

Prof. Frédéric ROBERT

Curriculum Vitae

Short CV

Frédéric Robert is Dean and Professor in electricity and electronics at the Brussels Faculty of Engineering.

He has held various positions within the Université libre de Bruxelles (ULB): Advisor to the Rector for teaching and learning in higher education, Vice-Dean of the École polytechnique de Bruxelles and Head of the Embedded Electronics research unit of the Bio-, Electro- And Mechanical Systems (BEAMS) department. From 2005, he supervised the engineering education department of the École polytechnique de Bruxelles: the Bureau d'Appui Pédagogique en Polytechnique (BAPP).

His research interests include science education (project-based learning, conceptual change, cognitive obstacles) and both advanced engineering in electricity and electronics (high frequency transformers, high energy physics instrumentation, industrial electronics).

He holds a Ph.D. in Applied Sciences (1999) and a Master of Engineering in electronics and telecommunications (1995).

Education

Courses

ELECH2001 Electricity (5 ECTS) – BA2 IR

ELECH201 Electricity and electronics (5 ECTS, cotitular Johan GYSELINCK) – BA2 IRBIO

ELECH309 Projet intégré (5 ECTS, cotitular Antoine NONCLERCQ, Dragomir MILOJEVIC, François HORLIN, François QUITIN) – BA3 IR ELEC

STAGH500/501 60-day Internship (10 ECTS) – MA1/2 IR all options

promotor or copromotor of 86 master thesis, 44 industrial internships, 38 student projects

Management responsibilities

2020 - ... Dean of the Ecole Polytechnique de Bruxelles (EPB)

2018-2020 Elected Vice-dean, EPB

2014-2018 Vice-dean for teaching, EPB

2014-2018 Group leader of the Embedded Electronics research unit

Educational services

2010-2016 Advisor to the Rector for teaching and learning in higher education

2010-2018 Academic responsibility of the Bureau d'Appui Pédagogique, EPB

2010-2014 Director of the 'bachelor in engineering science' program, EPB

Scientific profile

Profile information: [ULB Research Portal](#)

ISI-ranked journal papers: **36**

Citations (Scopus): **376**

h-index (Scopus): **11**

ORCID ID: [0000-0001-6520-5873](#)

Peer-reviewed conference papers: **53**

Citations (Google): **1327**

h-index (Google): **15**

Five main publications

Sommeillier, R., Quinlan, K.M., Robert, F., Domain of validity framework: a new instructional theory for addressing students' preconceptions in science and engineering. *Studies in science education*. (2020), <https://doi.org/10.1080/03057267.2020.1824472> (impact factor 5.25)

Abada, A., Abbrescia, M., AbdusSalam, S.S. *et al.* FCC-ee: The Lepton Collider. *Eur. Phys. J. Spec. Top.* **228**, 261–623 (2019). <https://doi.org/10.1140/epjst/e2019-900045-4>, 281 citations

Abada, A., Abbrescia, M., AbdusSalam, S.S. *et al.* FCC Physics Opportunities. *Eur. Phys. J. C* **79**, 474 (2019). <https://doi.org/10.1140/epjc/s10052-019-6904-3>, 192 citations (impact factor 4.5)

Marchal, P., Verkest, D., Shickova, A., Catthoor, F., Robert, F., Leroy, A., Spatial division multiplexing: a novel approach for guaranteed throughput on NoCs, Third IEEE/ACM/IFIP International Conference on Hardware/Software Codesign and System Synthesis, IEEE (2005), 91 citations.

Robert, F., Mathys, P., Schauwers, J.P., A closed-form formula for 2-D ohmic losses calculation in SMPS transformer foils, *IEEE Transactions on Power Electronics* (2001), 79 citations (impact factor 9.5)