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## Séminaire ISIR

Yannick Rondelez

**Mardi 14 mai 2013 à 14h00**

Campus Jussieu, 4 place Jussieu, Paris  
Salle de réunion H20

**Titre: "Molecular programming of complex behaviours"**

**Résumé:**

Molecular circuits including loops, feedback and gates are essential to control the complex dynamic functions of biological systems. This vocabulary is however essentially absent from chemistry as a synthetic discipline. Can we assemble chemical assemblies to implement circuits with specific dynamics or patterns, in vitro? What should be the architecture of these amorphous systems? I will discuss our recent experimental propositions, which combine molecular programming techniques with the concepts of dynamical systems theory to achieve this goal. I will show some of our experimental results such as a relaxation oscillator, bistable and flip-flop memories, predator-prey oscillations and traveling waves.

Webpage: [http://limmshp.iis.u-tokyo.ac.jp/mediawiki/index.php/Yannick\\_RONDELEZ,\\_Dr.](http://limmshp.iis.u-tokyo.ac.jp/mediawiki/index.php/Yannick_RONDELEZ,_Dr.)

Sous la co-tutelle de