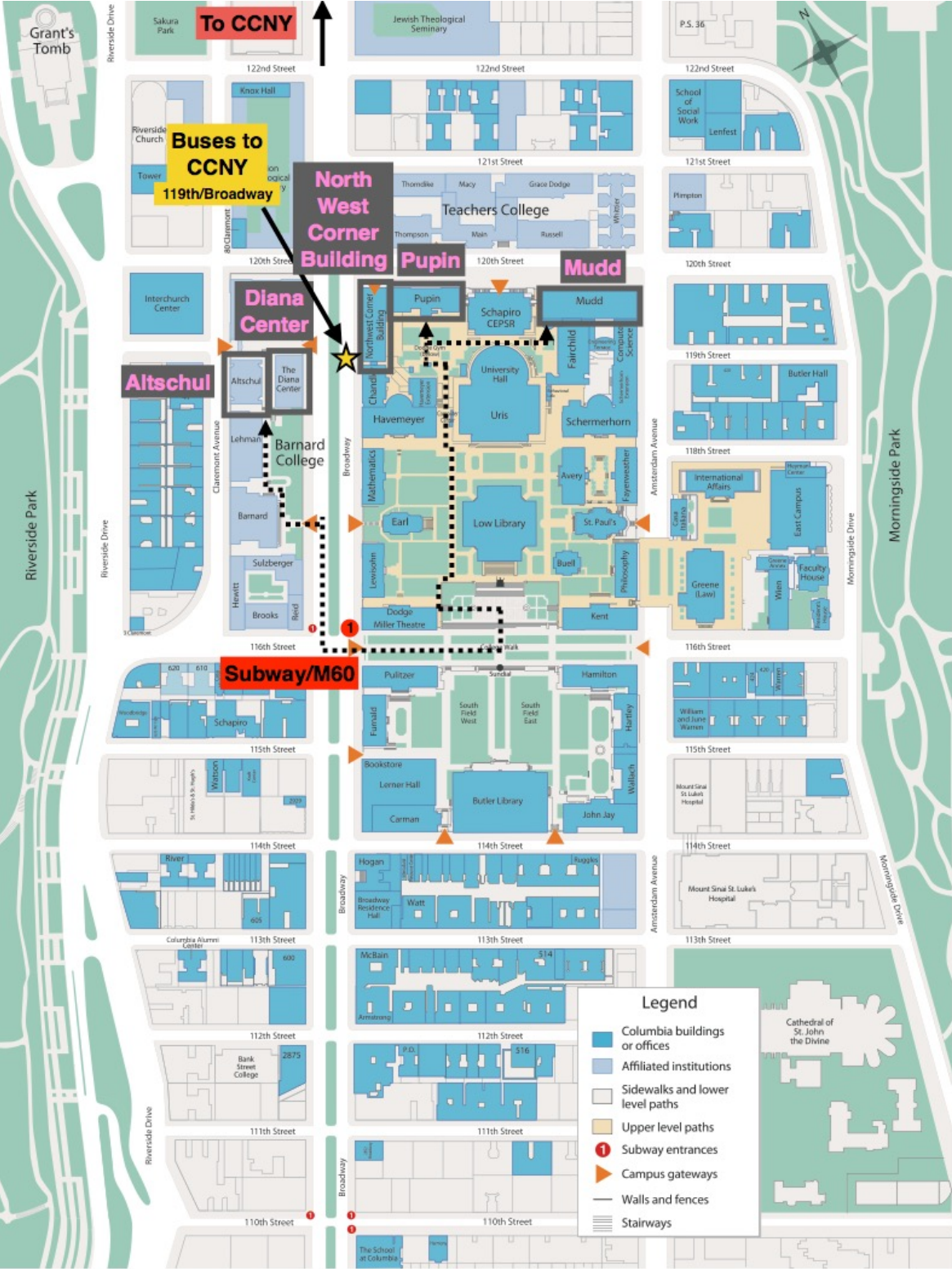
M Subway Stations

The 1 train

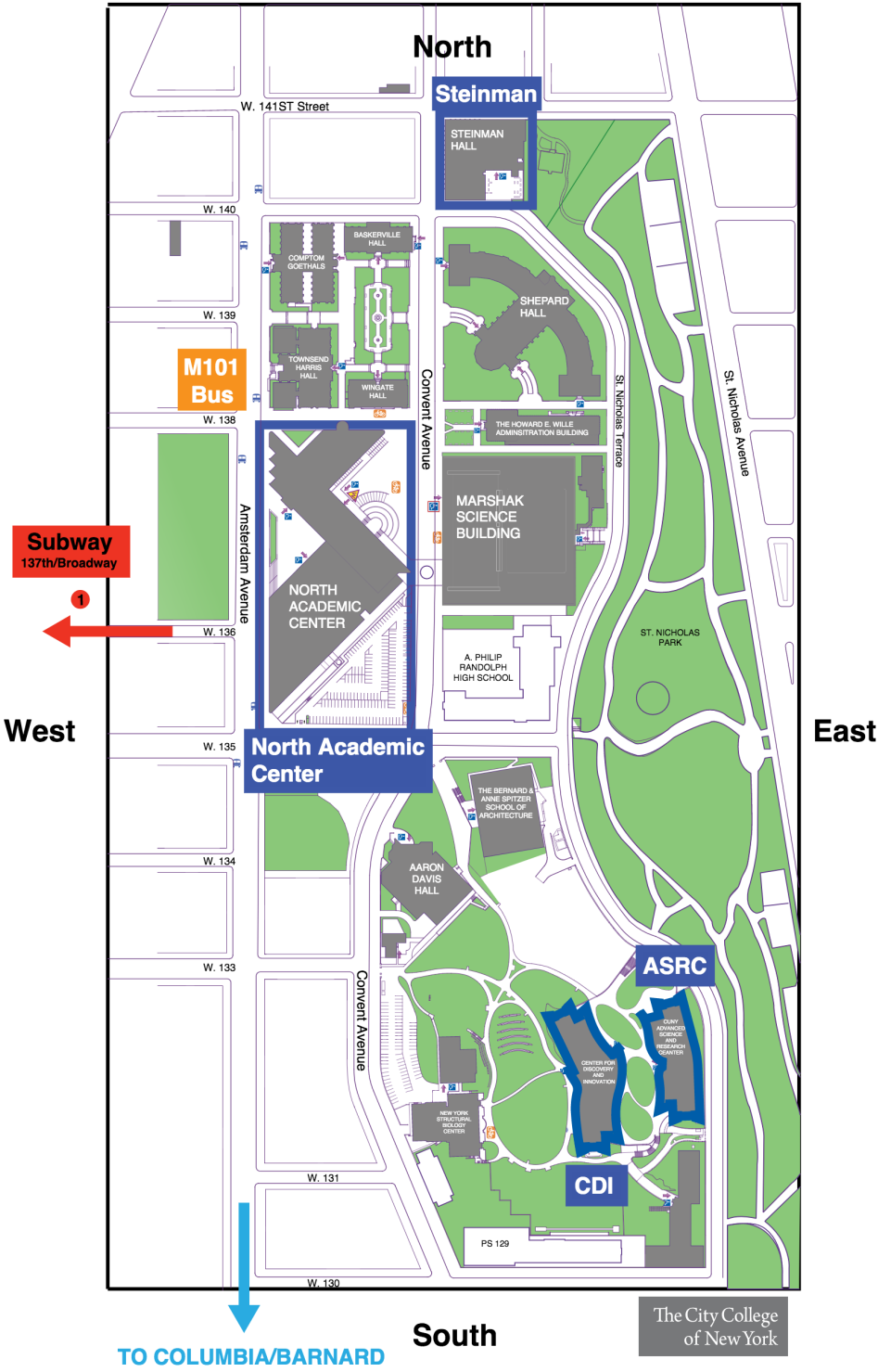
