

## 2. Program

### Scheme

#### First Week

	Sunday 07.09.2008	Monday 08.09.2008	Tuesday 09.09.2008	Wednesday 10.09.2008	Thursday 11.09.2008	Friday 12.09.2008	Saturday 13.09.2008	
9.00	Arrival and Free time for sightseeing in Hamburg or trips in the surrounding area	Welcome	C3: Low-Dimensional Electron Systems Lecture 1	C3: Low-Dimensional Electron Systems Lecture 2	C4: Optical Spectro- scopy Lecture 1	C4: Optical Spectro- scopy Lecture 2	Day-Trip to Lübeck  (UNESCO World Heritage Site)	
9.15		C1: Semiconductors and Ferromagnets Lecture 1		C3: Low-Dimensional Electron Systems Lecture 3				
9.30			C2: Molecular Beam Epitaxy Lecture 2			Seminar 1: Stuart Parkin Talk 1		Seminar 1: Stuart Parkin Talk 2
9.45								
10.00			C1: Semiconductors and Ferromagnets Lecture 2					
10.15								
10.30								
10.45								
11.00								
11.15								
11.30			C2: Molecular Beam Epitaxy Lecture 1	C1: Semiconductors and Ferromagnets Lecture 3	C1: Semiconductors and Ferromagnets Lecture 4	Seminar 2: Mathias Kläui Talk 1		Seminar 2: Mathias Kläui Talk 2
11.45								
12.00								
12.15								
12.30								
12.45			Lunch Break	Lunch Break	Drive to Airbus	Lunch Break		Lunch Break
13.00								
13.15								
13.30								
13.45								
14.00			Introduction to the Clean Room and Preparation Methods	Lunch at Airbus	C3: Low-Dimensional Electron Systems Exercise	Seminar 1: Stuart Parkin Discussion		
14.15		C1: Semiconductors and Ferromagnets Exercise				Seminar 2: Mathias Kläui Discussion		
14.30								
14.45			Zentrum für Mikro- strukturforschung					
15.00								
15.15								
15.30			Lab Tour 1 (C1, C2, C3)	Visit to Airbus				
15.45			Clean Room, Mole- cular Beam Epitaxy, Laboratories		Poster Session			
16.00						Poster Session		
16.15		Sightseeing Tour						
16.30								
16.45								
17.00								
17.15								
17.30								
17.45								
18.00		Welcome Party						

#### Second Week

	Sunday 14.09.2008	Monday 15.09.2008	Tuesday 16.09.2008	Wednesday 17.09.2008	Thursday 18.09.2008	Friday 19.09.2008	Saturday 20.09.2008	
9.00	Free time for sightseeing in Hamburg or trips in the surrounding area	C4: Optical Spectro- scopy Lecture 3	C5: Scanning-Probe Methods Lecture 2	C6: Simulation of Mi- cro- and Nanostruc- tures Lecture 2	Seminar 3: Scott Roy Talk 2	Seminar 4: Randall Feenstra Talk 2	Departure	
9.15								
9.30								
9.45								
10.00			C5: Scanning-Probe Methods Lecture 1	C5: Scanning-Probe Methods Lecture 3	C6: Simulation of Mi- cro- and Nanostruc- tures Lecture 3	Seminar 4: Randall Feenstra Talk 1		Seminar 5: Artur Zrenner Talk 2
10.15								
10.30								
10.45								
11.00								Closing
11.15								
11.30			C4: Optical Spectro- scopy Exercise	C6: Simulation of Mi- cro- and Nanostruc- tures Lecture 1	Seminar 3: Scott Roy Talk 1	Seminar 5: Artur Zrenner Talk 1		
11.45								
12.00								
12.15			Drive to DESY	Lunch Break	Lunch Break	Lunch Break		
12.30								
12.45								
13.00								
13.15			Lunch at DESY's canteen					
13.30				C5: Scanning-Probe Methods Exercise	Seminar 3: Scott Roy Discussion	Seminar 4: Randall Feenstra Discussion		Free time for sightseeing in Hamburg or trips in the surrounding area  or Departure
13.45						Seminar 5: Artur Zrenner Discussion		
14.00								
14.15								
14.30								
14.45		Visit to DESY	Zentrum für Mikro- strukturforschung	C6: Simulation of Mi- cro- and Nanostruc- tures Exercise 1	Drive to Harbor			
15.00								
15.15								
15.30								
15.45								
16.00			Lab Tour 2 (C4, C5)	C6: Simulation of Mi- cro- and Nanostruc- tures Exercise 2	Harbor Tour			
16.15								
16.30								
16.45								
17.00								
17.15								
17.30								
17.45								
18.00					Dinner			

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**Monday, 8 September 2008**

