



Séminaire Informatique Haute Performance au Campus Ter@tec  
Département Sciences de la Simulation et de l'Information

**Jeudi 29 Mars 2018**

**11h00 – durée : 45min**

**Bâtiment Ter@tec  
Salle Valadon – RdC**

***Thread interference analysis: decoupling the causes from the effects.***

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Understanding the performance of a multi-threaded application is difficult. The threads interfere when they access the same resource, which slows their execution down. Unfortunately, current profiling tools focus on identifying the interference causes, not their effects.

The developer can thus not know if optimizing the interference reported by a profiling tool can lead to better performance. In this paper, we propose to complete the profiling toolbox with an effect-oriented profiling tool able to indicate how much interference impacts performance, regardless of the interference cause. With an evaluation of 27 applications, we show that our tool successfully identifies 12 performance bottlenecks caused by 6 different kinds of interference.