Wrocław University of Science and Technology
Doctoral School

ACADEMIC TEACHER PROFESSIONAL EXPERIENCE

DOCTORAL SCHOOL OF WROCŁAW UNIVERSITY OF SCIENCE AND TECHNOLOGY

1. Basic information

Name, surname:	Grzegorz Soboń
Grade / Title:	Dr hab. inż., prof. uczelni
Scientific discipline	**automatyka, elektronika, elektrotechnika i technologie kosmiczne / control, electronic, electrical engineering and space technologies**
Faculty:	W12 Wydział Elektroniki, Fotoniki i Mikrosystemów / Faculty of Electronics, Photonics and Microsystems
Email address:	grzegorz.sobon@pwr.edu.pl
Link to home page and/or research profiles (Google Scholar, ResearchGate, etc.)	www.comb.pwr.edu.pl https://scholar.google.pl/citations?user=Ts2C370AAAAJ&hl=pl https://orcid.org/0000-0003-3857-3958 https://www.webofscience.com/wos/author/record/1936330

2. Publication record

Up to 10 most important papers published over the period of previous 10 years.

No.	Description (authors, publication title, journal / conference, DOI)	Publication year
1.	J. Boguslawski, G. Palczewska, S. Tomczewski, J. Milkiewicz, P. Kasprzycki, D. Stachowiak, K. Komar, M. J. Marzejon, B. L. Sikorski, A. Hudzikowski, A. Głuszek, Z. Łaszczych, K. Karnowski, G. Soboń, K. Palczewski, and M. Wojtkowski, "In vivo imaging of the human eye using a two-photon excited fluorescence scanning laser ophthalmoscope," *Journal of Clinical Investigation* **132**, e154218 (2022)	2022
2.	D. Stachowiak, M. Marzejon, J. Bogusławski, Z. Łaszczych, K. Komar, M. Wojtkowski, and G. Soboń, "Femtosecond Er-doped fiber laser source tunable from 872 to 1075 nm for two-photon vision studies in humans," *Biomed. Opt. Express* **13**, 1899-1911 (2022)	2022
3.	O. Szewczyk, K. Tarnowski, A. Głuszek, D. Szulc, K. Stefańska, P. Mergo, and G. Soboń, "All-normal dispersion supercontinuum vs. frequency-shifted solitons pumped at 1560 nm as seed sources for Thulium-doped fiber amplifiers", *Opt. Express* **29**, 18122-18138 (2021).	2021
4.	Z. Łaszczych and G. Soboń, "Dispersion management of a nonlinear amplifying loop mirror-based erbium-doped fiber laser," *Opt. Express* **29**, 2690-2702 (2021).	2021
5.	D. Stachowiak, J. Bogusławski, A. Głuszek, Z. Łaszczych, M. Wojtkowski, G. Soboń, "Frequency-doubled femtosecond Er-doped fiber laser for two-photon excited fluorescence imaging", *Biomed. Opt. Express* **11**, 4431-4442 (2020)	2020
6.	K. Krzempek, D. Tomaszewska, A. Głuszek, T. Martynkien, P. Mergo, J. Sotor, A. Foltynowicz, and G. Soboń, "Stabilized all-fiber source for generation of tunable broadband f_{CEO}-free mid-IR frequency comb in the 7 – 9 µm range," *Opt. Express* **27**, 37435-37445 (2019)	2019

7.	G. Soboń, T. Martynkien, K. Tarnowski, P. Mergo, J. Sotor, „Generation of sub-100 fs pulses tunable from 1700 to 2100 nm from a compact frequency-shifted Er-fiber laser", *Photonics Research* **5**, 151-155 (2017)	2017
8.	G. Soboń, T. Martynkien, P. Mergo, L. Rutkowski, A Foltynowicz, „High-power frequency comb source tunable from 2.7 to 4.2 µm based on difference frequency generation pumped by an Yb-doped fiber laser", *Optics Letters* **42**, 1748-1751 (2017)	2017
9.	G. Sobon, J. Sotor, T. Martynkien, K.M Abramski, „Ultra-broadband dissipative soliton and noise-like pulse generation from a normal dispersion mode-locked Tm-doped all-fiber laser", *Optics Express* **24**, 6156-6161 (2016)	2016
10.	G. Soboń, "Mode-locking of fiber lasers using novel two-dimensional nanomaterials: graphene and topological insulators", *Photonics Research* **3**, A56-A63 (2015)	2015

3. Projects and grants

List of the most important 5 projects/grants with basic description including: title, source(s) of funding, name of the call, role in the project (e.g., principal investigator).

