1. Curriculum vitae: **Patrick Wagner**

1) Personal data

Place of birth: Aschaffenburg (Germany), June 10, 1967
Marital status: married to Tania Houttekier, children: Merlijn (°2000) and Merel (°2003)
Languages: German (mother tongue), Dutch and English at C1 level (CEFR standard)
Address: Callaertstraat 12, B-1800 Vilvoorde phone: 0032 – (0)2 – 757 63 23

Publications: 435 contributions listed on Google Scholar, 6131 citations, h-index 43, I10 index 160

2) Affiliation

KU Leuven,
Department of Physics and Astronomy
Celestijnenlaan 200 D, B-3001 Leuven

E-mail: Patrick.Wagner@fys.kuleuven.be
Phone: 0032 – (0)16 – 32 21 79
Web: https://fys.kuleuven.be/zmb

3) Education

1986 – 1991 'Diplom-Physiker' at the *Technical University Darmstadt* / Germany, degree: 'mit Auszeichnung bestanden' (summa cum laude)

1991 – 1994 Doctoral studies (Ph.D.) in experimental physics at *TU Darmstadt*, degree: sehr gut bestanden' (magna cum laude) on November 14, 1994.

4) Employment

Since 2022 Head of the Laboratory for Soft Matter and Biophysics.

Since 2014 Full professor of physics at KU Leuven, Department of Physics and Astronomy.

2001 – 2014 Professor of physics at Hasselt University, since 2011 as full professor.

1995 – 2001 Postdoctoral fellow at the Laboratory for Solid State Physics & Magnetism, KU Leuven.

1991 – 1994 Research assistant at the Institute for Solid State Physics at TU Darmstadt, Germany.

5) Current research activities

a) Development of bio- and chemosensors for the detection and characterization of:

- Mutations in nucleic acids,
- Neurotransmitters and inflammation markers in body fluids,
- Living cells, bacteria, proteins, lipid vesicles, and membranes.

b) Mainly employed biosensing techniques:

- Electrochemical impedance spectroscopy EIS,
- Microgravimetry (quartz-crystal microbalance) with dissipation monitoring QCM-D,
- Heat transfer through biologically functionalized surfaces (HTM, own development).

c) Development of synthetic receptors and surface-chemical coupling routes:

- Molecularly- and surface-imprinted polymers (MIPs and SIPs)
- Coupling of natural and synthetic receptors to various chip materials including synthetic diamond, graphene, noble metals, and biocompatible oxides (Al_2O_3, TiO_2).

6) Teaching assignments

- *'Biophysics'* for students of the 1st bachelor Biology (9 ECTS points).
- *'Physics with elements of mathematics'* for the 1st bachelor Pharmacy (9 ECTS points).
- *'General physics 2'* for the 1st bachelor Physics/Mathematics (6 ECTS points).
- *'Transport processes in biological systems'* for master students in Biophysics, Biochemistry, and Biotechnology, jointly with prof. Marc Fransen (6 ECTS points).

7) Scientific distinctions

2008 – 2014 *Methusalem Grant* of the Flemish Government (01/01/2008 – 31/12/2014).

1996 – 1998 *Marie-Curie-Fellowship* of the European Union (01/06/1996 – 31/05/1998) with the project 'Wave-vector dependent tunneling in novel superconductors'.

1991 Master-student award of the WE-Heraeus Foundation.

Others Several teaching distinctions awarded by the Faculties of Science and Pharmacy.

8) Editorial tasks

Since 2018 Editor in the biosensors section of the MDPI journal *Sensors* (A1 journal).

Since 2016 Editor-in-chief of the Elsevier journal *Physics in Medicine*.

Since 2009 Guest editor of the annual section on *'Engineering of Functional Interfaces'* in the Wiley journal *Physica Status Solidi A* (A1 journal).

9) Scientific community services

2023 Vice-chair of the *3rd European Biosensor Symposium EBSS* in Aachen, Germany.

Since 2020 Member of the *Interdisciplinary Panel* of *FWO – Research Foundation Flanders*.

Since 2019 Board member of the Belgian Biophysical Society.

2016 - 2019 Chair of the scientific advisory board of the *Kurt-Schwabe-Institute for Measurement- and Sensor Technology* (Dresden, Germany), board member since 2011.

2010 - 2015 Member of the expert panel '*W&T 7 – Energy, Electrical Engineering, Electronics, and Mechanics'* of *FWO – Research Foundation Flanders*.

Since 2008 Co-organizer of the annual, interdisciplinary workshop *'EnFI - Engineering of Functional Interfaces'* for Ph.D. students and postdoctoral researchers.

2006 & 2007 President of the *Belgian Physical Society.*

2005 & 2008 Vice president of the *Belgian Physical Society.*

Ongoing Reviewer of journals (selected): *Biosensors & Bioelectronics, Physical Review Letters, Europhysics Letters, Langmuir, Sensors, Nature Nanotechnology, Analytical Chemistry, Analytical and Bioanalytical Chemistry, Food Chemistry, Sensors and Actuators A (Physical) and B (Chemical), Lab-on-a-Chip, Electrochimica Acta etc.*

Project evaluations for foreign research foundations (*e.g.* Nederlandse Organisatie voor Wetenschappelijk Onderzoek NoW, Czech Science Foundation GACR, ERC Starting Grants, UEFISCSU Romania, FWF Austria, Israel Science Foundation).

Memberships in external Ph.D. juries including *e.g.* Antwerp University, University of Ghent, Jyväskylä University, TU Eindhoven, TU Dresden, TU Delft, University Vienna.

10) PhDs

Until date, P. Wagner was promoter of 25 successfully defended 20 Ph.D. projects, being 20 at Hasselt University and 5 at KU Leuven. Four running Ph.D. projects will be defended at KU Leuven during 2022.

11) Recent invited lectures

- Dresdner Sensor Syposium, Dresden, Germany (5 – 7/12/202)
- 10th Intl. Conference on Molecular Electronics and Bioelectronics, Nara, Japan (24 – 26/06/2019).
- Point-of-Care, Biosensors & Mobile Diagnostics, Rotterdam, The Netherlands (18 – 19/06/2019)
- Bioinspired Materials 2018, Manchester Metroplolitan University, UK (10/10/2018)
- International Meeting on Chemical Sensors IMCS 2018, Vienna, Austria (15 – 19/07/2018).
- First European Biosensor Symposium, Potsdam, Germany (20 – 23/03/2017).