

Postdoc / Staff positions available – Riedel-Kruse Lab, University of Arizona

<https://riedel-kruse.arizona.edu>

Synthetic Biology, Systems Biology & Biophysics of Multicellular Bacterial Systems

We have **multiple postdoc / staff positions** to fill in the Riedel-Kruse Lab, Departments of MCB (and by courtesy) BME, Applied Math, and Physics, University of Arizona.

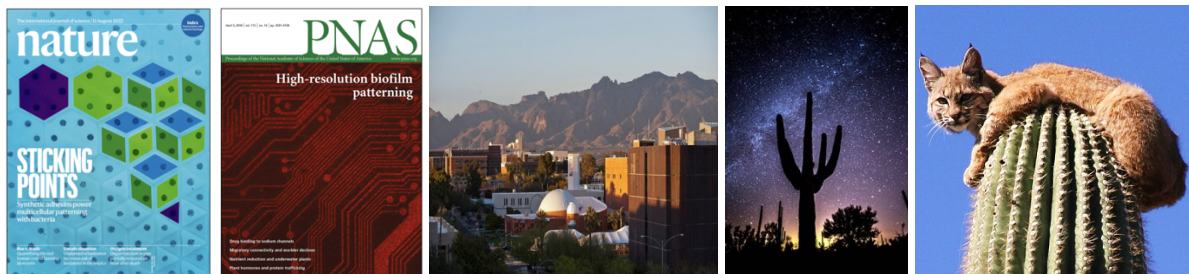
We recently developed a **synthetic cell-cell adhesion** toolbox [1], optogenetic cell-surface patterning methods [2] and genetic network modeling tools [3] that enable the engineering and patterning of multicell systems [4]. Future projects focus on multicellular bacterial self-assembly and pattern-formation, biofilm ecology, synthetic developmental programs, metabolic pathway modularization, methane to value-chemical conversion, active matter physics, and the evolutionary origin of multicellularity. Projects are motivated by the excitement for the basic sciences as well as the need to combat climate change and infectious diseases.

Our lab is well-funded, among others by NIH (R01 GM145893) and NSF (2229070).

The **ideal candidate** is strongly motivated and has a degree and experience in synthetic biology, systems biology, microbiology, bioengineering, biochemistry, chemical engineering, biophysics, modeling, or related. We are a very interdisciplinary lab, we have diverse project needs to match your individual skills and interests, and we provide many opportunities to collaborate and learn.

Interested candidates should email Prof. Ingmar Riedel-Kruse (ingmar@arizona.edu). Please provide a brief description of your research interests and your CV incl. publication list and the contact information of 2-3 references.

The University of Arizona, Tucson, Arizona, and the South-West are **exciting and affordable places to work, live, and explore!**



- [1] A genetically encoded adhesin toolbox for programming multicellular morphologies and patterns
Glass D, Riedel-Kruse IH*
Cell 174 (3), 649-658, 2018.
- [2] Biofilm Lithography enables high-resolution cell patterning via optogenetic adhesin expression
Jin X, Riedel-Kruse IH*
PNAS 115 (14) 3698-3703, 2018.
- [3] Nonlinear delay differential equations and their application to modeling biological networks
Glass D, Jin X, Riedel-Kruse IH*
Nature Communications 12, 1788, 2021.
- [4] 4-bit adhesion logic enables universal multicellular interface patterning
Kim H, Skinner DJ, Glass DS, Hamby AE, Stuart BAR, Dunkel J, Riedel-Kruse IH*
Nature 608, 324–329, 2022.