



The Max Planck Institute for the Physics of Complex Systems (MPI-PKS), and the Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG) invite applications for a



CENTER FOR
SYSTEMS BIOLOGY
DRESDEN

Max Planck Research Group Leader (W2) on Self-Organization of Multicellular Systems at the Center for Systems Biology Dresden

A fundamental question in biology is to understand the collective organization of cells during morphogenesis of complex organisms. Recent advances in biology allow the in-vitro differentiation of stem cells into organ-like tissues which provide model systems for the formation of organs such as brain, liver, and pancreas. Theoretical approaches play a key role to unravel the physical laws of collective cell behavior and provoke novel theories about how cells form tissues. We will establish a Max Planck Research Group at the Center for Systems Biology Dresden (CSBD) that develops theoretical and computational approaches to investigate principles underlying the self-organization of multicellular systems in functional units and complex morphologies.

Examples of theoretical or computational research questions include, but are not limited to:

- How do precise gene expression patterns arise robustly from heterogeneous stem cell populations?
- How do cells communicate and make decisions during morphogenesis?
- How does shape emerge by mechano-chemical processes?
- How do networks for transport and secretion form and what determines their geometry?

In general, we are interested in applicants using innovative theoretical and computational strategies including information theoretical and simulation-based approaches. We seek outstanding and creative scientists early in their career with a promising record

in the theoretical study of cells and tissues and the motivation to establish a Max-Planck Research group at the CSBD. As a group leader, you will develop an independent research program in an interactive and multi-disciplinary environment. The research campus hosts several experimental groups working in the above area. Future collaborations with these groups are very much encouraged. Cutting-edge projects that cross discipline boundaries are particularly welcome.

Max Planck Research Group leaders are appointed for five years. The Max Planck Research Group can be extended up to two times by two years, according to scientific criteria and after a positive evaluation in each case, taking into account the financial possibilities and those under labor legislation. Remuneration is based on group W 2 of the Federal Civil Service Remuneration Act (Bundesbesoldungsgesetz). Funds for postdocs and PhD students will be available and office space and equipment will be provided

Applications should include

- A cover letter explaining your motivation to apply for this position
- A Curriculum Vitae including publication list
- A statement of scientific achievements
- A two-page summary of your future research plans
- Up to three of your most important papers

Application documents should be merged into a single pdf and sent electronically to mprgl-sysbio@pks.mpg.de. Please also arrange for three academic references to be sent to the same email address. The deadline for applications including references is **8 December 2019**.



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Alternatively, the documents can also be sent through ordinary mail to:

Max Planck Institute for the Physics of Complex Systems
Visitors Program / MPRGL-sysbio
Nöthnitzer Str. 38
01187 Dresden
Germany

The Max-Planck-Gesellschaft wishes to increase the number of women in those areas where they are underrepresented. Women are therefore explicitly encouraged to apply.

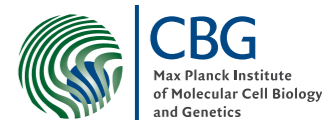
The Max-Planck-Gesellschaft is committed to increasing the number of employees with severe disabilities in its workforce. Applications from persons with severe disabilities are expressly welcome.

Successful applicants should be prepared to join a selection symposium, to be held in Dresden, Germany, on **9-10 March 2020**.

Scientific inquiries can be sent to Frank Jülicher (julicher@pks.mpg.de) or Gene Myers (myers@mpi-cbg.de).

For further information about the Center for Systems Biology Dresden and the Institutes see:

www.csbdresden.de
www.pks.mpg.de
www.mpi-cbg.de



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