

**Post-doc offer in molecular programming at Institute of Industrial Science,
the University of Tokyo (Rondelez, Y. Lab.)**

Project: Recent advances in molecular programming have demonstrated that it is possible to organize DNA-based reactions to perform predefined information processing tasks *at the molecular level*. While the complexity of the computations involved is still limited, a remarkable feature is that these amorphous systems can easily be partitioned in *billions* of microscopic compartments, and still retaining their function. This potential for high parallelism suggests that they may be able to drive difficult optimization problems at the level of molecular targets. The purpose of the research will thus be to construct a programmable molecular controller supervising semi-autonomous molecular evolution processes toward predefined goals. This work is to be held in the frame of the “Synthetic Biology” project supported by Grant-in-Aid for Scientific Research on Innovative Areas, Japan.

Candidate: We are seeking a curious and highly motivated scientist with some experimental background in either molecular/structural/systems biology. Instrumentation, microfluidics, programming and molecular programming skills are also welcome. The successful candidate should have an exceptional publication record, excellent communication skills and a strong interest for multidisciplinary frontier science.

Location & details: Our group is located with the Institute of Industrial Science, the University of Tokyo, in the framework of a French-Japanese joint research lab., and operated closely with Fujii Lab (www.microfluidics.iis.u-tokyo.ac.jp). We are involved in the building and characterization of complex molecular networks *in vitro*. We have expertise in the use of synthetic DNA strands to encode precise molecular behaviors or chemical computations. We have recently opened a new research direction seeking to build on this knowledge to solve critical molecular issues such as the search of polymers with particular properties. More details about our scientific interests can be obtained at www.yannick-rondelez.com. The working language is English. The financial support will be available until the end of March 2016, but the contract will be on the annual basis with the amount of 360 000 yens/month as salary. Starting date for the position is May 1, 2014 or later.

Contact: Interested individuals should send a CV, a list of publications, a statement of research interests to rondelez@iis.u-tokyo.ac.jp and tfujii@iis.u-tokyo.ac.jp. Letters of recommendation should be sent directly from previous supervisors to the same addresses.