

## Gravitation and Relativity Division Fachverband Gravitation und Relativitätstheorie (GR)

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Welcome to this year's programme of the division *Gravitation and Relativity*. The core of the programme consists of ordinary and invited talks of, respectively, 15 and 45 minutes total duration each. Special attention is drawn to our joint tutorial-session *Dark Matter* (together with AKjDPG/T/GR) on Sunday 16:00 - 17:45, on our section's (Matter and Cosmos) *Dissertation-Prize Colloquium* on Monday 14:30 - 16:00, our plenary talk on Tuesday 09:00 - 09:45 by Alessandra Buonanno, our poster session on Tuesday 17:00 - 18:30, and to the joint symposium (together with MP and AGPhil) on *Entanglement* on Thursday 11:00 - 13:00. Last, but not least, please note that our annual general meeting takes place on Thursday 18:30 - 20:00, at which we will elect a new chairperson and board members.

### Overview of Invited Talks and Sessions

(Lecture halls H-HS IV, V, VII, and IX; Poster Zelt)

#### Plenary Talks of GR

PV IV	Tue	9:00– 9:45	H-Aula/HS I/HS X	<b>The Making of High-Precision Gravitational Waves —</b> •ALESSANDRA BUONANNO
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#### Invited Talks

GR 2.1	Mon	11:15–12:00	H-HS IX	<b>Relativistic geodesy —</b> •CLAUS LÄMMERZAHN, VOLKER PERLICK
GR 5.1	Tue	11:00–11:45	H-HS IX	<b>Testing GR with gravitational waves: current status and future prospects —</b> •COLLIN CAPANO
GR 7.1	Wed	10:30–11:15	H-HS IX	<b>The Sagnac effect in General Relativity —</b> •JÖRG FRAUENDIENER
GR 14.1	Thu	16:30–17:15	H-HS IV	<b>Teaching general relativity with sector models —</b> •UTE KRAUS, CORVIN ZAHN
GR 14.2	Thu	17:15–18:00	H-HS IV	<b>How Long Is Now? On the problem of accurate time measurements —</b> •THOMAS FILK

#### Invited talks of the joint symposium SYMD

See SYMD for the full program of the symposium.

SYMD 1.1	Mon	14:30–15:00	H-Aula/HS I/HS X	<b>N-Particle Scattering and Asymptotic Completeness in Wedge-Local Quantum Field Theories —</b> •MAXIMILIAN DUELL
SYMD 1.2	Mon	15:00–15:30	H-Aula/HS I/HS X	<b>First observation of double electron capture in Xe-124 with the dark matter detector XENON1T —</b> •ALEXANDER FIEGUTH
SYMD 1.3	Mon	15:30–16:00	H-Aula/HS I/HS X	<b>Anisotropic Transport of Galactic Cosmic Rays based on Stochastic Differential Equations —</b> •LUKAS MERTEN

## Invited talks of the joint symposium SYEN

See SYEN for the full program of the symposium.

SYEN 1.1	Thu	11:00–11:40	J-HS D	<b>Entanglement and Complexity in Quantum Many-Body Systems</b> — •TOMAZ PROSEN
SYEN 1.2	Thu	11:40–12:20	J-HS D	<b>Entanglement and Explanation</b> — •CHRIS TIMPSON
SYEN 1.3	Thu	12:20–13:00	J-HS D	<b>Production and observation of entanglement in quantum optics</b> — •ROMAN SCHNABEL

## Sessions

GR 1.1–1.2	Sun	16:00–17:45	P-HS 1	<b>Tutorial: Dark Matter (joint session AKjDPG/T/GR)</b>
GR 2.1–2.4	Mon	11:15–12:45	H-HS IX	<b>Classical Theory of General Relativity 1</b>
GR 3.1–3.3	Mon	16:30–17:15	H-HS IX	<b>Relativistic Astrophysics</b>
GR 4.1–4.3	Mon	17:15–18:00	H-HS IX	<b>Other Topics in Gravitational Physics</b>
GR 5.1–5.5	Tue	11:00–12:45	H-HS IX	<b>Gravitational Waves</b>
GR 6.1–6.17	Tue	17:00–18:30	Zelt	<b>Poster</b>
GR 7.1–7.2	Wed	10:30–11:30	H-HS IX	<b>Classical Theory of General Relativity 2</b>
GR 8.1–8.3	Wed	11:30–12:15	H-HS IX	<b>Black Holes 1</b>
GR 9.1–9.7	Wed	14:00–15:45	H-HS IX	<b>Black Holes 2</b>
GR 10.1–10.8	Wed	16:30–18:30	H-HS IX	<b>Quantum Gravity and Quantum Cosmology 1</b>
GR 11.1–11.5	Thu	14:00–15:15	H-HS V	<b>Alternative Classical Theories of Gravitation</b>
GR 12.1–12.8	Thu	14:00–16:00	H-HS IV	<b>Cosmology</b>
GR 13.1–13.3	Thu	15:15–16:00	H-HS V	<b>Numerical Relativity</b>
GR 14.1–14.4	Thu	16:30–18:30	H-HS IV	<b>Didactical Aspects of Relativity</b>
GR 15	Thu	18:30–20:00	H-HS IV	<b>Annual General Meeting</b>
GR 16.1–16.6	Fri	9:00–10:30	H-HS IX	<b>Alternative Approaches</b>
GR 17.1–17.3	Fri	9:30–10:30	H-HS VII	<b>Fundamental Problems and General Formalism</b>
GR 18.1–18.3	Fri	11:00–11:45	H-HS IX	<b>Quantum Gravity and Quantum Cosmology 2</b>

## Annual General Meeting of the Gravitation and Relativity Division

Thursday 18:30–20:00 H-HS IX

- Report by the chairperson
- Reports by the members of the board
- Election of new chairperson and board
- Miscellaneous