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Type: **Plenary talk**

General Relativity meets Geodesy

Thursday, 11 July 2024 12:00 (30 minutes)

The intersection of General Relativity and geodesy represents a new frontier in Earth sciences. A major task of geodesy is to determine the gravity field of the Earth, e.g. to monitor mass variations. Due to recent advancements in high precision clock comparison, General Relativity introduced an entirely new measurement concept to geodesy based on the gravitational redshift. We present the basics of a genuinely general relativistic framework for geodesy, generalising the traditional (post-)Newtonian geodetic concepts. Moreover, we outline the exciting applications of clocks on ground and in space for gravity field recovery, reference systems, synchronisation, and tests of General Relativity.

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Session Classification: Thursday plenary session