

AIP | CENTER FOR THE HISTORY OF PHYSICS

Global Science, Global Technology, Global Impacts

A Conference for Graduate Students and Early-Career Scholars

College Park, MD, 30 March - 1 April

Organizing Committee:

Lisa Ruth Rand, University of Pennsylvania

Indianara Silva, Universidade Estadual de Feira de Santana, Brazil

Gabriel Henderson, Michigan State University

Christian Joas, Ludwig-Maximilians University of Munich

Thiago Hartz, Niels Bohr Archive

Conference planning supported by:

The Center for History of Physics (American Institute of Physics)

International Commission for the History of Physics

History of Science Society Physical Sciences Forum

H-Net (H-PhysicalSciences and H-SciMedTech)

Joint Atlantic Seminar in the History of the Physical Sciences (JASHOPS)

Philadelphia Area Center for the History of Science

Saturday, March 29 : BBQ for conference presenters, chairs, commentators, organizers

Sunday, March 30

7:00am – 8:00am Breakfast at the Marriott Greenbelt (for those who stayed Saturday night!) / shuttle service to AIP

12:00am – 12:50 pm Lunch at AIP / shuttle service to AIP

12:50pm – 1:00am Official Welcome to Conference

SESSION 1: BIG DATA, BIG SCIENCE
Chair: Lisa Ruth Rand, University of Pennsylvania

1:00- 2:00 pm **Elena Aronova**, Max Planck Institute for the History of Science
Following the Data: Archives of Big Science and the Promise of Big Data, 1950s-1970s

2:00- 2:15pm Coffee and Tea Break

SESSION 2: COLD WAR TECHNOLOGIES
Chair: Olival Freire Jr., Universidade Federal da Bahia

2:15- 2:45pm **Climério Paulo da Silva Neto**, Universidade Federal da Bahia / University of British Columbia
Cold War Converging Scientific Traditions: the Invention of the Maser

2:45- 3:15pm **Layne Karafantis**, John Hopkins University
Refining Command and Control Systems through Field Experiments

3:15-3:45pm **Daniel Volmar**, Harvard University
The World is My Antenna: Cold War Radio Physics and the Consolidation of Strategic Communications in the United States

3:45-4:10pm **Discussion** (Commentator: **Joan Bromberg**, Johns Hopkins University)

4:10-4:25pm Coffee and Tea Break

SESSION 3: NEGOTIATING GLOBAL SCIENCE
Chair: Joseph D. Martin, Colby College

4:25- 4:55pm **Abel Streefland**, Leiden University

Putting a Lid on Knowledge. The Dutch Ultracentrifuge Program Made Secret

4:55- 5:25pm

Lif Lund Jacobsen, Rigsarkivet (The Danish National Archives)
International Cooperation in Seismological Research during the Cold War: The Case of Danish Seismologist Inge Lehmann

5:25- 5:55pm

Stuart Butler, University of Manchester
In or Out of Europe? British Collaboration in Space Research 1959-73

5:55- 6:20pm

Discussion (Commentator: **Richard Staley**, University of Cambridge)

6:30pm

Dinner – at Chef’s Secret, Greenbelt MD (Thai restaurant)

Monday, March 31

7:00- 8:00am

Breakfast at the Mariott Greenbelt (Ivy Lane) / Shuttle Service to AIP

SESSION 4: NUCLEAR DREAMS

Chair: Christian Joas, Ludwig-Maximilians University of Munich

8:30- 9:30am

Alex Wellerstein, Center for History of Physics, American Institute of Physics
Clean, limitless, classified: Laser fusion in the turbulent 1970s

9:30-9:45pm

Coffee and Tea Break

SESSION 5: QUANTUM THEORY IN CONTEXT

Chair: Thiago Hartz, Niels Bohr Archive

9:45- 10:15am

Virgile Besson, Universidade Federal da Bahia / University of Lyon
The Causal Interpretation of Quantum Mechanics: How Ideological, Scientific and Institutional Factors Can Explain the Emergence of a Marginal Program of Research in France during the 1950s

10:15-10:45am

Jean-Phillipe Martinez, University Paris Diderot
"Does Quantum Mechanics contradict Materialism?" Vladimir Fock and the Soviet Reception of Quantum Theory

10:45-11:00am

Coffee and Tea Break

11:00-11:30am

Jose G. Perillan, Vassar College
Quantum Mythologies of Marginalization

11:30-12:00pm

Blai Pié i Valls, University of Barcelona
International science in Europe: Paul Ehrenfest's case

12:00-12:25pm

Discussion (Commentator: **Alexei Kojevnikov**, University of British Columbia)

12:25- 1:30pm

Lunch at ACP Lunch Room

SESSION 6: ATMOSPHERIC SCIENCE
Chair: Gabriel Henderson, Michigan State University

1:30- 2:00pm

Blair Stein, University of Oklahoma
Trans Canada Air Lines, The Canadair North Star, and the Cultural Nordicity of All- Weather Technologies, 1946-1953

2:00- 2:30pm

Milena Wazeck, British Academy / Royal Society Newton International Fellow
Linearity: The Emergence of a Controversial Issue in 1980s Air Pollution Research

2:30- 3:00pm

Thorleif Aass Kristiansen, University of Bergen
The Introduction of Numerical Meteorology to Norway

3:00- 3:25pm

Discussion (Commentator: **Kristine Harper**, Florida State University)

3:25- 3:45pm

Coffee and Tea Break

3:45- 4:15pm

Tour of Niels Bohr Library & Archives

4:30- 6:00pm

Free time

6:00- 7:00pm

Reception/Dinner in ACP Rotunda

TRIMBLE LECTURE

7:00pm – 9:00 pm (or longer)

Richard Staley, University of Cambridge
“The Guiding Hand of History”: Ernst Mach on the Past and Future of Physics

Tuesday, April 1

7:00am – 8:00am

Breakfast at the Hilton Garden Inn / shuttle service to AIP

SESSION 7: DISCIPLINARY BOUNDARIES

Chair: Indianara Silva, Universidade Estadual de Feira de Santana

8:30- 9:00am

Leyla Mariane Joaquim, Universidade Federal da Bahia
From Physics to Biology: Physicists in the Search for Biological Explanations

9:00- 9:30am

Jeremy Steeger, University of Notre Dame
The United States Synthetic Chemical Industry's Impact on Physical Chemical Research

9:30- 9:45am

Coffee and Tea Break

9:45- 10:15am

Alexandre Bagdonas, Universidade de São Paulo / University of British Columbia
Cosmological Speculations Versus Empiricist Temper: Gamow, Nuclear Physics, and the Big Bang during the 1930s

10:15- 10:45am

Wanderley Vitorino da Silva Filho, Universidade Federal da Bahia / University Paris Diderot
The Development of Condensed Matter Physics in Brazil and Bahia

10:45- 11:15am

Discussion (Commentator: **David DeVorkin**, National Air and Space Museum)

11:15- 12:15pm

Lunch at ACP Lunch Room

12:20 – 12:50 pm

take metro to Carnegie Institution of Washington

1:00- 3:00pm

Tour of Carnegie Institution of Washington, the 1914 building of the Department of Terrestrial Magnetism

SESSION 8: ROUNDTABLE DISCUSSION

Chair: Greg Good, Center for History of Physics, American Institute of Physics

3:00- 4:00pm

Perspectives and Challenges in the Historiography of the Physical Sciences

4:30pm

Conference adjourns. Have a safe journey home!