



**Postdoctoral Positions on Cellular Information Processing**

Applications are invited for postdoctoral positions at the Systems Biology and Bioengineering Group of Professor Savas Tay, at the Institute for Molecular Engineering, **University of Chicago** ([taylab.uchicago.edu](http://taylab.uchicago.edu/)).

In this project, we want to understand how immune networks like NF-kappaB process dynamical signaling inputs and how they interact with biological noise, at the single-cell level. The following papers describe the current direction of our research:

* Noise facilitates transcriptional control under dynamic inputs. **Cell** 160, 381 (2015)
* Noise induced NF-kB mode hopping enables temporal gene multiplexing. **Cell Systems**, 3: 532-539 (2016).
* Digital signaling decouples activation probability and population heterogeneity. **eLife** 4:e08931 (2015)
* Single-cell NF-kB dynamics reveal digital activation and analogue information processing. **Nature** 466, 267 (2010)
* Ultra-Multiplexed Analysis of Single Cell Dynamics Reveals Logic Rules in Differentiation, **Science Advances**, DOI: 10.1126/sciadv.aav7959 (2019)

Applications from a range of backgrounds including Biology, Physics, Chemistry, Engineering and Computer Science are invited. Required skills include cell culture, basic biochemistry, microscopy, image processing, and programming. Experience with microfluidics, cloning, signaling pathways and stochastic modeling are a plus. Using sophisticated computer controlled experimental setups will be necessary.

Our laboratory is located at the Knapp Center at the University of Chicago, and we are affiliated with the Institute for Molecular Engineering ([www.ime.uchicago.edu](http://www.ime.uchicago.edu)) and Institute for Genomics and Systems Biology (<http://www.igsb.anl.gov/>).

Highly motivated candidates with a strong track record of publications should send an application package with research interests, full CV with experimental and computational skills listed in detail, names and contact information of 3 references to Savas Tay ([savas.tay@gmail.com](mailto:savas.tay@gmail.com)).

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