1.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Towards smart lasers: nonlinearity management in optical fibers for ultrashort laser pulse generation supported with machine learning
	Sources of funding	National Science Center (NCN)
	Name of the call	Sonata BIS
	Implementation period	04.2022 – 04.2027
2.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Design and fabrication technology of optical fiber components for lasers and amplifiers
	Sources of funding	National Science Center (NCN)
	Name of the call	Preludium BIS
	Implementation period	09.2022 – 09.2026
3.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Compact femtosecond fiber laser for multiphoton biomedical imaging
	Sources of funding	National Centre for Research and Development (NCBR)
	Name of the call	LIDER
	Implementation period	01.2021 – 01.2024
4.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Fiber-based mid-infrared frequency combs for laser spectroscopy and environmental monitoring
	Sources of funding	Foundation for Polish Science (FNP)

	Name of the call	First TEAM
	Implementation period	06.2018 – 11.2022
5.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Ultrashort-pulsed fiber amplifiers for the mid-infrared spectral range
	Sources of funding	The Polish Ministry of Science and Higher Education (MNiSW)
	Name of the call	Iuventus Plus
	Implementation period	10.2016 – 04.2019

4. International experience

Brief description of international cooperation and experience (e.g., research stays, cooperation with foreign entities, coordination or participation in international projects or programmes, keynote speeches and presentations delivered at renowned international conferences, visiting professor stays, invited lectures).

No.	Description	Year(s)
1.	Cooperation with Umeå University, Department of Physics, Sweden. Post-doc stay (10.2016-05.2017), multiple short-term research stays, visits and seminars. Multiple joint publications (>10 papers)	Since 2016
2.	Collaboration with TRUMPF Laser GmbH, Fiber Lasers R&D Department, Schramberg, Germany – short research stays and invited lectures	Since 2018
3.	Multiple oral talks given at renowned international conferences, like: OSA High-Brightness Sources Congress, CLEO US, CLEO/EQEC Europe, SPIE Photonics West, OSA Nonlinear Optics, etc.	2011 - 2023
4.	Participation in program committees of several international conferences (CLEO/Europe-EQEC: 2019, 2021, 2023; EPS-QEOD Europhoton: 2020, 2022, EOS Annual Meeting EOSAM: 2021, CLEO Pacific Rim: 2018)	Since 2019
5.	Invited Talk @ CLEO Pacific Rim/OECC/PGC 2017, 31.07 – 4.08.2017, Singapore. Title: "Ultrafast fiber lasers mode-locked with 2D nanomaterials"	2017
6.	Collaboration with KTH Royal Institute of Technology, Sweden (Dr. Robert Lindberg, Prof. Fredrik Laurell, Prof. Valdas Pasiskevicius) – research visits, joint publications	Since 2014
7.	Collaboration with University of Vienna, Austria (Dr. Oliver Heckl) – visits, joint grant proposals, joint publications	Since 2019

5. Experience in teaching doctoral students

Brief description of experience in teaching doctoral students (e.g., courses in doctoral schools and PhD studies, summer/winter schools for doctoral students, tutorials, trainings, etc.).

No.	Description	Year(s)
1.	Course “Money, money, money! How to write your first research grant proposal and obtain funding” in doctoral school at PWr	Since 202
2.	Lecturer at the International Siegman School on Lasers (for PhD students), organized by Optica (former: The Optical Society, OSA)	2022
3.	Lecturer at the SupUVIR First Workshop on Photonic Crystal Fiber Technology for Ultrafast Optics Applications (9-12.04.2018) for PhD students, Institute of Electronic Materials Technology (ITME) in Warsaw	2018

6. List of supervised doctoral students

List of all supervised doctoral students that defended the PhD including: name of the student, dissertation title, year of awarding PhD.

No.	Name, surname	Dissertation title	Year of awarding PhD
1.			
2.			
3.			

7. Prizes and awards

The most important national and international prizes and awards related to research, development and teaching activities.

