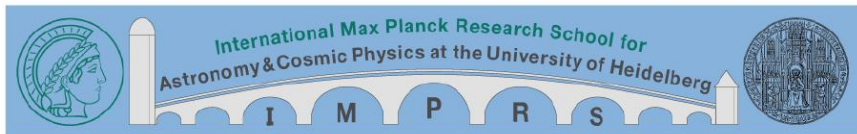


IMPRS and the University Institutes

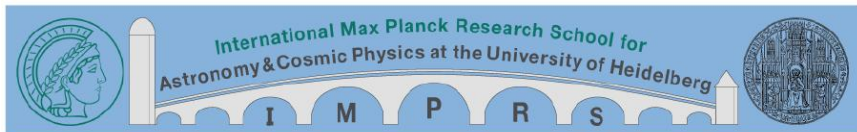
Julian Merten

Institut für Theoretische Astrophysik
Zentrum für Astronomie
Universität Heidelberg

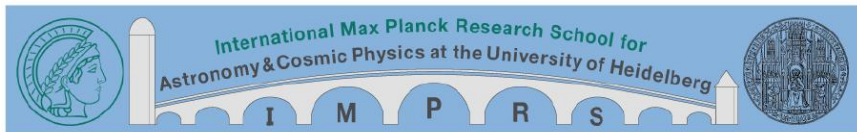
March 10th, 2009



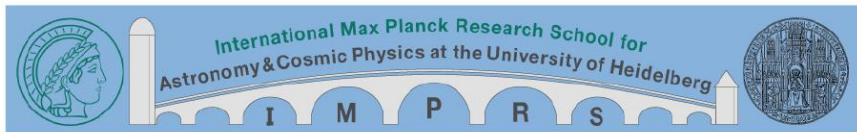
- 1 Overview of the IMPRS-HD
 - Purpose
 - Students
 - Officials
- 2 The astronomy institutes of Heidelberg University
 - ARI
 - ITA
 - LSW
- 3 The astronomy institutes of the Max-Planck society (MPG)
 - MPI-K
 - MPIA
- 4 Scientific and social activities offered by the IMPRS



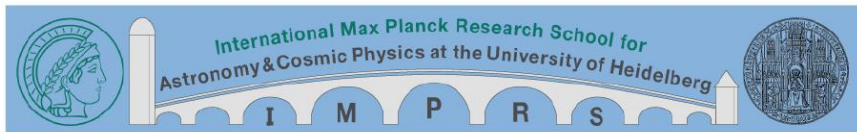
- Graduate school for the doctoral degree in astronomy (physics is also possible).
- Established in 2005 as a joint initiative between the Max-Planck society and the University of Heidelberg.
- Since 2007/08 independent part of the Heidelberg Graduate School of Fundamental Physics (HGSFP). Umbrella institution for doctoral studies in the department of Physics & Astronomy in Heidelberg.
 - Fundamental interactions and cosmology
 - Astronomy and cosmic physics (IMPRS-HD)
 - Quantum dynamics and complex quantum systems
- Strong focus on international students. MPG requirement: > 50% foreign students.



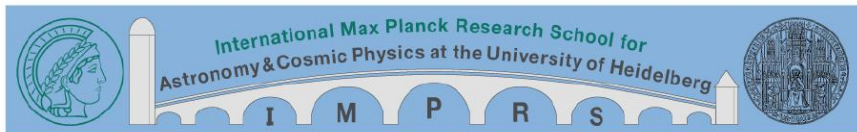
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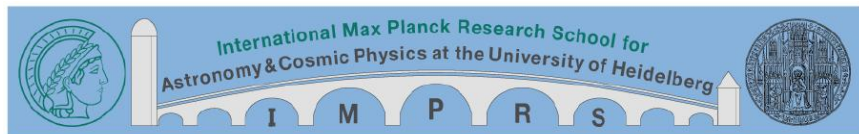


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What IMPRS offers



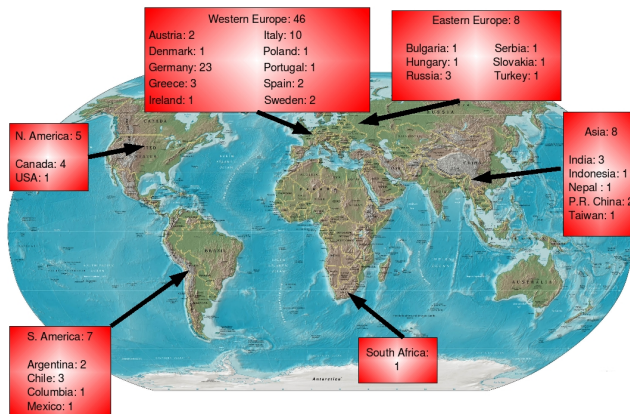
Study plan

- A **thesis committee** consisting of the supervisor and two other expert scientist meets at least once a year.
 - supervises progress of research work
 - defines the curriculum
- IMPRS offers a number of mandatory **astronomy courses**, given at the university.

