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Since 2006 I have been a professor at the Vrije Universiteit Brussel (VUB) where I am now full professor. As part of my university, I am the VUB-director of the Interuniversity Institute for High Energies (IIHE) with about 100 members, I was the president of the physics department and I am coordinator of a center of excellence for high-energy physics, which currently includes 23 professors. In the Belgian context, since 2013 I am the Spokesperson for the Flemish participation in the CMS experiment at CERN, i.e. the largest FWO Big Science project, and the Spokesperson for the Belgian CMS Tracker Upgrade project, i.e. the largest experimental project ever for fundamental physics in Belgium.



Initially, I measured the mass of the W boson with the LEP collider at CERN, a topic recently highlighted in the media. Since then, 26 PhD students have graduated or are working towards graduation with me as a promotor with research mainly at the LHC collider at CERN. With the CMS experiment at this particle collider, I initiated top quark research about the heaviest fundamental particle we know. Shortly after our discovery of the Higgs boson in 2012, I was elected chair of the CMS Collaboration Board (2014-2017) where all major decisions of this 4000-person international collaboration are made. Additionally, I chaired the CMS International Committee and was the founding co-chair of the CMS Career Committee. Meanwhile, I was invited for keynote talks at the most prominent conferences worldwide and received individual prizes from the World Economic Forum, the National Academy and the university. More importantly, a number of my students and postdocs have received prestigious awards and positions.

For the period 2018-2020 I was elected chair of the European Committee for Future Accelerators (ECFA). In this role I represented the European community of particle physicists (above 10000 persons strong) and played an instrumental role in updating the European Strategy for Particle Physics. I initiated (and participated in) amongst others the international study group to compare Higgs physics at future colliders, the development of a European Detector R&D Roadmap and international working groups to enhance the synergies of physics and detector studies across various future Higgs factories.

SELECTED INTERNATIONAL AND NATIONAL LEADERSHIP ROLES

- **Chairperson of the European Committee for Future Accelerators**, ECFA (elected, 2018-2020)
- **Strategy Secretariat to update the European Strategy for Particle Physics** (2018-2020)
- **Director of the Inter-university Institute for High Energies** (2011-now, VUB part) *~100 members*
- **Coordinator VUB Strategic Research Programme High-Energy Physics** (2013-now) *23 professors*
- **President of the Young Academy of Belgium** (Flanders) (elected, 2013-2015) *founding president*
- **President of the Department of Physics** (elected, 2012-2014 and 2016-2018, VUB)
- **President of the Education Council** (2013-2015, Faculty of Science and Bio-engineering, VUB)
- **Chairperson of the CMS Collaboration Board** (elected, 2014-2017) & **Secretary** (2013-2014)
- **Member CMS Executive Board, Management Board and Finance Board** (2013-2017)
- **Chairperson CMS International Committee** (2013-2019) & **CMS Search Committee** (2014-2017)
- **Chairperson CMS Career Committee** (2012-2014) *founding chairperson*
- **First convener of the CMS top quark group & Member of Physics Coordination** (2007-2008)

SELECTED & RECENT PROJECT LEADERSHIP

- **PI of the CMS Phase-2 Tracker project in Belgium** (2017-2023) *~10M EUR*
- **PI Flemish contribution to CMS** (2013-now, largest Big Science project Flanders) *~1.2M EUR per year*
- **Deputy Spokesperson of an Excellence of Science (EoS) project "be.h"** (2018-2021) *~4M EUR*
- **PI of several other research projects** *~40M EUR (incl. the above) obtained in open competition*

SCIENTIFIC IMPACT AND OTHER SCIENTIFIC OUTPUT

- **Publications:** 1230 with ~150k citations, h-index 172 (source INSPIRE <http://inspirehep.net/>)
- **Promoter of 26 PhD students and 14 master students**, several winning international awards
- **Above 250 presentations** at conferences, workshops, seminars, and international meetings
- **Co-author of more than 100 internal publications** in large international collaborations
- **Annual Prize for Science Valorisation** by the VUB (2014, 150k EUR)
- **Awarded Young Scientist 2013** by the World Economic Forum (2013)
- **Prize for Science Communication** by the Royal Flemish Academy of Belgium (2013)
- **Discovery of the Higgs boson** as member of the CMS collaboration (2012)
- **Frequently invited for outreach talks**, 150+ presentations on science for the general public
- **Extensive experience with media**, 100+ appearances (television, radio, national newspapers)
- **Keynote talks at academic, career, outreach & political events, debates, academic openings, ...**
- **PI of three Innoviris projects**, in Belgium, incl. STEM education on the COVID pandemic
- **Organisation of major conferences/workshops:** recent examples are: Joint APPEC-ECFA-NuPECC Seminar series (initiator, 2019), EPS-HEP conference (member local organising committee, 2019), Future Circular Collider week (main local organiser, 2019), CERN School of Computing (main local organiser, 2016), CMS Week in Brussels (main organiser, 2011), International Top Quark Conference (main organiser, 2010), member of 20+ committees of prominent international conferences/workshops
- **European delegate in the International Committee for Future Accelerators**, ICFA (2018-2020)
- **Chairperson MYRRHA International Advisory Committee** (2020-now) ESFRI ~1.6B EUR project
- **Invited member to CERN Council** and **member of CERN's Scientific Policy Committee** (2018-2020)
- **Member of European APPEC (astroparticle) and NuPECC (nuclear phys) committees** (2018-2020)
- **Member of the European Physics Society HEPP board** (2018-2020)
- **Member of the LEP Electroweak Working Group**, combining W and Z boson results at LEP
- **Convenor of the Standard Model Handles and Candles Working Group**, Les Houches (2007)
- **Belgian delegate to the Restricted European Committee for Future Accelerators** (2012-2018)
- **Belgian delegate to the International Particle Physics Outreach Group** (2006-2014)
- **Member of advisory boards**, recent examples are: Scientific and Strategic Council of IJCLab (2020-now), International Advisory Committee for Physics and Detector studies for Higgs Factories (initiator, 2020-now), FCC Physics & Experiments workshops (2020-now), European H2020 ESCAPE external expert advisory board (2019-now, <https://projectescape.eu>), Scientific Advisory Panel of NIKHEF (2019-now), Scientific Adv. Comm. Institute of Physics at the Uni. of Amsterdam (chair, 2016-2017)
- **Member of international review panels**, recent examples are: ECFA Detector R&D Roadmap (initiator, 2020-now), high-level committee for the Dutch National Roadmap for Large Research Infrastructures (2019-2020), Spanish Research Agency panel for HEP (2019), HCERES review panel for IRFU (2018), MYRRHA international review panel of the Flemish Government (chair, 2017), NWO committee for VICI grants (2014-2018), Flemish delegate in the NSF International Oversight & Finance Group of IceCube (2014-now), FWO Committee for International Collaboration (2012-2017)

SELECTED & RECENT REALISATIONS OF ADDED VALUE OUTSIDE THE ACADEMIC COMMUNITY

- **Co-creator/author "Van Knal tot Zwijnenstal"** (2021), children's book age 5-8 for >2000 schools
- **Chair jury New Scientist Science Talent** (2021), competition in Belgium and the Netherlands
- **Invited by Buurman to his "Vuurman" project** (2021), inspire professional musicians with our science
- **COVID e-traject "Generatie Pandemie"** (2021, PI, 34k EUR), developed for secondary schools
- **Chair or member of several Advisory or Review Committees**, not always in academia