

## Program for Bad Honnef Physics School 2021

### Sunday, August 8, 2021

- 14.00 – 16.30 Arrival and Registration  
16.45 – 17.00 Carlos Sá de Melo (Atlanta, USA):  
*Opening and welcome*  
17.00 – 18.00 William Phillips (Gaithersburg, USA):  
*Laser cooling I*  
18.30 – 20.00 Dinner  
20.00 – 21.00 Alexander Fetter (Stanford, USA):  
*Superfluid vortex dynamics I*

### Monday, August 9, 2021

- 09.00 – 10.00 Ulrich Schneider (Cambridge, UK):  
*Atoms in optical lattices I*  
10.00 – 10.30 Coffee Break  
10.30 – 11.30 Antun Balaž (Belgrade, Serbia):  
*Numerical analysis of the Gross-Pitaevskii physics for dipolar bosons and beyond I*  
12.00 – 13.30 Lunch  
13.30 – 15.00 Discussions @ Wonder Room  
*Meet the lecturers*  
15.00 – 15.30 Coffee Break  
15.30 – 16.30 William Phillips (Gaithersburg, USA):  
*Laser cooling II*  
16.30 – 17.00 Coffee Break  
17.00 – 18.00 Alexander Fetter (Stanford, USA):  
*Superfluid vortex dynamics II*  
18.30 – 20.00 Dinner  
20.00 – Socializing @ Wonder Room

### Tuesday, August 10, 2021

- 09.00 – 10.00 Ulrich Schneider (Cambridge, UK):  
*Atoms in optical lattices II*  
10.00 – 10.30 Coffee Break  
10.30 – 11.30 Antun Balaž (Belgrade, Serbia):  
*Numerical analysis of the Gross-Pitaevskii physics for dipolar bosons and beyond II*  
12.00 – 13.30 Lunch  
13.30 – 15.00 Discussions @ Wonder Room:  
*Meet the lecturers*  
15.00 – 15.30 Coffee Break

15.30 – 16.30 Discussions @ Wonder Room:  
*Student Round Table*  
16.30 – 17.00 Coffee Break  
17.00 – 18.00 Alexander Fetter (Stanford, USA):  
*Superfluid vortex dynamics III*  
18.30 – 20.00 Dinner  
20.00 – 21.00 Discussions @ Wonder Room:  
*Meet the lecturers*

### Wednesday, August 11, 2021

09.00 – 10.00 Ulrich Schneider (Cambridge, UK):  
*Atoms in optical lattices III*  
10.00 – 10.30 Coffee Break  
10.30 – 11.30 Silke Ospelkaus (Hannover, Germany):  
*Ultracold chemistry I*  
12.00 – 13.30 Lunch  
13.30 – 17.00 Excursion  
17.00 – 18.00 Richard Scalettar (Davis, USA):  
*Monte-Carlo simulation of ultracold atoms I*  
18.30 – 20.00 Dinner  
20.00 – Socializing @ Wonder Room

### Thursday, August 12, 2021

09.00 – 10.00 Jean Dalibard (Paris, France):  
*Solitons in an atomic 2D gas: an illustration of scale invariance*  
10.00 – 10.30 Coffee Break  
10.30 – 11.30 Antun Balaž (Belgrade, Serbia):  
*Numerical analysis of the Gross-Pitaevskii physics for dipolar bosons and beyond III*  
12.00 – 13.30 Lunch  
13.30 – 15.00 Discussions @ Wonder Room:  
*Meet the lecturers*  
15.00 – 15.30 Coffee Break  
15.30 – 16.30 Vanderlei Bagnato (São Carlos, Brazil):  
*Producing and characterizing a far from equilibrium BEC I*  
16.30 – 17.00 Coffee Break  
17.00 – 18.00 Richard Scalettar (Davis, USA):  
*Monte-Carlo simulation of ultracold atoms II*  
18.30 – 20.00 Dinner  
20.00 – 21.00 Discussions @ Wonder Room:  
*Meet the lecturers*

## Friday, August 13, 2021

- 09.00 – 10.00 Silke Ospelkaus (Hannover, Germany):  
*Ultracold chemistry II*
- 10.00 – 10.30 Coffee Break
- 10.30 – 11.30 Silke Ospelkaus (Hannover, Germany):  
*Ultracold chemistry III*
- 12.00 – 13.30 Lunch
- 13.30 – 15.00 Discussions @ Wonder Room:  
*Meet the lecturers*
- 15.00 – 15.30 Coffee Break
- 15.30 – 16.30 Vanderlei Bagnato (São Carlos, Brazil):  
*Producing and characterizing a far from equilibrium BEC II*
- 16.30 – 17.00 Coffee Break
- 17.00 – 18.00 Richard Scalettar (Davis, USA):  
*Monte-Carlo simulation of ultracold atoms III*
- 18.30 – 20.00 Dinner
- 20.00 – Socializing @ Wonder Room

## Saturday, August 14, 2021

- 10.00 – 11.00 Nathan Goldman (Brussels, Belgium):  
*Topological states of matter: Introducing theoretical concepts I*
- 11.00 – 11.30 Coffee Break
- 11.30 – 12.30 Nathan Goldman (Brussels, Belgium):  
*Topological states of matter: Introducing theoretical concepts II*
- 12.30 – 12.35 Axel Pelster (Kaiserslautern, Germany):  
*Concluding remarks*
- 12.35 – 14.00 Lunch
- 14.00 – Departure