

Postdoc Assoc, Synthetic Biology & Statistics,  
Optimization, Control Theory, System Identification  
New York University Abu Dhabi

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<b>Job Title</b>	Postdoc Assoc, Synthetic Biology & Statistics, Optimization, Control Theory, System Identification
<b>Department</b>	Network Dynamics and Synthetic Biology Group of Andras Gyorgy <a href="http://netb.io/">http://netb.io/</a>
<b>Institution</b>	New York University Abu Dhabi Abu Dhabi, , United Arab Emirates
<b>Date Posted</b>	Dec. 4, 2017
<b>Application Deadline</b>	Open until filled
<b>Position Start Date</b>	Flexible
<b>Job Categories</b>	Post-Doc
<b>Academic Field(s)</b>	Statistics & Actuarial Science Physics - General Mathematics/Applied Mathematics Computer/Information Sciences Biology - Molecular Biology - Cell Biology Biology - General

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**Job Description**

Postdoctoral Associate Positions in Synthetic Biology and Statistics, Optimization, Control Theory,  
System Identification and Network Dynamics

Network Dynamics and Synthetic Biology Group of Andras Gyorgy

NYU Abu Dhabi

The Network Dynamics and Synthetic Biology Group at New York University Abu Dhabi seeks highly

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motivated and collaborative applicants to fill multiple Postdoctoral Associate positions, both experimental and quantitative/theory-focused. Research in the group revolves around topics at the interface of engineering (dynamical systems and control theory, network science, statistics, optimization) and synthetic biology. A major thrust of the research carried out in the group is the development of a combined theoretical/experimental framework to accurately predict the complex behaviors that emerge when parts are interconnected, thus accounting for various sources of context-dependence, such as the sharing of limited resources. Members of our interdisciplinary team leverage experiments to inform modeling/theoretical analysis and vice versa. For more information, visit <http://netb.io/>.

Candidates applying for experimental positions will focus on research projects targeting one of the major bottlenecks in the rational design of synthetic biocircuits: scalability. To this end, we develop standardized probing parts, and create computational tools for the quantitative prediction of the behavior of synthetic gene circuits in vivo (mainly *E. coli*) and in vitro (cell-free extracts). Applicants with a PhD in synthetic biology, bioengineering, cellular biology, biophysics, quantitative/systems biology, or in a related field are encouraged to apply. The positions require experience in molecular and cell biology. Experience working with microplate readers and flow cytometers is desired, but not required.

Candidates applying for quantitative/theory-focused positions will focus on research projects about system and parameter identification using noisy data, optimization for experiment design, analyzing/designing pattern formation over large-scale networks, and the development of novel tools for the rational design of synthetic gene circuits. Applicants with a PhD in engineering, statistics, optimization, physics, mathematics, computer science, or in a related field are encouraged to apply. The positions require experience with at least one of the following: statistics, stochastic systems, optimization, control theory, system identification, network science.

Ideal candidates are self-motivated and hard-working with excellent communication skills in English and with the ability to work in multidisciplinary teams. Scientific creativity is essential. Successful candidates will take part in collaborative projects involving multiple laboratories from the US and Europe. We seek driven and enthusiastic individuals with a proven track record of independent research whose priority is to excel in their career while maintaining healthy work-life balance.

Applications will be accepted on a rolling basis and candidates will be considered until the positions are filled. To be considered, please prepare in PDF format: (1) cover letter summarizing research experience and specific interest in the position; (2) curriculum vitae including a full list of publications; and (3) the names and contact details of three references. Applications should be submitted to <https://apply.interfolio.com/46474> for the experimental and to <https://apply.interfolio.com/46473> for the

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quantitative/theory-focused positions. If you have any questions, or you want to follow up on your application, please feel free to contact Andras Gyorgy at [andras.gyorgy@nyu.edu](mailto:andras.gyorgy@nyu.edu).

The positions provide salary higher than internationally competitive rates for postdoctoral positions, in addition to substantial benefits (generous housing, transportation and travel allowances, educational subsidies for children), together with full health insurance and retirement contributions. The UAE does not levy income tax. The initial appointment is for two years with the possibility of renewal based on performance. Start date is flexible.

**About NYUAD:**

NYU Abu Dhabi offers a stimulating research environment led by a distinguished research community and supported by state-of-the-art research facilities. Our students are drawn from around the world and surpass all traditional recruitment benchmarks, both US and global. NYU Abu Dhabi's highly selective liberal arts enterprise is complemented by an institute for advanced research, sponsoring cutting-edge projects across numerous disciplines. New York University has established itself as a Global Network University, a multi-site, organically connected network encompassing three foundational degree-granting campuses (New York, Abu Dhabi, and Shanghai) and eleven research and study-away sites across five continents. Faculty and students circulate within this global network in pursuit of common research interests and the promotion of cross-cultural and interdisciplinary solutions for problems both local and global.

**EEO/AA Policy**

EOE/AA/Minorities/Females/Vet/Disabled/Sexual Orientation/Gender Identity Employer

**Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

**Contact**     Andras Gyorgy  
                      Network Dynamics and Synthetic Biology Group of  
                      Andras Gyorgy  
                      New York University Abu Dhabi

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