

Seven Pines Symposium XVII
“The Conceptual Development of Quantum Physics”
May 15–19, 2013

Program & Participants

(Breakfast 8:30-9:15 or 9:30 A.M., Lunch and Free Time 12:30-3:30 P.M.
Cocktails and Dinner 7:00 P.M.)

Wednesday, May 15

6:30 P.M. Welcome, Cocktails and Dinner

Thursday, May 16

9:15–9:45 Introduction: Lee Gohlike (Outing Lodge)

9:45–10:45: **From classical mechanics to quantum mechanics**

Session Chair:

- (a) Schrödinger and *Umdeutung*: **Jürgen Renn** (MPIWG, Berlin)
- (b) The necessity of quantum mechanics: **Olivier Darrigol** (CNRS, Paris)

10:45–11:15 Break

11:15–12:30 Discussion

3:30–4:30: **New perspectives on the birth of quantum mechanics**

Session Chair:

- (a) From the perspective of solid-state physics: **Christian Joas** (Ludwig-Maximilians-Universität, Munich)
- (b) From the point of view of the Sommerfeld school: **Suman Seth** (Cornell)

4:30–5:00 Break

5:00–6:30 Discussion

Friday, May 17

9:30–10:30: **History of interpretations of quantum mechanics**

Session Chair:

- (a) 20s & 30s: **Guido Bacciagaluppi** (Aberdeen)
- (b) 50s through 70s: **Olival Freire** (Bahia Brasil)

10:30–11:00 Break

11:00–12:30 Discussion

3:30–4:30 **History of entanglement**

Session Chair:

- (a) **Jos Uffink** (Minnesota)
- (b) Experiment: **Edward Fry** (Texas A&M)

4:30–5:00 Break

5:00–6:30 Discussion

Saturday, May 18

9:30–10:30: **Quantum field theory I**

Session Chair:

- (a) 20s & 30s: **Christoph Lehner** (MPIWG, Berlin)
- (b) 40s & 50s: **Alexander Blum** (MPIWG, Berlin)

10:30–11:00 Break

11:00–12:30 Discussion

3:30–4:30 **Quantum field theory II**

Session Chair:

- (a) In particle physics: **Anthony Duncan** (University of Pittsburgh)
- (b) In condensed-matter physics (i): **Gordon Baym** (University of Illinois at Urbana-Champaign)
- (c) In condensed-matter physics (ii): **Philip W. Anderson** (Princeton)

4:30–5:00 Break

5:00–6:30 Discussion

Sunday, May 19

9:30–11:30 Wrap up session

Session Chair:

Discussants:

- Clayton Gearhart (St. John's, Minnesota)
- Michel Janssen (Minnesota)
- Roger Stuewer (Minnesota)

Non-speaking Board members:

- Geoffrey Hellman (Minnesota)
- Don Howard (Notre Dame)
- John Norton (Pittsburgh)
- Serge Rudaz (Minnesota)
- Philip Stamp (Vancouver)
- Bill Unruh (Vancouver)
- Bob Wald (Chicago)

Junior Discussants:

- Matt Gorski (Notre Dame)
- Martin Jähnert (MPIWG, Berlin)
- Tom Pashby (Pittsburgh)
- Ben Wilson (MIT)

Observers:

- members of the Physics Interest Group (PIG) of the Minnesota Center for Philosophy of Science