The IND Sixth Avenue Line

The IND Eight Avenue Line

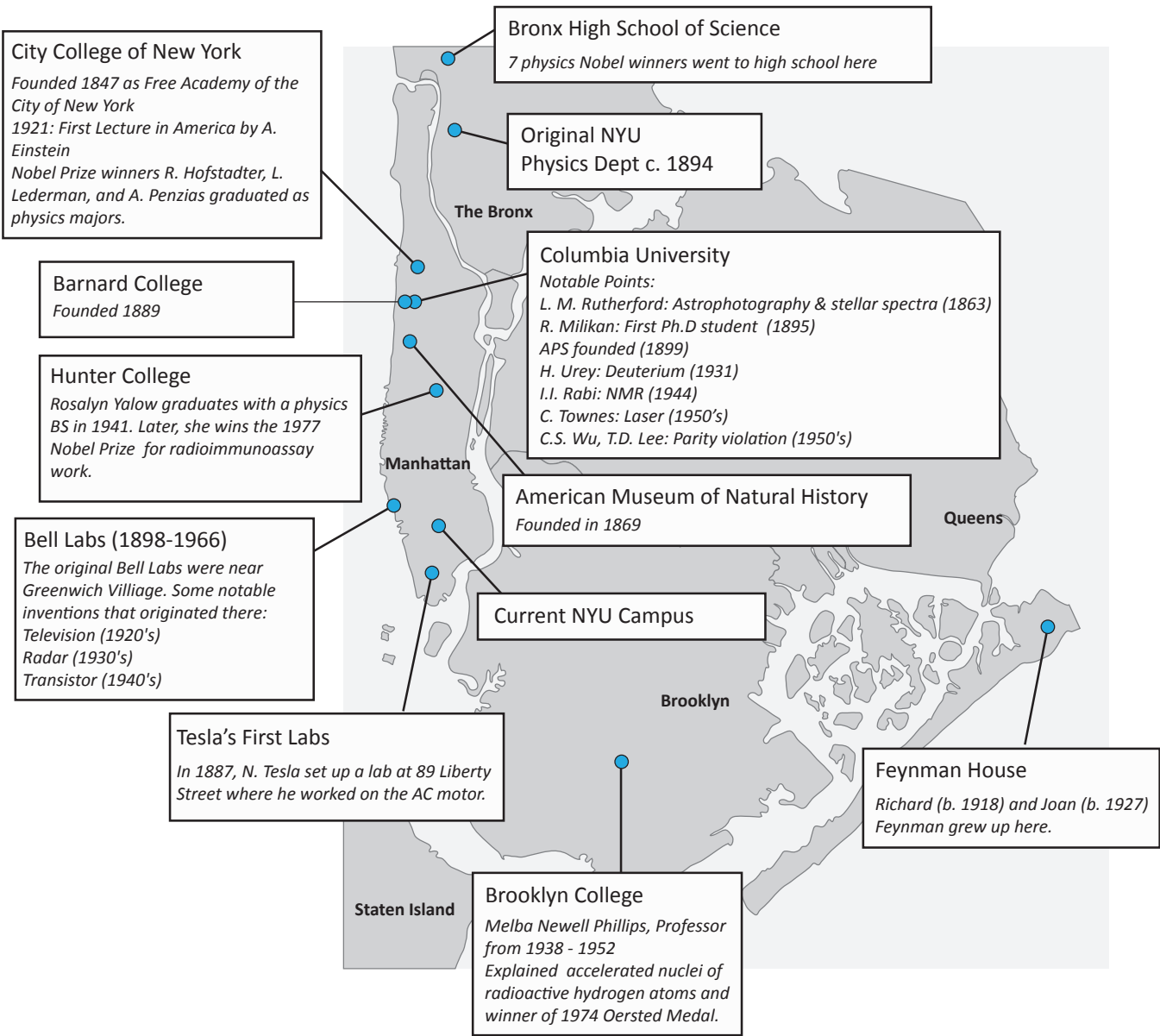
Map: Columbia and Barnard campuses



Map: CCNY campus



History of physics in NYC



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