

In the context of the new EOS (Excellence of Science) programme in Belgium, the project “The H boson gateway to physics beyond Standard Model” has started the 1st of Jan 2018, as a consortium among the HEP groups in five Universities in Belgium — Universiteit Antwerpen (UA), Université catholique de Louvain (UCL), Universiteit Ghent (UG), Université Libre de Bruxelles (ULB), and the Vrije Universiteit Brussel (VUB). More details on the consortium can be found here: <https://www.be-h.be/>

The project offers 10 PhD positions on the following topics:

1	Theory vs. experiment on the Higgs boson potential	TH	Fabio Maltoni (UCL) and Alberto Mariotti (VUB)
2	Study of the HVV off-shell processes at CMS	EXP	Pascal Vanlaer (ULB) and Nick Van Remortel (UA)
3	Higgs boson production in the VBF mechanism at CMS	EXP	Pierre Van Mechelen (UA) and Laurent Favart (ULB)
4	The top-Higgs connection in the SMEFT and CMS	EXP	Andrea Giammanco (UCL) and Jorgen d’Hondt (VUB)
5	Electroweak couplings of the top quark in ttV	EXP	Didar Dobur (UG) and Andrea Giammanco (UCL)
6	Search for a heavy resonance decaying into Z+A/H at CMS	EXP	Christophe Delaere (UCL)
7	Search for dark Z bosons with lepton pairs at CMS	EXP	Steven Lowette (VUB) and Barbara Clerbaux (ULB)
8	Displaced heavy flavour identification at CMS	EXP	Freya Blekman (VUB)
9	Search for sterile neutrinos at CMS	EXP	Barbara Clerbaux (ULB) and Didar Dobur (UG)
10	Displaced tau and hadronic signatures in CMS	EXP	Giacomo Bruno (UCL)

Some further details on these positions:

- Positions are fully funded for four years and will normally start in fall 2018 (earlier starts can be considered).
- 7 out of 10 positions are joint between two institutions/advisors. Candidates will spend two years in the first University and two years in the second one, and will obtain a double PhD degree. However, as Belgium is a relatively small western European country, it is feasible to commute to all groups without moving by public transport, which is generally also financially supported by the university.
- The be.h consortium foresees a rich training program including the participation to several international doctoral schools, workshops, and conferences, as well as visiting periods to CERN and to other international institutions.
- The positions are open to candidates of any nationality. The EOS consortium welcomes applicants with diverse backgrounds and experiences. We regard gender equality and diversity as a strength and an asset.
- The positions will remain open until suitable candidates are found. Interested persons are encouraged to apply before 1st of February 2018, when the first review of the applications will take place. After that, reviews will take place every 1st day of the following months. Status of the position will be updated regularly in this web page.
- Candidates should express preferences (ordered list) on the positions that they would like to apply to in the cover letter of the application.
- Candidates should hold a Master diploma, or equivalent, by the appointment starting time, which is subject to mutual agreement but cannot be later than 31/12/2018.

- Applications can be submitted by clicking on the “Apply for this job” button on <https://cp3.irmp.ucl.ac.be/Jobs/Details/EOS-beh-PhDs> . In the form, contact information, CV, personal interests and names and e-mails of reference persons (min=1,max=3), should be provided. (Application material and the recommendation letters from senior scientists should be submitted ONLY using the online form).

Contacts:

Hiring and Equal opportunity officers: Barbara Clerbaux (ULB) and Nick Van Remortel (UA).

Detailed information on the research topic of a given opening can be obtained by directly contacting the corresponding advisors via e-mail.

Consortium Coordinator: Fabio Maltoni (UCL)