

# JLab UGBoD Candidate Statement

Emilie Passemar, Indiana University

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## Academic Profile

Assistant Professor, Indiana University, 2014 - present.  
Director's Postdoctoral Fellow, Los Alamos National Laboratory, 2011 - 2014.  
Postdoctoral Researcher, IFIC, Valencia, Spain, 2009 - 2011.  
Early Stage Researcher, ITP, University of Bern, Switzerland, 2007 - 2009.  
PhD in Theoretical Physics, University Paris XI, Orsay, France, 2008.  
Master in Physics, University Paris XI, Orsay, France, 2004.

## Academic Service

Referee for various grant agencies: NSF, Spanish National Research Agency, Physical Review D, Physical Review Letter, Physics Letters B, Editor for Chinese Physics C.  
Referee for the Conference Experience for Undergraduate research students in Nuclear Physics.  
Member for one year of the committee awarding Jefferson Laboratory Thesis Prize.  
Member of the FLAVIANet Kaon Working Group.  
Member of the JLab eta factory working group. Contribution to the proposal for the JLab eta factory experiment.  
Convener of one working group (Amplitude Parametrization, CP and more) of ATHOS/PWA conference and of the GB working group of the Chiral Dynamics International Workshop.  
Coordinator of the  $\tau$ , low multiplicity and electroweak working group for the Belle II Theory Interface Platform initiative.  
Contribution to the proposal for the CEPC (Chinese Electron Positron Collider) project.

## Research Interests

My research interests are in Theoretical Nuclear Physics, in particular in low energy probes of electroweak interactions, fundamental symmetries, and effective field theories from QCD to physics beyond the standard model. I have recently studied  $\eta$  and  $\eta'$  decays to unveil the dynamics of QCD in its non perturbative regime. I am currently interested in understand the structure of the nucleon and in particular the nucleon form factors.

## Candidate Statement

The strength and openness of its users community is key to JLab's continued leadership and excellence in Nuclear Science. This particularly applies to close interactions and exchanges between experimentalists and theorists, which over the years proved to be essential for the success of the JLab experimental program. When I joined the users's community, I could immediately see the strength of these interactions, and have personally benefited from them. Yet, it should be always kept in mind that creating and maintaining a collaborative environment is not a trivial task and continued investment of effort is required for it to be preserved. I would be delighted to have the honor to serve as a theory liaison for the JLab Users Group of Directors. In this capacity, I will use my extensive experience of interactions and collaborations, both inside JLab and in the community at large, to maintain and foster collaborations between theorists and experimentalists, help to identify and support promising new initiatives and overall prepare JLab to be successful in its future scientific endeavors.