Communication

- IMPRS consists of **~ 70 students**, placed in different generations.
- Central meeting point for each generation is the **IMPRES seminar**.
- Many more scientific and social events are offered by the IMPRS.

Some numbers



of students
75

German
contribution
~ 30%

Female
contribution
~ 35%

Alumni
13

Some numbers

IMPRS applications – statistics 2005-2007

Year	Nationalities	Europe/West	Europe/East	Asia	America/Latin	America/North	Arabia	Africa
2005	Applicants	Italy 14	Russia 4	India 6	Chile 3	Canada 3	Iran 2	Ethiopia 1
	82	Germany 11	Ukraine 3	China PR 4	Argentina 2	Mexico 2	Lebanon 1	
	55m, 27f	Greece 2	Poland 2	Korea 3	Pakistan 2	Hong Kong 1	Egypt 1	Turkey 1
New members 17	UK 2	Slovakia 2	Croatia 1	Malaysia 1	Philippines 1	Indonesia 1	Taiwan 1	
	Austria 2	Portugal 1	Spain 1	Sweden 1				
33 shortlisted	Germany 4							
	20m, 13f	Europe/W 10	Europe/E 6	Asia 6	America/L 4	America/N 3		
2006	Applicants	Italy 13	Bulgaria 2	India 12	Argentina 3	Canada 2	Iran 4	South Africa 2
	90	Germany 12	Romania 2	Taiwan 3	Chile 3	USA 1	Lebanon 1	Egypt 1
	56m, 34f	Spain 5	Ukraine 2	Pakistan 2	Brazil 1	Ecuador 1	Turkey 1	
New members 23	UK 3	Hungary 1	Korea 1	Bangladesh 1	Mexico 1	Peru 1		
	Austria 1	Poland 1	Russia 1	Indonesia 1	Thailand 1			
	Finland 1	France 1	Czech Rep. 1					
43 shortlisted	Germany 6	Ireland 1						
	27m, 16f	Europe/W 12	Europe/E 4	Asia 12	America/L 5	America/N 2	Arabia 1	Africa 1
2007	Applicants	Germany 24	Hungary 3	India 9	Mexico 4	Canada 2	Iran 6	Algeria 2
	108	Italy 10	Russia 3	Taiwan 7	Chile 4	USA 1	Lebanon 1	Egypt 1
	60m, 48f	Italy-Chile 1	Turkey 2	China PR 4	(Chile-Italy 1)			
New members 26	Spain 5	Georgia 1	Indonesia 1	Columbia 2				
<small>Note: 4 HGSFP arrivals</small>	France 3	Romania 1	Thailand 1					
	Greece 3	Portugal 3	UK 2	Austria 1	Cyprus 1	Denmark 1	Norway 1	
87 shortlisted	Germany 12							
	34m, 33f	Europe/W 22	Europe/E 5	Asia 13	America/L 8	America/N 2	Arabia 3	Africa 2

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2008	Applicants	Germany 11	Romania 1	India 16	Mexico 1	/	Iran 6	Algeria 2
	104	Italy 14	Bulgaria 2	Pakistan 3	Chile 1			Ethiopia 1
	55m, 49f	Sweden 3	Czech Rep. 3	Bangladesh 1	Columbia 5	Venezuela 1		
	New members 24	Spain 2	Serbia 1	Taiwan 4	China 5	Indonesia 3	Korea 1	
Note: 3 HGSP arrivals		Ireland 1	Turkey 1	Russia 2				
		Austria 1	Portugal 1	Belgium 1	Australia 1			
46 shortlisted	Germany 2							
22m, 24f	Europe/W 19	Europe/E 5	Asia 12	America/L 4	America/N 0	Arabia 0	Africa 0	
2009	Applicants	Germany 13	Hungary 1	India 16	Columbia 3	USA 3	Iran 13	Algeria 2
	133	Italy 14	Poland 2	China 4	Chile 1	Brasil 2	Jordan 1	Egypt 1
	79m, 54f	Greece 3	Bulgaria 2	Nepal 1	Peru 1	Venezuela 2	Iraq 1	Sth Africa 1
	New members	Portugal 2	Russia 2	Pakistan 1	Taiwan 4	Argentina 1	Mexico 2	Ethiopia 1
	Netherl. 2	Ukraine 1	Romania 1	Albania 1	Lithuania 1	Turkey 3		
	Denmark 1	Finnland 1	Sweden 1					
62 shortlisted	Germany 12							
36m, 26f	Europe/W 18	Europe/E 8	Asia 12	America/L 5	America/N 3	Arabia 1	Africa 1	