<b>09.00–09.15</b>	<b>Welcome</b>	Hörsaal AP
<b>09.15–10.00</b>	Course 1: Semiconductors and Ferromagnets – Lecture 1 <b>Basic Properties of Bulk Semiconductors</b> Ulrich Merkt	Hörsaal AP
<b>10.00–10.45</b>	Course 1: Semiconductors and Ferromagnets – Lecture 2 <b>Novel Semiconductor Devices</b> Ulrich Merkt	Hörsaal AP
<b>11.15–12.00</b>	Course 2: Molecular Beam Epitaxy – Lecture 1 <b>Semiconductor Heterostructures</b> Wolfgang Hansen	Hörsaal AP
	<i>Lunch Break</i>	
<b>14.00–15.00</b>	Course 1: Semiconductors and Ferromagnets <b>Exercise</b> Ulrich Merkt	Seminarraum 3 Seminarraum 4
<b>15.15</b>	<b>Meeting for Sightseeing Tour</b>	Entrance 11 C
<b>15.30–17.30</b>	<b>Sightseeing Tour</b>	
<b>18.00</b>	<b>Welcome Party</b>	Seminarraum 2

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**Tuesday, 9 September 2008**

- Course 3: Low-Dimensional Electron Systems – Lecture 1  
**09.00–09.45 Landau Quantization and Quantum Hall Effect** Hörsaal AP  
Katrin Buth
- Course 2: Molecular Beam Epitaxy – Lecture 2  
**10.00–10.45 Molecular Beam Epitaxy of Semiconductor Nanostructures** Hörsaal AP  
Christian Heyn
- Course 1: Semiconductors and Ferromagnets – Lecture 3  
**11.00–11.45 Ferromagnetic Domains** Hörsaal AP  
Guido Meier
- Lunch Break*
- 13.30–14.30 Introduction to the Clean Room and Preparation Methods** Blue Saloon
- 14.30–17.00 Zentrum für Mikrostrukturforschung - Lab Tour 1** Start:  
Molecular Beam Epitaxy Blue Saloon  
Clean Room  
Magnetic-Force Microscope  
 $^3\text{He}$ - $^4\text{He}$  Dilution Refrigerator  
Laboratory for High-Frequency Measurements

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**Wednesday, 10 September 2008**

<b>09.00–09.45</b>	Course 3: Low-Dimensional Electron Systems – Lecture 2 <b>Electron-Electron Interaction</b> Daniela Pfannkuche	Hörsaal AP
<b>09.45–10.30</b>	Course 3: Low-Dimensional Electron Systems – Lecture 3 <b>Electron Transport</b> Daniela Pfannkuche	Hörsaal AP
<b>11.00–11.45</b>	Course 1: Semiconductors and Ferromagnets – Lecture 4 <b>Dynamics of Domain Walls and Vortices</b> Guido Meier	Hörsaal AP
<b>12.00</b>	<b>Meeting for Trip to Airbus</b>	Entrance 11 C
<b>13.50–14.10</b>	<b>Lunch at Airbus</b>	
<b>14.10–16.45</b>	<b>Visit to Airbus</b>	

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**Thursday, 11 September 2008**

<b>09.00–09.45</b>	Course 4: Optical Spectroscopy – Lecture 1 <b>Nanoplasmonics</b> Detlef Heitmann	Hörsaal AP
<b>10.00–10.45</b>	Seminar 1 – Talk 1 <b>Spin-Polarized Tunneling</b> Stuart Parkin	Hörsaal AP
<b>11.00–11.45</b>	Seminar 2 – Talk 1 <b>Nanoscale Domain Walls and Related Spin Structures</b> Mathias Kläui	Hörsaal AP
	<i>Lunch Break</i>	
<b>13.30–14.30</b>	Course 3: Low-Dimensional Electron Systems <b>Exercise</b> Daniela Pfannkuche	Seminarraum 3 Seminarraum 4
<b>14.45–16.45</b>	<b>Poster Session</b>	Seminarraum 2

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**Friday, 12 September 2008**

<b>09.00–09.45</b>	Course 4: Optical Spectroscopy – Lecture 2 <b>Metamaterials</b> Stefan Mendach	Hörsaal AP
<b>10.00–10.45</b>	Seminar 1 – Talk 2 <b>Racetrack Memory</b> Stuart Parkin	Hörsaal AP
<b>11.00–11.45</b>	Seminar 2 – Talk 2 <b>Interaction between Spin-Polarized Currents and Domain Walls</b> Mathias Kläui	Hörsaal AP
	<i>Lunch Break</i>	
<b>13.30–14.15</b>	Seminar 1 <b>Discussion</b> Stuart Parkin	Blue Saloon
<b>14.15–15.00</b>	Seminar 2 <b>Discussion</b> Mathias Kläui	Blue Saloon
<b>15.15–17.15</b>	<b>Poster Session</b>	Seminarraum 2

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**Saturday, 13 September 2008**

<b>08.45</b>	<b>Meeting for Trip to Lübeck</b>	Hauptbahnhof/ Central Station
<b>10.30–12.30</b>	<b>Guided Tour through Lübeck</b>	Start: Holstentor
<b>12.30–16.30</b>	<b>Free Time for Sightseeing in Lübeck</b>	
<b>16.45</b>	<b>Meeting for Return to Hamburg</b>	Hauptbahnhof/ Central Station Lübeck
<b>18.00</b>	<b>Arrival in Hamburg</b>	

