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Type: **Invited talk in a parallel session**

The unity of time

Tuesday, 9 July 2024 15:30 (15 minutes)

In this talk various definitions and realizations of time are considered and compared. These realizations are clocks based on kinematics and dynamics, on electromagnetic and gravitational interactions, on classical and quantum systems. Conditions are stated for which all these time scales coincide. Furthermore, the issue of the synchronization of clocks will be treated. Finally, the importance of the definition of time for the new *Système International* will be outlined.

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Session Classification: Navigating science and philosophy: exploring limits

Track Classification: History of Relativity (HR): Navigating science and philosophy: exploring limits