



## Job Description

<b>College/Management Unit</b>	Systems Biology Ireland
<b>School/Unit</b>	Systems Biology Ireland
<b>Post Title &amp; Subject Area (if relevant)</b>	Postdoctoral Scientist (Computational Cell Biology)
<b>Post Duration</b>	2 years
<b>Reports to</b>	Prof Walter Kolch & Prof Boris Kholodenko
<b>HR Reference No.</b>	004046
<b>HR Administrator</b>	Deirdre Wilmot

### Position Summary

Systems Biology Ireland (SBI; <http://www.ucd.ie/sbi/>) focuses on elucidating the design principles of signal transduction networks in mammalian cells and applying this knowledge to important questions in biology and biomedicine, such as cell fate decisions (differentiation, proliferation and apoptosis). A main aim of SBI's research is to develop and apply computational models based on biological experimentation that open new avenues for understanding and treatment of human diseases on a molecular level. Ongoing projects include the spatiotemporal dynamics and statistical analysis of signalling and transcriptional networks that govern cell proliferation, differentiation and motility. SBI is using modern transcriptomics and proteomics technologies to experimentally address these questions. The successful applicant will work closely with experimentalists at the interface between dynamic system analysis, mathematical statistics, engineering, bioinformatics and biology in a multi-disciplinary research community at SBI. This presents a unique opportunity for creative individuals who want to work at the cutting-edge of systems biology.

**Salary: € 32,000- €43,000 per annum**

Appointment will be made commensurate with qualification and experience.

### Principal Duties and Responsibilities

- You will be a part of an interdisciplinary team with national and international collaborations in the field of systems biology. While the emphasis of this post is on computational, dynamic and statistical modelling, you will have a strong interest to collaborate with biologists.
- You will participate in ongoing SBI programmes (reverse engineering of signalling networks and gene regulatory networks, cell fate decisions) and contribute to SBI's overall research goals, but also will have freedom to develop your own research interests in systems biology.
- You will be an outstanding scientist who aspires to push the boundaries of our current knowledge.
- You will have the opportunity to supervise Masters and PhD students.

### Selection Criteria

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

### Mandatory

- A PhD in a relevant discipline, e.g. Biophysics, Chemical Engineering, Statistics or Applied Mathematics
- Knowledge and experience of advanced mathematical modelling, including non-linear dynamics, and using probabilistic and data driven modelling approaches to analyse biological systems.
- Basic knowledge of cell/molecular biology.
- An appropriate record of scientific contributions to the field, such as publications or conference contributions.
- A strong ability to work in and actively contribute to an interdisciplinary research environment.
- Excellent interpersonal and communication skills, and a strong collaborative spirit.

### Desirable

- Research expertise in the use of probabilistic and statistical approaches to the analysis and modelling of transcriptional and gene networks. Working knowledge of Bioinformatics methods.

## **Further Information for Candidates**

### **Supplementary information**

The University:	<a href="http://www.ucd.ie/aboutucd.htm">http://www.ucd.ie/aboutucd.htm</a>
The School/Programme Office/Unit:	<a href="http://www.ucd.ie/sbi">http://www.ucd.ie/sbi</a>

### **Relocation Expenses**

- Will not apply
- Will be applied in accordance with the UCD policy  
<http://www.ucd.ie/hr/html/manual/remvexp.pdf>

### **Informal Enquiries ONLY to:**

Name:	Walter Kolch & Boris Kholodenko
Title:	Profs
Email address:	<a href="mailto:systemsbiology@ucd.ie">systemsbiology@ucd.ie</a>

### **Particular to this position**

Conditions specific to this post (if any):

- n/a