

Program

Sunday, 10 February 2019

16:00 – 21:00	Registration	
from 18:30	<i>BUFFET SUPPER / Informal get together</i>	
19:45 – 20:00	Scientific organizers	Opening and welcome
20:00 – 21:00	Martin Hendry	Einstein's masterpiece: 100 years of general relativity

Monday, 11 February 2019

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	Bernard Schutz	Intuition in physics: What is a physicist anyway?
10:00 – 11:00	Karl-Heinz Lotze	Various approaches to teach light deflection in gravitational fields
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Silvia Simionato	Combining general relativity and optics to visualize light on curved paths
12:30	Conference Photo (in the foyer of the lecture hall)	
12:45	<i>LUNCH</i>	
14:15 – 15:15	Friedrich Herrmann	GTR and Cosmology in the Karlsruhe Physics Course: A short description of a 15-hour course for the upper secondary school
15:15 – 15:45	<i>COFFEE BREAK</i>	
15:45 – 17:45	Daina Taimina	Tactile hyperbolic geometry (workshop)
17:45 – 18:00	Stefan Jorda	About the Wilhelm and Else Heraeus-Foundation
18:30	<i>DINNER</i>	

Program

Tuesday, 12 February 2019

08:00	<i>BREAKFAST</i>	
09:00 – 11:00	Ute Kraus	Teaching general relativity with sector models (talk with workshop)
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Poster flash presentations I (3 min. each)	
12:45	<i>LUNCH</i>	
14:15– 15:15	Poster session I: Teaching resources	
15:15 – 15:45	<i>COFFEE BREAK</i>	
<u>Workshop</u>		
15:45 – 17:15	Hans-Peter Nollert	Teaching General Relativity using ruler and calculator: An interactive workshop based on the Shapiro effect
<u>Hands-on sessions</u>		
15:45	Matěj Ryston	Hands-on activities for teaching curvature
16:25	Efstratios Kapotis	Experimentation and simulations for teaching General Relativity
17:05	Sven Weissenborn	Virtual sector models
<u>Group discussion</u>		
15:45	Markus Pössel (Chair)	Simplifications and misconceptions in General Relativity
<u>Group discussion</u>		
16:45	Stuart Farmer (Chair)	Teaching General Relativity at school - exchange of experiences
18:30	<i>DINNER</i>	

Program

Wednesday, 13 February 2019

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	Corvin Zahn	Visualization of general relativity
10:00 – 11:00	Andrew Hamilton	Using general relativistic visualization to confront myths and misconceptions about what happens inside black holes
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Ellen Karoline Henriksen	Developing learning resources and investigating students' learning in general relativity and quantum physics
12:45	<i>LUNCH</i>	
14:15	Excursion	
		Walk to local sightseeing spot. (Destination depending on the weather.)
18:30	<i>DINNER</i>	

Program

Thursday, 14 February 2019

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	David Blair	Einsteinian reality: A challenge for school education
10:00 – 11:00	Magdalena Kersting	Curved spacetime: Investigating students' conceptual understanding in general relativity
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Poster flash presentations II (3 min. each)	
12:45	<i>LUNCH</i>	
14:15– 15:15	Poster session II: Design, evaluation, programs	
15:15 – 15:45	<i>COFFEE BREAK</i>	

Workshop

15:45 – 16:45	Roberto Salgado	Relativity on rotated graph paper
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Hands-on sessions

15:45	Friedrich Herrmann	Geodesic Lab - Have fun with geodesics
16:25	Ute Kraus Corvin Zahn	Wormholes: Interactive flight through a wormhole & 3D wormhole model
17:05	Stephan Preiß	Through Hildesheim at nearly the speed of light & The vehicle-through-the-garage-paradox visualized

Group discussion

15:45	Markus Pössel (Chair)	Simplifications and misconceptions in General Relativity
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Group discussion

16:45	Stuart Farmer (Chair)	Teaching General Relativity at school - exchange of experiences
18:30	<i>HERAEUS DINNER at the Physikzentrum (cold & warm buffet, free beverages)</i>	

Program

Friday, 15 February 2019

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	Kimberly Coble	Big ideas in cosmology: undergraduate students' ideas about the structure, fate, evolution, and curvature of the universe
10:00 – 11:00	David Treagust	Time for changing paradigms in science and in education
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Scientific organizers	Poster awards, summary, discussions and closing remarks
12:45	<i>LUNCH</i>	

End of the seminar and FAREWELL COFFEE / Departure

*Please note that there will be **no** dinner at the Physikzentrum on Friday evening for participants leaving the next morning.*