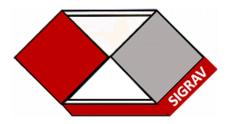
## XXIV SIGRAV Conference on General Relativity and Gravitation



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## **Experimental challenges for space-based** gravitational wave detectors: overview of LISA

Thursday, 9 September 2021 15:00 (30 minutes)

In this talk we address the measurement concept and the main experimental challenges for LISA, the first space-based GW observatory, to be launched in 2034. The task of using laser interferometry to measure the GW tidal deformation of a constellation of free-falling test masses is discussed, both in the context of heritage from the preparatory single-spacecraft mission - LISA Pathfinder - and for the unique remaining challenges to be met by the first orbiting GW observatory, whose location will allow the exploration of the mHz frequency band only accessible from space.

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Session Classification: The future of Gravitational waves astronomy

Track Classification: Experimental Gravitation