

# 3rd ISTA Summer School in Analysis and Mathematical Physics

*Organizers:* László Erdős, Julian Fischer, Jan Maas, Robert Seiringer

*Date:* June 10-14, 2024

*Venue:* Raiffeisen Lecture Hall  
Institute of Science and Technology Austria (ISTA)  
Am Campus 1, 3400 Klosterneuburg, Austria

*Lecture series:*

**Elia Bruè** (Bocconi University):  
*Nonuniqueness in the Partial Differential Equations of Fluid Dynamics*

**Mathieu Lewin** (Université Paris Dauphine – PSL):  
*Mathematical foundations of Density Functional Theory*

**Jan Philip Solovej** (University of Copenhagen):  
*The universal structure of large atoms and molecules*

*Invited talks:*

**August Bjerg** (University of Copenhagen):  
*Periodicity of atomic structure in a Thomas-Fermi mean-field model*

**Anuj Kumar** (University of California, Berkeley):  
*Nonuniqueness in Transport and 2D Euler Equations*

**Peter Madsen** (LMU Munich):  
*Classical density functional theory: Universal bounds and local density approximation*

## Schedule

### Monday, June 10

8:25	<i>Summer School shuttle bus from Vienna, Heiligenstadt to ISTA</i>
9:00-9:30	Registration and Welcome Coffee
9:30-9:35	Opening
9:35-10:45	<b>Lecture 1.1 – Jan Philip Solovej</b>
10:45-11:15	Coffee Break
11:15-12:30	<b>Lecture 2.1 – Mathieu Lewin</b>
12:30-14:15	Lunch
14:15-15:30	<b>Lecture 3.1 – Elia Bruè</b>
15:30-16:00	Coffee Break
16:00-17:15	<b>Lecture 1.2 – Jan Philip Solovej</b>
17:35	<i>Summer School shuttle bus from ISTA to Vienna, Heiligenstadt</i>

### Tuesday, June 11

8:50	<i>Summer School shuttle bus from Vienna, Heiligenstadt to ISTA</i>
9:30-10:45	<b>Lecture 2.2 – Mathieu Lewin</b>
10:45-11:15	Coffee Break
11:15-12:30	<b>Lecture 3.2 – Elia Bruè</b>
12:30-12:45	Group photo
12:45-14:15	Lunch
14:15-15:30	<b>Lecture 1.3 – Jan Philip Solovej</b>
15:30-16:00	Coffee Break
16:00-17:00	Lightning Talks
17:15	<i>Summer School shuttle bus from ISTA to Vienna, Heiligenstadt</i>

**Wednesday, June 12**

- 8:50 *Summer School shuttle bus from Vienna, Heiligenstadt to ISTA*
- 9:30-10:45 **Lecture 2.3 – Mathieu Lewin**
- 10:45-11:15 Coffee Break
- 11:15-12:30 **Lecture 3.3 – Elia Bruè**
- 12:30-14:30 Lunch
- 14:30 *Summer School shuttle bus from ISTA to Stift Klosterneuburg*
- 15:00-17:00 Cellar tour and Wine Tasting at the Stift Klosterneuburg
- 17:00-19:30 Dinner at Stiftsrestaurant Leopold
- 19:00 *Summer School shuttle bus from Stiftsrestaurant Leopold to Vienna, Heiligenstadt*
- 19:30 *Summer School shuttle bus from Stiftsrestaurant Leopold to Vienna, Heiligenstadt*

**Thursday, June 13**

- 8:50 *Summer School shuttle bus from Vienna, Heiligenstadt to ISTA*
- 9:30-10:45 **Lecture 1.4 – Jan Philip Solovej**
- 10:45-11:15 Coffee Break
- 11:15-12:30 **Lecture 2.4 – Mathieu Lewin**
- 12:45-14:15 Lunch
- 14:15-15:30 **Lecture 3.4 – Elia Bruè**
- 15:30-16:00 Coffee Break
- 16:00-17:00 **Invited Talk – August Bjerg**
- 17:15 *Summer School shuttle bus from ISTA to Vienna, Heiligenstadt*

## Friday, June 14

- 8:50 *Summer School shuttle bus from Vienna, Heiligenstadt to ISTA*
- 9:30-10:30 **Invited Talk – Peter Madsen**
- 10:30-11:00 Coffee Break
- 11:00-12:00 **Invited Talk – Anuj Kumar**
- 12:00-12:05 Closing
- 12:05 Lunch
- 12:15 *Summer School shuttle bus from ISTA to Vienna, Heiligenstadt*
- 13:00 *Summer School shuttle bus from ISTA to Vienna, Heiligenstadt*

## Campus map

