

# Second International UQUAM Workshop, Innsbruck, 21-24 September 2015

## Programme

	Monday	Tuesday	Wednesday	Thursday
9:00-9:45	Thierry Giamarchi	Eugene Demler	Francesca Ferlino	Michael Koehl
9:45-10:15	Traci Li	Johannes Zeiher	Jan Budich	Wolfgang Lechner
10:15-10:45	Coffee Break			
10:45-11:30	Markus Oberthaler	Sylvain Nascimbene	Martin Zwierlein	Alexander Glaetzle [10:45-11:30]
11:30-12:15	Lukas Sieberer	Mark Fischer [11:30-12:00]	Ahmed Omran	Jerome Beugnon [11:30 - 12:00]
12:15-15:00	Lunch Break	Buffet at the hotel [12:00-13:00]	Lunch Break	Christian Hofrichter [12:00 - 12:30]
15:00-15:45	Zoran Hadzibabic	UQUAM Review Session	Ana Maria Rey	Mykola Maksimenko [12:30 -13:00]
15:45 -16:15	Laura Corman	[13:00-17:15]	Sumilar Banerjee	
16:15-16:45	Coffee Break			
16:45-17:30	Daniel Podolsky	Poster Flash Presentation	Dima Abanin	
17:30-18:00	Catherine Laflamme	[17:15-17:45]	Camille Frapolli	
18:00-19:30		Poster Session [17:45-19:30]		
19:30			Social Dinner	

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### Monday, Sep. 21st

8:30-9:00: *Registration at the Hotel Grauer Bär*

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#### 9:00 – 10:15: First session

9:00-9:45: *Transport and out of equilibrium phenomena in cold atomic gases*

Thierry Giamarchi (University of Geneva)

9:45-10:15: *Resolving multiband geometry using Wilson lines*

Tracy Li (LMU)

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#### 10:15-10:45: Coffee Break

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**10:45 – 12:15: Second session**

10:45-11:30: *Two component quantum-gas mixtures – spin dynamics and immersed quantum systems*

Markus Oberthaler (University of Heidelberg)

11:30-12:15: *Order, superfluidity, and vortex unbinding in two-dimensional driven-dissipative condensates*

Lukas Sieberer (Weizmann)

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**12:15-15:00: Lunch Break**

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**15:00 – 16:15: Third session**

15:00-15:45: *Non-equilibrium dynamics of a BEC in a box potential*

Zoran Hadzibabic (University of Cambridge)

15:45-16:15: *Condensation for rings of atoms*

Laura Corman (LKB Paris)

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**16:15-16:45: Coffee Break**

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**16:45 – 18:00: Fourth session**

16:45-17:30: *TBA*

Daniel Podolsky (Technion)

17:30-18:00:  *$CP(N-1)$  Quantum Field Theories with Alkaline-Earth Atoms in Optical Lattices*

Catherine Laflamme (ITP and IQOQI, Innsbruck)

## **Tuesday, Sep. 22nd**

### **9:00 – 10:15: First session**

9:00-9:45: *TBA*

Eugene Demler (Harvard University)

9:45-10:15: *Rydberg Dressing with p-States*

Johannes Zeiher (MPQ Garching)

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### **10:15-10:45: Coffee Break**

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### **10:45 – 12:00: Second session**

10:45-11:30: *Dynamic optical lattices of sub-wavelength spacing for ultracold atoms.*

Sylvain Nascimbene (LKB Paris)

11:30-12:00: *The role of SU(2) symmetry for many-body localization*

Mark Fischer (Weizmann)

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### **12:00-13:00: Lunch Break**

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### **13:00 – 17:15: UQUAM Review session**

13:00-14:00: *Open panel review talks*

All UQUAM members

14:00-14:30: *Meeting with phd students and postdocs*

All phd students and post-docs

14:30-15:00: *Coffee break*

15:00-17:00: *Meeting with PIs*

All PIs

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**17:15 – 19:30: Poster session**

17:15-17:45: *Flash presentation (one minute per poster)*

17:45-19:30: *Poster session*

## **Wednesday, Sep. 23rd**

### **9:00 – 10:15: First session**

9:00-9:45: *The Fascination of Lanthanides for Ultracold Quantum Physics*

F. Ferlaino (IQOQI and IEP Innsbruck)

9:45-10:15: *Synthetic helical liquids with cold atoms in optical lattices*

Jan Budich (ITP and IQOQI, Innsbruck)

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### **10:15-10:45: Coffee Break**

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### **10:45 – 12:15: Second session**

10:45-11:30: *Strongly Interacting Fermi Gases of Atoms and Molecules*

Martin Zwierlein (MIT)

11:30-12:15: *A microscope for Fermi gases*

Ahmed Omran (MPQ Garching)

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### **12:15-15:00: Lunch Break**

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### **15:00 – 16:15: Third session**

15:00-15:45: *Dynamics of entanglement in trapped ion arrays*

Ana Maria Rey (JILA, Boulder)

15:45-16:15: *Can a random harmonic chain thermalize strongly localized particles in one dimension?*

Sumilan Banerjee (Weizmann)

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**16:15-16:45: Coffee Break**

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**16:45 – 18:00: Fourth session**

16:45-17:30: *Many-body localization and periodically driven systems*

Dima Abanin (University of Geneva)

17:30-18:00: *Bose-Einstein condensation in a gas of spin-1 sodium atoms*

Camille Frapolli (LKB Paris)

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**19:30: Social dinner at the Bierstindl**

## Thursday, Sep. 24th

### 9:00 – 10:15: First session

9:00-9:45: *TBA*

M. Köhl (University of Bonn)

9:45-10:15: *Parity Adiabatic Quantum Computing*

Wolfgang Lechner (ITP and IQOQI, Innsbruck)

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### 10:15-10:45: Coffee Break

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### 10:45 – 13:00: Second session

10:45-11:30: *Designing Quantum Spin Models with Laser-Dressed Rydberg Atoms*

Alexander Glätzle (ITP and IQOQI, Innsbruck)

11:30-12:00: *Coherent coupling of a BEC on an optical clock transition*

Jérôme Beugnon (LKB Paris)

12:00-12:30: *Strongly interacting Ytterbium atoms in optical lattices*

Christian Hofrichter (LMU Munich)

12:30-13:00: *Weak and strong topological invariants in a driven 2D Kitaev model*

Mykola Maksymenko (Weizmann)