

Gravitation and Relativity Division Fachverband Gravitation und Relativitätstheorie (GR)

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Welcome to the annual meeting of the *General-Relativity and Gravitation* division of the DPG at - virtually - Jena. Despite the adverse circumstances, forcing us to hold this meeting in a purely online format, we have again a rich scientific program, including some outstanding highlights. We will take part in two symposia, one on “Entanglement” (Monday) the other on “Neutron Stars” (Thursday). There will be two distinguished plenary-like talks, one by Alessandra Buonanno (MPI Gollm), who would have been our plenary speaker last year and who will speak on “News from the Gravitational-Waves Sky”, the other by Heino Falcke (Radboud U.) on how Black-Holes look like. Last not least, on Tuesday evening, this year’s Nobel-Prize laureate Reinhard Genzel will deliver an evening talk on the Galactic Black-Hole. Let me also draw your attention to our General Assembly of Members on Thursday evening, starting at 19:00. Finally, I wish all of you a pleasant and informative week!

Overview of Invited Talks and Sessions

(Lecture halls H2, H4, H6, and H9)

Plenary Talk of the Gravitation and Relativity Division

PV II Mon 9:45–10:30 Audimax **What’s in a Shadow** — ●HEINO FALCKE

Invited Talks

GR 2.1 Tue 11:00–11:45 H6 **The Sagnac effect in General Relativity** — ●JÖRG FRAUENDIENER
GR 4.1 Tue 16:30–17:15 H6 **News from the Gravitational-Wave Sky** — ●ALESSANDRA BUONANNO

Invited talks of the joint symposium Entanglement (SYEN)

See SYEN for the full program of the symposium.

SYEN 1.1 Mon 16:30–17:10 Audimax **Squeezed and entangled light - now exploited by all gravitational-wave observatories** — ●ROMAN SCHNABEL
SYEN 2.1 Mon 17:10–17:50 Audimax **Entanglement and Explanation** — ●CHRIS TIMPSON
SYEN 3.1 Mon 17:50–18:30 Audimax **Entanglement and complexity in quantum many-body dynamics** — ●TOMAZ PROSEN

Invited talks of the joint symposium Neutron stars (SYNS)

See SYNS for the full program of the symposium.

SYNS 1.1 Thu 14:00–14:40 Audimax **Binary neutron stars: from gravitational to particle physics** — ●LUCIANO REZZOLLA
SYNS 1.2 Thu 14:40–15:20 Audimax **Probing subatomic physics with gravitational waves** — ●TANJA HINDERER
SYNS 1.3 Thu 15:20–16:00 Audimax **A NICER view of neutron stars** — ●ANNA WATTS

Sessions

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|--------------|-----|-------------|------|---|
| GR 1.1–1.6 | Mon | 11:00–12:30 | H2 | Black Holes |
| GR 2.1–2.4 | Tue | 11:00–12:30 | H6 | Classical GR-1 |
| GR 3.1–3.8 | Tue | 14:00–16:00 | H6 | Classical GR-2 |
| GR 4.1–4.6 | Tue | 16:30–18:30 | H6 | Gravitational waves |
| GR 5.1–5.7 | Wed | 14:00–15:45 | H6 | Alternative aspects and formulations |
| GR 6.1–6.8 | Wed | 16:30–18:30 | H6 | Numerical relativity |
| GR 7.1–7.4 | Thu | 11:00–12:00 | H9 | Experimental tests |
| GR 8.1–8.2 | Thu | 12:00–12:30 | H9 | Quantum field theory in curved spacetimes |
| GR 9.1–9.4 | Thu | 16:30–17:30 | H9 | Cosmology |
| GR 10.1–10.2 | Thu | 17:30–18:00 | H9 | Scalar-tensor and non-local gravity theories |
| GR 11.1–11.2 | Thu | 18:00–18:30 | H9 | Didactical and heuristic aspects |
| GR 12 | Fri | 19:00–20:30 | MVGR | Annual General Meeting |
| GR 13.1–13.5 | Fri | 11:00–12:15 | H4 | Quantum gravity and cosmology |

Mitgliederversammlung des Fachverbands Gravitation und Relativitätstheorie

Donnerstag 19:00–20:30 MVGR

- Bericht des Vorsitzenden
- Wahl zur Neubesetzung des Vorsitizes
- Wahl des Beirats
- Verschiedenes