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:	Wacław Urbańczyk
Grade / Title:	Profesor
Scientific discipline	**nauki fizyczne/ physical sciences**
Faculty:	W11 Wydział Podstawowych Problemów Techniki / Faculty of Fundamental Problems of Technology
Email address:	Waclaw.urbancztyk@pwr.edu.pl

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.	G. Statkiewicz-Barabach, K. Tarnowski, D. Kowal, P. Mergo, W.Urbańczyk, Fabrication of multiple Bragg gratings in microstructured polymer fibers using a phase mask with several diffraction order, Opt. Express 13, 8521-8534, 2013.	2013
2.	Maciej Napiórkowski, Wacław Urbańczyk, Role of symmetry in mode coupling in twisted microstructured optical fibers, Opt. Lett. 43, 395-398, 2018.	2018
3.	K. Zolnacz, A. Musial, N. Srocka, J. Große, M. J. Schlösinger, P.-I. Schneider, O. Kravets, M. Mikulicz, J. Olszewski, K. Poturaj, G. Wojcik, P. Mergo, K. Dybka, M. Dyrkacz, M. Dlubek, S. Rodt, S. Burger, L. Zschiedrich, G. Sek, S. Reitzenstein, W. Urbanczyk, "Method for direct coupling of a semiconductor quantum dot to an optical fiber for single-photon source applications," Opt. Express 27, 26772–26785, 2019.	2019
4.	A. Musial, K. Zolnacz, N. Srocka, O. Kravets, J. Große, J. Olszewski, K. Poturaj, G. Wojcik, P. Mergo, K. Dybka, M. Dyrkacz, M. Dlubek, K. Lauritsen, A. Bülter, P. I. Schneider, L. Zschiedrich, S. Burger, S. Rodt, W. Urbanczyk, G. Sek, S. Reitzenstein, "Plug&play fiber-coupled 73 kHz single-photon source operating in the telecom O-band," Adv. Quantum Technol. 3, 2000018 (2020).	2020
5.	K. Zolnacz, M. Napiorkowski, A. Kiczor, M. Makara, P. Mergo, W. Urbanczyk, "Bend-induced long period grating in a helical core fiber," Opt. Lett. 45, 1595–1598, 2020.	2020
6.	M. Napiórkowski, W. Urbańczyk, Rigorous modeling of twisted anisotropic optical fibers with transformation optics formalism, Opt. Express. 29, 15199-15216, 2021.	2021
7.	M. Bernas, K. Zolnacz, M. Napiorkowski, G. Statkiewicz-Barabach, W. Urbanczyk, "Conversion of LP11 modes to vortex modes in a gradually twisted highly birefringent optical fiber," Opt. Lett. 46, 4446–4449, 2021.	2021
8.	T. Gao, L. Rickert, F. Urban, J. Große, N. Srocka, S. Rodt, A. J. Musial, K. Zolnacz, P. Mergo, K. Dybka, W. Urbanczyk, G. Sek, S. Burger, S. Reitzenstein, T. Heindel, "A quantum key distribution testbed using a plug&play telecom-wavelength single-photon source," Appl. Phys. Rev. 9,	2022

	011412,2022.	
9.	K. Żołnacz, W. Urbańczyk, Selective excitation of different combinations of LP01 and LP11 polarization modes in a birefringent optical fiber using a Wollaston prism, Opt. Express 30, 926-938, 2022	2022
10.	S. Majchrowska, K. Żołnacz, W. Urbańczyk, K. Tarnowski, Multiple intermodal-vectorial four-wave mixing bands generated by selective excitation of orthogonally polarized LP01 and LP11 modes in a birefringent fibe, Opt. Lett. 47, 2522-2525, 2022.	2022

