



### **Postdoc in ERC Funded Project (HyBOP): Hydrogen-Bond Networks as Optical Probes**

We invite applications for a 3 year postdoctoral position in the research project *Hydrogen-Bond Networks as Optical Probes (HyBOP)* funded recently within the ERC framework. The project is lead by Ali Hassanali, in the Condensed Matter and Statistical Physics Section (CMSP) at the Abdus Salam International Center for Theoretical Physics (ICTP), Trieste, Italy.

**Project/Research Context:** The postdoctoral researcher will be part of a highly interdisciplinary team developing atomistic models to study the origins of glowing organic materials immersed in aqueous environments. The long-term vision of the project is to develop a framework for an *entirely new class of fluorophores in nature* that will serve as probes of water-mediated forces in complex environments. The project involves strong collaborations with experimentalists and combines a synergy of electronic-structure, data-science, physical-chemistry and information-theory to investigate the origins of light-matter interactions in biology.

**Profile of Candidate:** We are looking for highly motivated postdoctoral researchers with a background in data-science and machine learning interested in using, as well as developing techniques to investigate the optical properties of organic materials. The postdoc will interact closely with other postdocs working on non-equilibrium excited state molecular dynamics where out-of-the-box thinking involving bringing in ideas from data and information science to the physical chemistry of fluorescence, will be explored.

**For further information:** Interested candidates can contact the PI, Ali Hassanali, at [ahassana@ictp.it](mailto:ahassana@ictp.it) to schedule a Zoom meeting. Please include a brief summary of your background and an expression of interest in the project.