No.	Description	Year
1.	Warsaw: Polish Prime Minister Award for the best PhD thesis in year 2013.	2015
2.	Polish Ministry of Science and Education Prize for outstanding achievements in fundamental sciences (team prize shared with Prof. Krzysztof Abramski and Dr. Jarosław Sotor)	2014
3.	Stipend of the Polish Ministry of Science and Higher Education for outstanding young scientists (3-year scholarship)	2014
4.	START stipend for young scientists funded by the Foundation for Polish Science (FNP) - twice (in 2013 with distinctions).	2013, 2014
5.	The ABB Prize, awarded by the Director of ABB Research Center	2013

8. Other significant achievements

Information on other significant achievements related to research, development and teaching activities.

Research group leader:

- Optical Frequency Comb Spectroscopy Group (www.comb.pwr.edu.pl). In 2018, I established a new research group at Wroclaw University of Science and Technology. The group consists currently of 9 researchers (PI, 2 post-docs, 4 PhD students and 2 undergraduate students), and develops novel types of ultrafast lasers for spectroscopy and biomedical applications

Supervision of PhD students:

- Supervisor of 7 doctoral students: Olga Szewczyk, Zbigniew Łaszczych, Dorota Tomaszewska-Rolla, Mikołaj Krakowski, Alicja Kwaśny, Szymon Matczak, Katarzyna Kunio

Invited papers in journals:

- G. Sobon, „Mode-locking of fiber lasers using novel two-dimensional nanomaterials: graphene and topological insulators [Invited],” Photonics Research 3, A56-A63 (2015)
- G. Sobon, J. Sotor, „Recent Advances in Ultrafast Fiber Lasers Mode-locked with Graphene-based Saturable Absorbers,” Current Nanoscience 12(3), 1-7 (2016)
- K. Krzempek, D. Tomaszewska, A. Foltynowicz, and G. Soboń, "Fiber-based optical frequency comb at 3.3 μm for broadband spectroscopy of hydrocarbons [Invited]," Chinese Optics Letters 19(8), 081406 (2021)

Invited seminars:

- Joint seminar of International Centre for Translational Eye Research & Department of Physical Chemistry of Biological Systems, Institute of Physical Chemistry, Polish Academy of Sciences , 18 February 2021, Warsaw, Poland (online)
- University of Warsaw, The Student Association of Optics and Photonics (OSA-SPIE-EPS-IEEE University of Warsaw Student Chapter), 28 October 2020, Warsaw, Poland (online)
- TRUMPF Laser GmbH, 8 November 2018, Schramberg, Germany.
- Umeå Universitet, Department of Physics (Institutionen för fysik), 3 October 2018, Umeå, Sweden.
- Institute of Electronic Materials Technology (ITME), lecturer at the Workshop on Photonic Crystal Fiber Technology for Ultrafast Optics Applications, 9 April 2018, Warsaw, Poland.
- Wroclaw University of Science and Technology, Faculty of Fundamental Problems of Technology, 18 March 2018, Wroclaw, Poland.
- Nicolaus Copernicus University, Institute of Physics, 15 December 2017, Torun, Poland.
- Umeå Universitet, Department of Physics (Institutionen för fysik), 9 August 2016, Umeå, Sweden.
- Jagiellonian University, Faculty of Physics, Astronomy and Applied Computer Science, 26 October 2015, Krakow, Poland.
- University of Warsaw, Faculty of Physics, 5 June 2014, Warsaw, Poland.
- Institute of Electronic Materials Technology (ITME), 25 November 2011, Warsaw, Poland.

Scientific schools and trainings:

- 15.02. – 27.02.2016 Winter College on Optics: „Optical Frequency Combs - from multispecies gas sensing to high precision interrogation of atomic and molecular targets", International Centre for Theoretical Physics (ICTP), Trieste, Italy
- 24.08. – 25.08.2014 Summer school: „Frontiers of Solid State Light Sources", Université de Neuchâtel, Neuchâtel, Switzerland
- 04.03. – 05.03.2013 Winter School on Ultrafast Optics, Davos, Switzerland
- 26.08. – 28.08.2012 Summer School on Frontiers of Solid-State Light Sources, KTH Royal Institute of Technology, Stockholm, Sweden
- 19.07. – 25.07.2012 10th International Krutyn Summer School (IKSS): „Frontiers in Science and Technology of Carbon Nano-Materials", Krutyń, Poland

Other achievements:

- Included in the Top 2% cited scientists database published in 2020, 2021 and 2022 by J. Baas, K, Boyack, and J. Ioannidis
- Top5 cited employee at Wrocław University of Science and Technology in years 2016, 2017, 2018, 2019 and 2020.