

## ERWIN SCHRÖDINGER 1887–1961

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This symposium is dedicated to Erwin Schrödinger's legacy in quantum theory and to his views on the interpretation of quantum mechanics from a contemporary perspective. A series of lectures will outline recent experimental and theoretical developments related to Schrödinger's work, as well as his influence from the point of view of history and philosophy of science.

## INVITED SPEAKERS

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**Michel Bitbol**, CREA, École Polytechnique, Paris  
**Roberto Car**, Princeton University  
**Olivier Darrigol**, CNRS, Paris  
**Jürg Fröhlich**, ETH, Zürich  
**Moty Heiblum**, Weizman Institute of Science  
**Helge Kragh**, University of Aarhus  
**Jürgen Renn**, MPI für Wissenschaftsgeschichte, Berlin  
**K. Birgitta Whaley**, University of California, Berkeley  
**Walter Thirring**, Universität Wien and ESI  
**Anton Zeilinger**, Universität Wien and IQOQI  
**Peter Zoller**, Universität Innsbruck and IQOQI

## ORGANIZING COMMITTEE

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C. Dellago, W. L. Reiter, J. Yngvason, A. Zeilinger

## HONORARY CHAIR

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Ruth Braunizer, Alpbach

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In co-operation with: The Faculty of Physics (University of Vienna)  
and the City of Vienna

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1887–1961

**ERWIN SCHRÖDINGER / 50 YEARS AFTER**  
SYMPOSIUM AT THE ESI / 2011 / JANUARY 13–15

## THURSDAY, 13TH JANUARY, 2011

Kleiner Festsaal der Universität Wien,  
Dr.-Karl-Lueger-Ring 1, 1010 Vienna

### EVENING PROGRAMME – PUBLIC LECTURE

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**19:30** **Jürgen Renn**, MPI für Wissenschaftsgeschichte, Berlin  
*Schrödingers Weg zur Wellenmechanik*  
Einleitende Worte: Rektor **Georg Winckler**, Universität Wien  
Gemeinsam mit der Stadt Wien,  
Wiener Vorlesung

## FRIDAY, 14TH JANUARY 2011

Boltzmann Lecture Hall, Erwin Schrödinger Institute,  
Boltzmanngasse 9, 1090 Vienna

### OPENING CEREMONY – MORNING SESSION

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**Chair** **Jakob Yngvason**, Vice President and  
Scientific Director of the ESI

**09:00** **Christoph Dellago**, Dean, Faculty of Physics, University of Vienna  
**Klaus Schmidt**, President of the ESI

**09:30** **Olivier Darrigol**, CNRS, Paris  
*A few reasons why Louis de Broglie discovered Broglie's waves  
and yet did not discover Schrödinger's equation*

**10:30** **Jürg Fröhlich**, ETH Zürich  
*A Minimalist's View of Quantum Mechanics,  
Eighty Five Years After Schrödinger's 'Annus Mirabilis'*

**11:30** **Walter Thirring**, University of Vienna and ESI  
*Erwin Schrödinger: Personal Reminiscences*

**12:30** Lunch break

### AFTERNOON SESSION

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**Chair** **Markus Arndt**, University of Vienna

**14:30** **K. Birgitta Whaley**, University of California, Berkeley  
*Quantum Coherence and Entanglement in Biology*

**15:30** **Anton Zeilinger**, University of Vienna and IQOQI, Vienna  
*The Career of Schrödinger's Entanglement  
from Philosophical Curiosity to Quantum Information*

**16:30** Coffee break

**17:00** **Moty Heiblum**, Weizman Institute of Science  
*Neutral Modes – A New Family of Energy Carrier Currentless States*

**18:00** Poster Session

**19:00** **Reception** at the ESI / Common Room

## SATURDAY, 15TH JANUARY 2011

Boltzmann Lecture Hall, Erwin Schrödinger Institute,  
Boltzmanngasse 9, 1090 Vienna

### MORNING SESSION

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**Chair** **Christoph Dellago**, University of Vienna

**09:00** **Michel Bitbol**, CREA, École Polytechnique, Paris  
*Schrödinger's translation scheme between (abstract)  
representations and facts: a re-flection on his late  
interpretation of quantum mechanics*

**10:00** **Helge Kragh**, University of Aarhus  
*A Quantum Discontinuity: the Bohr-Schrödinger Dialogue*

**11:00** Coffee break

**11:30** **Roberto Car**, Princeton University  
*Quantum mechanics and hydrogen bonds*

**12:30** **Peter Zoller**, University of Innsbruck  
*Quantum Computing and Quantum Simulation  
with Quantum Optical Systems*

**13:30** Closing Ceremony

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The Symposium is accompanied by an exhibition on  
Erwin Schrödinger, organized by the Universitätsbibliothek /  
Österreichische Zentralbibliothek für Physik.