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.)	Project leader
	Project title	*Helical microstructured fibers for applications in optical metrology and communication*
	Sources of funding	NCN
	Name of the call	Maestro 8
	Implementation period	2017-2022
2.	Role in the project (e.g., principal investigator, work package leader, etc.)	Project Leader
	Project title	*Photonic crystal fibres for sensing and nonlinear applications*
	Sources of funding	FNP
	Name of the call	Edycja 2009
	Implementation period	2009-2013
3.	Role in the project (e.g., principal investigator, work package leader, etc.)	Leader of the group from PWr
	Project title	*Photonic Skins For Optical Sensing-PHOSFOS*
	Sources of funding	EC
	Name of the call	FP7-ICT-2007-2 STREP
	Implementation period	2008-2011
4.	Role in the project (e.g., principal investigator, work package leader, etc.)	Project leader
	Project title	Polymer microstructured fibers
	Sources of funding	NCBiR
	Name of the call	POIG 01.01.02-02-002/08: *Wykorzystanie nanotechnologii w nowoczesnych materiałach*
	Implementation period	2011-2014
5.	Role in the project (e.g., principal investigator, work package leader, etc.)	*POIR.04.01.01-00-0024/19*
	Project title	*Światłowody utrzymujące polaryzację o kształtowanej dyspersji w zakresie spektralnym 1500-2000 nm*
	Sources of funding	NCBiR
	Name of the call	*POIR.04.01.01-00-0024/19*

	Implementation period	2021-2023

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.	Several stays of overall duration of 4 years at Département d'informatique, Laboratoire d'optoélectronique, Université du Québec à Hull (UQAH), Canada	1992-2004
2.	Adjunct professor at Département d'informatique, Laboratoire d'optoélectronique, Université du Québec à Hull (UQAH), Canada	1998-2004
3.	3-mounths stay at Switzerland Center of Electronics and Microtechniques, Neuchatel, Switzerland.	1989
4	Coordination of Fiber Optic Group (PWr) activity in three Cost Actions: P11, 299, TD1001.	2006-2012

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.	Reporting seminar of physical sciences	2022-2023
2.	Lecture on *Optical fibers and their applications*	2015-2020

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.	Tadeusz Martynkien	*Spektralne właściwości włókien o wysokiej dwójłomności*	2000
2.	Magdalena Nawrocka	*Światłowodowy czujnik interferencyjny do pomiaru szybkich zmian ciśnienia*	2001
3.	Jacek Olszewski	*Analiza strat mocy w światłowodach fotonicznych wybranych typów*	2006
4.	Marcin Szpulak	*Modelowanie wybranych parametrów transmisyjnych światłowodów mikrostrukturalnych*	2006
5.	Gabriela Statkiewicz-Barabach	*Badania eksperymentalne światłowodów mikrostrukturalnych do zastosowań pomiarowych*	2007
6.	Grzegorz Gołojuch	*Analiza właściwości transmisyjnych dwójłomnych struktur falowodowych wybranych typów*	2010
7.	Alicja Anuszkiewicz	*Metrologiczne właściwości polaryzacyjnych siatek długookresowych wytworzonych w światłowodach mikrostrukturalnych*	2012

8.	Dominik Kowal	*Stuktury periodyczne w światłowodach polimerowych*	2016
9.	Maciej Napiorkowski	*Numeryczne badania właściwości skręconych i zgiętych światłowodów z wykorzystaniem formalizmu optyki transformacyjnej*	2016
10.	Kinga Żołnacz	*Eksperymentalne badania wybranych procesów konwersji modowej w strukturyzowanych światłowodach*	2022

7. Prizes and awards

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

No.	Description	Year
1.	SPIE Fellow	2006
2.	Medal KEN	2014

8. Other significant achievements

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

Chairman of 6 international conferences, including SPIE Photonics Europe - Topical Conference on Photonic Crystals and Fibers, member of the scientific committee at 28 international conferences, including SPIE Photonics Europe 2012-2022, EWOFS 2016-2023, OFS 2015-2023, chair of cyclical Polish-Czech-Slovak Optical Conference (3x)