

S  verine OVYN

CURRICULUM VIT  

PERSONAL

Date of Birth: August 31, 1982
Place of Birth: Anderlecht, Belgium
Status: Single
Language: French
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ADDRESSES

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FORMATION EXPERIENCE

Doctorat en Sciences (Ph. D.)

January 2006 - Present

Universit   catholique de Louvain, Louvain-La-Neuve (Belgium)

Subject: *Photon-induced physics at the LHC, including WH and Wt associated productions*

Supervisor: Prof. V. Lema  tre

DEA en Sciences Physiques (Master)

September 2004 - January 2006

Universit   catholique de Louvain, Louvain-La-Neuve (Belgium)

Title: *Production du boson de Higgs par interactions photon-proton dans le cadre du Mod  le Standard*

Supervisor: Prof. V. Lema  tre

Licence en Sciences Physiques

September 2003 - June 2004

Universit   catholique de Louvain, Louvain-La-Neuve (Belgium)

Title: *Performance du syst  me de d  clenchement de CMS pour la production de bosons de Higgs suivis de leur d  sint  gration en leptons taus*

Supervisor: Prof. V. Lema  tre

TEACHING EXPERIENCE

Teaching assistant (UCL)

September 2004 - Present

Supervision of laboratory and exercise sessions for undergraduate students (250h/year) in classical mechanics and electromagnetism

SCIENTIFIC STAY

CERN Summer Student, Geneva

July-August 2004

Supervisor: K. Blaum (CERN)

- ◇ The aim of this stay was to perform ion simulation studies to optimize the geometry for the deflector of a reference ion source, with respect to the shape of the ion beam and the transport efficiency. ISOLTRAP experiment, CERN.

6th ESA Student Parabolic Flight Campaign, Bordeaux

1 week, July 2003

Supervisors: J. Govaerts (UCL) and Gh. Grégoire (UCL)

- ◇ Test of the constancy of the velocity of light using a zero-gravity environment.

RESEARCH ACTIVITIES

◇ Trigger activities for CMS Forward Physics: software developments

(2007-2008) Contributions to the development of new trigger paths (L1+HLT) for the Forward Physics Group, in particular for the production of exclusive dielectrons, dijets, electron-jet-gap and forward jets with rapidity gaps in between. Work with X. Rouby and J.J. Hollar. These triggers have been integrated in the CMS software before the massive MC production (CSA07).

◇ Photon induced physics at LHC: phenomenology and analysis

(2005-present) Contributions to Louvain photon group activities (UCL CP3) in photon-photon and photon-proton related research. Interests in the production of photon-induced Higgs boson and single top quark. Extraction of the V_{tb} value of the Cabibbo-Kobayashi-Maskawa matrix element. Participation to the $\gamma\gamma \rightarrow \mu^+\mu^-$, $\gamma\gamma \rightarrow e^+e^-$ approved analysis for the CMS Forward Physics group, with its application to early LHC data observation. Photon-induced Higgs boson and single top quark production is also investigated.

◇ Fast simulation of a general purpose particle detector: software development

(2005-present) Design, development and validation with X. Rouby of DELPHES, a fast simulator of a general purpose particle detector.

SKILLS AND COMPETENCES

ORGANISATIONAL ◇ CP3 lunch seminar chairwoman

September 2008 - present

Organisation of weekly internal seminars during the academic semesters. The aim of these is the presentation of the work of Ph. D. students, post-docs and any members of the Center for Particle Physics and Phenomenology (UCL CP3).

◇ CERN L3 coordinator

September 2007 - June 2008

Representative of the Forward Physics Group to the Trigger Study Group (position shared with X. Rouby)

LANGUAGE

◇ **French:** Mother tongue

◇ **English:** Intermediate oral and written skills

COMPUTER

Developer in C/C++/Root; user of Fortran 77, Pythia, MadGraph, CalcHEP, Com-
pHEP, Tauola. Linux and MS Windows environments

OTHERS Holder of a Belgian driving license, category B vehicle.

MAJOR ORAL COMMUNICATIONS

J. de Favereau, **S. Ovin**, on behalf of the Louvain Photon group, *High energy single top photoproduction at LHC*, **International Worskhop on Top Quark Physics**; La Biodola, Italy, May 20 (2008).

S. Ovin, on behalf of the Louvain Photon group, *Associated W and Higgs boson photoproduction and other electroweak photon induced processes at the LHC*, **Worskhop on High-Energy Photon Collisions**; CERN, Switzerland, April 25 (2008).

S. Ovin, on behalf of the CMS collaboration, *Exclusive dilepton and Upsilon production with CMS: a feasibility study*, **XVI International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS08)**; London, England, April 8 (2008).

S. Ovin, on behalf of the Louvain Photon group, *High energy photoproduction at the LHC*, **Heidelberg-Liege-Paris-Wroclaw Meeting (HLPW 2008)**; Spa, Belgium, March 8 (2008).

M Grothe, V. Lemaître, **S. Ovin**, K. Piotrkowski, X. Rouby *Triggering on forward physics with CMS at the LHC*, **Deutsche Physikalische Gesellschaft (DPG) conference**; Freiburg, Germany, March 6 (2008).

