



**SAPIENZA**  
UNIVERSITÀ DI ROMA



## **ERC project HyGate – Call For Interest for two PhD scholarships**

I am seeking for two highly motivated candidates for conducting theoretical and simulation work on gating of ion channels within the framework of the ERC project “HyGate – Hydrophobic Gating in nanochannels: understanding single channel mechanisms for designing better nanoscale sensors”. The positions are available within the PhD programme in Theoretical and Applied Mechanics of Sapienza University of Rome – Italy.

The scholarships cover the 3 years of legal duration of the PhD, and will start in 2019. Further information on the PhD degree in Italy can be found on the University website <https://www.uniroma1.it/en/pagina/phd-programmes>

Motivated candidates, holding a Masters Degree or equivalent (EU or Extra EU) in Engineering, Physics, or similar fields and with a strong interest in numerical simulations of biological phenomena, are invited to contact as soon as possible the principal investigator via email [alberto.giacomello@uniroma1.it](mailto:alberto.giacomello@uniroma1.it)

### **The Research Institution – Sapienza**

Founded in 1303, the University of Rome “La Sapienza” is one of the largest European universities; its name means “Wisdom”. The world’s leading university rankings place Sapienza at the top of Italian universities for quality of research, education and international dimension; moreover, Sapienza excels in many subject areas, including Physics, Mechanical and Aerospace Engineering.

### **The Research Project – HyGate**

HyGate aims at understanding the fundamental mechanisms of hydrophobic gating in model nanopores and biological ion channels and exploit this knowledge in order to design a new generation of biosensors. An innovative set of rare event simulation tools will be developed and used in order to bridge the molecular timescales and the biological ones. The physical insights into the behavior of water in complex nanoconfined environments are expected to inspire innovative strategies for nanopore sensing and nanofluidic circuits. A multidisciplinary team, across physics, biology, and engineering will work together to achieve these ambitious goals.