



## Cardio-Renal Physiology / Systems Modeling

A funded post-doctoral position in the area of computational physiology is available at the Interface Group of the Institute of Physiology, University of Zurich, Switzerland: <http://interfacegroup.ch/>

Combining clinical analysis and computational modeling, this project aims at refining our understanding of the coupling between cardiovascular and renal function in health and diseases, accounting for its complex hormonal and biomechanical inter-regulations.

The candidate will work within the Swiss national flagship project NCCR Kidney.CH ([www.nccr-kidney.ch](http://www.nccr-kidney.ch)) and in tight collaboration with the University Hospitals of Bern, Geneva and Zurich; at the interface between fundamental physiology and clinical applications. His/her focus will be on developing a systems approach of the cardiovascular and renal function, including hemodynamic and neuro-hormonal regulatory mechanisms relevant for the control of homeostasis. Of interest is the understanding of the evolution in renal and cardiac function in patients undergoing renal transplant.

### Prerequisites:

The candidate must have (*mandatory*):

- A master's degree in engineering, computational sciences or a related field.
- Excellent English language skills.
- A strong motivation and willingness to integrate new knowledge from our multidisciplinary environment.

The ideal candidate will have:

- Expert knowledge in systems and controls with emphasis on their application to physiological systems.
- Expert knowledge in numerical methods and lower order modeling.
- Knowledge of the cardiovascular and renal physiology.
- Experience coding in R is a plus

### Environment:

The Interface Group offers a creative, international work environment, outstanding computational infrastructure, integration into a large research network and access to experimental and clinical data for model parametrization.

### Application:

Candidates are encouraged to apply to Dr. Diane de Zélicourt, [diane.dezelicourt@physiol.uzh.ch](mailto:diane.dezelicourt@physiol.uzh.ch), with a motivation letter, CV, transcripts and contact information of two references.