S. Ovin, *L1 trigger studies*, **CERN/Diffraction and fwd physics - CMS week**; CERN, Switzerland, June 20 (2007).

S. Ovin, *High energy photoproduction at the LHC*, **2007 International Conference on Photon interactions (PHOTON2007)**; Paris, France, July 10 (2007).

PUBLICATIONS

2008 The CMS Collaboration, S. Chatrchyan et al, *The CMS experiment at the CERN LHC*, JINST **3** S08004 (2008). [[web](#)]

W Adam et al, *The CMS tracker operation and performance at the Magnet Test and Cosmic Challenge*, JINST **3** P07006 (2008). [[pdf](#)]

J. de Favereau de Jeneret, S. Ovin, *Single top quark photoproduction at the LHC*, Contribution to the CERN workshop on high energy photon collisions at the LHC, April 2008 (CP3-08-31), Nucl. Phys. B (Proc. Suppl.) 179-180 (2008) 277-284. [[hep-ph:0806.4886](#)]

S. Ovin, J. de Favereau de Jeneret, *High energy single top photoproduction at the LHC*, Presented at the International Workshop on Top Quark Physics (TOP2008), La Biodola, Isola d'Elba, Italy, May 2008, (CP3-08-28), to be published in "Il nuovo cimento". [[hep-ph:0806.4841v1](#)]

S. Ovin on behalf of the CMS Collaboration, *Exclusive dilepton and Upsilon production with CMS: a feasibility study*, Presented at the XVI International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS08), April 2008. (CP3-08-16).

S. Ovin, *Associated W and Higgs boson photoproduction and other electroweak photon induced processes at the LHC*, Contribution to the CERN workshop on high energy photon collisions at the LHC, Switzerland, April 2008, (CP3-08-14), Published in Nucl. Phys. B (Proc. Suppl.) 179-180 (2008) 269-276. [[hep-ph:0806.1157](#)]

S. Ovin on behalf of the Louvain Photon group, *High energy photoproduction at the LHC*, Presented at the Joint Meeting Heidelberg-Liège-Paris-Wroclaw (HLPW08), Spa, 6-9 March 2008 (CP3-08-15), published as a volume of the AIP Conference Proceedings No 1038. [[pdf](#)]

S. Ovin, X. Rouby, J.J. Hollar, *Forward Physics Triggers*, CMS internal note (CP3-08-07), CMS IN-2008/028.

2007

J. Hollar, S. Ovin, X. Rouby, *Exclusive $\gamma\gamma \rightarrow \ell^+\ell^-$ production*, (CP3-07-28), Physics Analysis Summary. [[CMS PAS DIF-07-001](#)]

S. Ovin, *High energy photoproduction at the LHC*, Proceedings of the International Conference on the Structure and Interactions of the Photon, July 2007 (CP3-07-27), Nucl. Phys. B (Proc. Suppl.) 184 (2008) 166-168. [[pdf](#)]

D. Abbaneo et al., *Tracker operation and performance at the Magnet Test and Cosmic Challenge*, CERN CMS NOTE-2007-029 (2007). [[pdf](#)]

CMS Collaboration (J. Nash et al.), *CMS expression of interest in the SLHC*, CERN LHCC-2007-014, CERN LHCC-G-131. [[pdf](#)]

CMS Collaboration (David G. d'Enterria et al.), *CMS physics technical design report: Addendum on high density QCD with heavy ions*, CERN LHCC-2007-009, J. Phys. G **34** 2307-2455 (2007). [[pdf](#)]

2006

CMS Collaboration (G.L. Bayatian et al.), *CMS physics: Technical design report*, CMS Collaboration, CERN LHCC-2006-001, CMS TDR-008-1. [[pdf](#)]

CMS Collaboration (G.L. Bayatian et al.), *CMS technical design report, volume II: Physics performance*, CMS Collaboration, CERN LHCC-2006-021, CMS TDR-008-2, J. Phys. G **34** 995-1579 (2006). [[pdf](#)]

The CMS and TOTEM diffractive and forward physics working group, *Prospects for Diffractive and Forward Physics at the LHC*, CERN LHCC2006-039/G-124. [[pdf](#)]

2005

R. Brauer et al., *Design and test beam performance of substructures of the CMS tracker end caps*, CERN CMS NOTE2005-025, December 2005. 45pp.

W. Adam et al., *The effect of highly ionising particles on the CMS silicon strip tracker*, NIM A **543** (2005) 463-482. [[pdf](#)]

D. Bertrand, J. Govaerts, Gh. Grégoire, S. Ovin; *The APTOVOL experiment: a parabolic test of the constancy of the velocity of light*, Physica Mag. 27 (2005) 227-236.

S. Ovin, *Production du boson de Higgs par interactions photon-proton dans le cadre du Modèle Standard*, Rapport de DEA, January 2005.

- 2004** S. Ovin, *Performance du système de déclenchement de CMS pour la production de bosons de Higgs suivis de leur désintégration en leptons taus*, Mémoire, June 2004.
- 2003** EDU News, *European Space Agency's Newsletter on education*. [\[pdf\]](#)