

CEA - Saclay 91191 Gif-sur-yvette Cedex  
**Service de Physique de l'Etat Condensé**  
SÉMINAIRE

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**Mercredi 22 juin 11h15**

**Orme des Merisiers SPEC Salle Itzykson, Bât.774**

**Avalanches**

**Kay Wiese**

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Magnetic domain walls, charge density waves, contact lines, and cracks are all elastic systems, pinned by disorder. Changing an external parameter, they remain stuck before advancing in sudden rapid motion, termed avalanche. After an introduction into the phenomenology, I present work based on the functional renormalization group, which allows to go beyond the usual toy-model description: avalanche-size distributions in any dimension, and the distribution of velocities in an avalanche. These techniques also lead to an exact solution for the decay of 2-dimensional Burgers turbulence.

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