

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 –
9:00am

Breakfast at the Marriott Greenbelt (Ivy Lane) for those who arrived Saturday

11:30 am Shuttle Service to American Institute of Physics
Noon Lunch at American Institute of Physics / in ACP Lunch Room
12:50 pm **Official Welcome**

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-
5:25 pm **Lif Lund Jacobsen**, Rigsarkivet (The Danish National Archives)
*International Cooperation in Seismological Research during the Cold War: The
Case of Danish Seismologist Inge Lehmann*

5:25-5:55 pm **Stuart Butler**, University of Manchester
In or Out of Europe? British Collaboration in Space Research 1959-73

5:55-6:20 pm Discussion (Commentator: **Richard Staley**, University of Cambridge)

6:30 pm **Dinner** – at Siri Chef’s Secret, Greenbelt MD (Thai restaurant)

8:00 pm Shuttle Service back to Marriott Hotel in Greenbelt from restaurant

Monday, March 31

7:45 am Shuttle Service to American Institute of Physics

8:00-8:30 am Breakfast at American Institute of Physics

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 American Institute of Physics** / in 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

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

Tuesday, April 1

7:45 am

Shuttle Service to American Institute of Physics

8:00-8:30 am

Breakfast at the American Institute of Physics

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

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

9:30-
9:45am Coffee and Tea Break

9:45-
10:15am **Wanderley Vitorino da Silva Filho**, Universidade Federal da Bahia / University
Paris Diderot
The Development of Condensed Matter Physics in Brazil and Bahia

10:15-
10:45am **Discussion** (Commentator: **David DeVorkin**, National Air and Space Museum)

11:00-
12:00pm **Lunch at American Institute of Physics** / in ACP Lunch Room

12:30 pm Shuttle Service back to Marriott Hotel in Greenbelt

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 **Greg Good**, Director, History Center of American Institute of Physics,
Perspectives and Challenges in the Historiography of the Physical Sciences

4:30pm Conference adjourns. Have a safe journey home!