



## R u đ e r   B o š k o v i ć   I n s t i t u t e

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### Postdoctoral Position in Condensed Matter Theory at RBI

The Condensed Matter and Statistical Physics Group at Theoretical Physics Division, Rudjer Boskovic Institute, Zagreb is inviting applications for a postdoctoral position in theoretical condensed matter physics, starting immediately and for the duration of 2 years.

The appointment is associated with the Horizon 2020 FETOPEN project "Reservoir Computing with Real-time Data for future IT (RECORD-IT)". The project focuses on the development of a novel concept of using the reservoir computing for sensing purposes. The concept should be applicable to a broad range of sensing situations.

The work will be done in close collaboration with several experimental group that are working on a device prototype in the context of ion concentration sensing, using the network of components such as memristors, organic transistors and silicon nanowires.

The theoretical work should deal with the development of the models for sensing reservoir dynamics of various sensor components and development of necessary simulation tools to investigate the information processing capabilities of the device. Both ab-initio and semi-empirical approaches will be used to address the complex ion dynamics.

The applicant should have a strong background in theoretical condensed matter physics. The previous experience with electronic structure and transport calculations based on density functional theory and/or molecular dynamics stimulation is an advantage.

*Additional information: Theoretical Physics Division have recently got HORIZON 2020 EU project RBI-T-Winning (~ 1 mil.Eur) for the period of 3 years with the aim of raising its research profile through the collaboration with four excellent EU institutions: LMU Munich, SISSA Trieste, LPT Orsay and Niels Bohr Institute Kopenhagen by intensive exchange of knowledge and experience which involves staff exchange, lectures, conferences and trainings in which the future postdoc researcher is expected to actively participate.*

*How to Apply: Interested applicants should send the following: curriculum vitae with publication and presentation details and the names and contact information of 2 references, via e-mail to [crljen@irb.hr](mailto:crljen@irb.hr) or to Rudjer Boskovic Institute, Department of Human Resources, Bijenicka cesta 54, Zagreb 10000, Croatia with the mark "Position Application". The deadline for applications is February 10, 2016.*

*For further details please contact Prof. Z. Crljen, [crljen@irb.hr](mailto:crljen@irb.hr)*