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IMPRS people (without IMPRS board)

Spokespersons:



Hans-Walter Rix (MPI's)
Stefan Wagner (ZAH)

Coordinator:



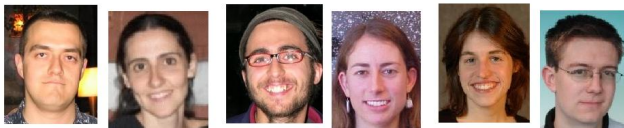
Christian Fendt

Secretary:



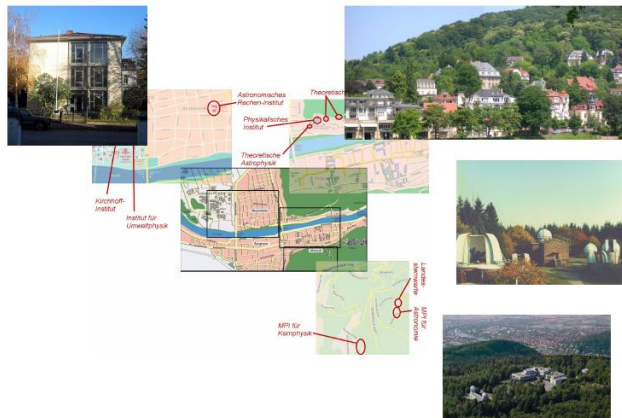
Heide Seifert

Student representatives:



Steve Boudreault, Giulia Vannoni, Marcello Cacciato, Ros Skelton, Kelly Foyle, Leonard Burtscher, Julian Merten, Mario Gennaro

The institutes and the number of IMPRS students



MAX-PLANCK-GESELLSCHAFT

- MPIA (33)
- MPI-K (9)

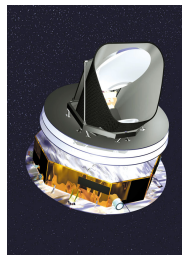


- ARI (11)
- ITA (15)
- LSW (7)

- History goes back to 1700.
- Hosts an GRAPE / MPRACE cluster
- Staff: 84 including students.
- Research at ARI and potential IMPRS supervisors.
 - Astrometry (Stefan Jordan)
 - Stellar dynamics (Andreas Just, Rainer Spurzem)
 - Galaxy evolution (Burkhard Fuchs, Eva Grebel, Thorsten Lisker)
 - Cosmology and gravitational lensing (Joachim Wambsganz, Björn Schäfer)



- Founded in 1976
- Staff: 45 including students.
- Research at ITA and potential IMPRS supervisors.
 - Star formation, interstellar turbulence, molecular cloud dynamics and galactic dynamics (Ralf Klessen, Robi Banerjee).
 - Cosmology, clusters of galaxies, gravitational lenses and CMB (Matthias Bartelmann).
 - Development of stars and physics of planets (Werner Tscharnuter)
 - Stellar atmospheres and astrochemistry (Hans-Peter Gail)
 - Cosmic radiation fields (Rainer Wehrse)



Landessternwarte (LSW)

- Inaugurated in 1898 by the grand duke Friedrich I. of Baden
- Staff: 60 including students.
- Research at LSW and potential IMPRS supervisors.
 - Theory of AGN and compact objects (Max Camenzind).
 - Extragalactic astrophysics (Jochen Heidt, Gerd Pühlhofer, Stefan Wagner)
 - Stellar astrophysics (Joachim Krautter, Sabine Reffert, Otmar Stahl)
 - Galactic archaeology (Norbert Christlieb)
 - Instrumentation (Nicholas Elias, Andreas Quirrenbach)

