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Time resolved

SEMINAIRE

Compressed Ultrafast Photography: Imaging Light-speed Events in a Snapshot

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Lundi 8 janvier 2018 – 14h00
Amphithéâtre SOLEIL

Direct imaging of transient events can greatly aid the understanding of many underlying principles in materials science, chemistry, and biology. These events, often probabilistic and occurring at sub-nanosecond time scales, require real-time imaging at ultra-high temporal resolutions. However, established ultrafast imaging methods fall short due to their requirement for repetitive measurements. To overcome these limitations, we have developed compressed ultrafast photography (CUP)—the world's fastest imaging technology with an imaging speed of up to 10 trillion frames per second. CUP has made first-ever real-time recording of a number of optical phenomena, including faster-than-light propagation of non-information, laser-pumped fluorescence emission [*Nature* **516** 74-77 (2014)], time-resolved light backscattering [*Scientific Reports* **5** 15504 (2015)], and propagating photonic Mach cones [*Science Advances* **3** e1601814 (2017)]. Given CUP's passive, ultrafast, and real-time imaging capability, we envision it to facilitate the next-generation synchrotron source in single-shot time-resolved X-ray imaging.

Ce séminaire sera suivi d'une pause café

Formalités d'entrée : accès libre dans l'amphi du pavillon d'Accueil.
Si la manifestation a lieu dans le Grand Amphi SOLEIL du Bâtiment Central merci de vous munir d'une piece d'identité (à échanger à l'accueil contre un badge d'accès)

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