**Sunday, 14 September 2008**

*Free time for sightseeing in Hamburg or trips in the surrounding area.*

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**Monday, 15 September 2008**

<b>09.00–09.45</b>	Course 4: Optical Spectroscopy – Lecture 3 <b>Photoluminescence Spectroscopy of Semiconductor Nanostructures</b> Tobias Kipp	Hörsaal AP
<b>10.00–10.45</b>	Course 5: Scanning-Probe Methods – Lecture 1 <b>Scanning Tunneling Microscopy and Spectroscopy</b> Roland Wiesendanger	Hörsaal AP
<b>11.00–12.00</b>	Course 4: Optical Spectroscopy <b>Exercise</b> Tobias Kipp and Stefan Mendach	Seminarraum 3 Seminarraum 4
<b>12.00</b>	<b>Meeting for Trip to DESY</b>	Entrance 11 A
<b>13.00–14.00</b>	<b>Lunch at DESY's canteen</b>	
<b>14.00–16.15</b>	<b>Visit to DESY</b>	

**Tuesday, 16 September 2008**

<b>09.00–09.45</b>	Course 5: Scanning-Probe Methods – Lecture 2 <b>Scanning Force Microscopy and Spectroscopy</b> Roland Wiesendanger	Hörsaal AP
<b>10.00–10.45</b>	Course 5: Scanning-Probe Methods – Lecture 3 <b>Recent Research Highlights based on Scanning-Probe Methods</b> Jens Wiebe	Hörsaal AP
<b>11.00–11.45</b>	Course 6: Simulation of Micro- and Nanostructures – Lecture 1 <b>Basic Models of Semiconductor Devices</b> Dietmar Möller	Hörsaal AP
	<i>Lunch Break</i>	
<b>13.30–14.30</b>	Course 5: Scanning-Probe Methods <b>Exercise</b> Jens Wiebe	Seminarraum 3 Seminarraum 4
<b>14.45–17.15</b>	<b>Zentrum für Mikrostrukturforschung - Lab Tour 2</b> Photoluminescence Plasmons 300-Millikelvin Scanning Tunneling Microscope with Spin Resolution Low-Temperature Scanning Force Microscope	Start: Blue Saloon

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**Wednesday, 17 September 2008**

<b>09.00–09.45</b>	Course 6: Simulation of Micro- and Nanostructures – Lecture 2 <b>Numerical Techniques used in Device Simulation</b> Dietmar Möller	Hörsaal AP
<b>10.00–10.45</b>	Course 6: Simulation of Micro- and Nanostructures – Lecture 3 <b>Micromagnetic Modeling and Simulation</b> Markus Bolte	Hörsaal AP
<b>11.00–11.45</b>	Seminar 3 – Talk 1 <b>Simulation Techniques for Electrical Analysis of Micro- and Nanostructures</b> Scott Roy	Hörsaal AP
	<i>Lunch Break</i>	
<b>13.30–14.15</b>	Seminar 3 <b>Discussion</b> Scott Roy	Blue Saloon
<b>14.30–15.30</b>	Course 6: Simulation of Micro- and Nanostructures <b>Exercise 1</b> Dietmar Möller	Computer Rooms 302 and 306
<b>15.30–16.30</b>	Course 6: Simulation of Micro- and Nanostructures <b>Exercise 2</b> Dietmar Möller	Computer Rooms 302 and 306

**Thursday, 18 September 2008**

<b>09.00–09.45</b>	Seminar 3 – Talk 2 <b>Nano-Scale Field Effect Transistors - Simulations and Analysis</b> Scott Roy	Hörsaal AP
<b>10.00–10.45</b>	Seminar 4 – Talk 1 <b>Reconstructions of Semiconductor Surfaces</b> Randall Feenstra	Hörsaal AP
<b>11.00–11.45</b>	Seminar 5 – Talk 1 <b>Optical Properties of Single Semiconductor Quantum Dots</b> Artur Zrenner	Hörsaal AP
	<i>Lunch Break</i>	
<b>13.30–14.15</b>	Seminar 4 <b>Discussion</b> Randall Feenstra	Blue Saloon
<b>14.15–15.00</b>	Seminar 5 <b>Discussion</b> Artur Zrenner	Blue Saloon
<b>15.00</b>	<b>Meeting for Harbor Tour</b>	Entrance 11 C
<b>16.00–18.00</b>	<b>Harbor Tour</b>	
<b>18.30</b>	<b>Dinner</b>	

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**Friday, 19 September 2008**

<b>09.00–9.45</b>	Seminar 4 – Talk 2 <b>Tunneling Spectroscopy of Semiconductor Surfaces</b> Randall Feenstra	Hörsaal AP
<b>10.00–10.45</b>	Seminar 5 – Talk 2 <b>Coherent Optoelectronics with Single Quantum Dots</b> Artur Zrenner	Hörsaal AP
<b>10.45–11.30</b>	<b>Closing</b>	Hörsaal AP
	<i>Departure</i>	

