

# ACADEMIC TEACHER PROFESSIONAL EXPERIENCE

#### DOCTORAL SCHOOL OF WROCŁAW UNIVERSITY OF SCIENCE AND TECHNOLOGY

# 1. Basic information

Name, surname:	Michał Przewoźniczek
Grade / Title:	PhD, DSc
Scientific discipline	informatyka techniczna i telekomunikacja / information and communication technology
Faculty:	W4 Wydział Informatyki i Telekomunikacji / Faculty of Information and Communication Technology
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ResearchGate, etc.)	https://scholar.google.com/citations? user=bmJw3Z0AAAAJ&hl=pl
	https://orcid.org/0000-0003-2446-6473

### 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.	R. Tinós, M. W. Przewozniczek, D. Whitley, and F. Chicano, Iterated Local Search with Linkage Learning, ACM Transactions on Evolutionary Learning and Optimization, Vol. 4, Issue 2, pp. 1-29.	2024
2.	M. M. Komarnicki, M. W. Przewozniczek, H. Kwasnicka and K. Walkowiak, Incremental Recursive Ranking Grouping for Large Scale Global Optimization, IEEE Transactions on Evolutionary Computation, vol. 27, pp. 1498-1513.	2023
3.	M. M. Komarnicki, M. W. Przewozniczek, R. Tinós, and X. Li, <u>Overlapping Cooperative Co-Evolution for Overlapping</u> <u>Large-Scale Global Optimization Problems</u> , In <i>Proceedings of</i> <i>the Genetic and Evolutionary Computation Conference</i> ( <i>GECCO</i> '24), pp. 665–673.	2024
4.	L. Tulczyjew, M. W. Przewozniczek, R. Tinós, A. M. Wijata, and J. Nalepa, <u>CANNIBAL Unveils the Hidden Gems:</u> <u>Hyperspectral Band Selection via Clustering of Weighted</u> <u>Variable Interaction Graphs</u> , In <i>Proceedings of the Genetic</i> <i>and Evolutionary Computation Conference Companion</i> (GECCO '23), pp. 412-421.	2024
5.	M. W. Przewozniczek, R. Tinós, M. M. Komarnicki, <u>First</u> <u>Improvement Hill Climber with Linkage Learning on</u> <u>Introducing Dark Gray-Box Optimization into Statistical</u>	2023



	2023
<i>(GECCO '23)</i> , pp. 981-989, ACM.	
M.W. Przewozniczek, M. M. Komarnicki, Empirical linkage	2020
learning, IEEE Transactions on Evolutionary Computation,	
vol. 24, no. 6, pp. 1097-1111.	
M. W. Przewozniczek, R. Datta, K. Walkowiak, M. Komarnicki,	2020
Splitting the fitness and penalty factor for temporal diversity	
increase in practical problem solving, Expert Systems With	
Applications, vol. 145, pp.1-11.	
M.W. Przewozniczek, R, Goścień, P. Lechowicz, K. Walkowiak,	2020
Metaheuristic Algorithms with Solution Encoding Mixing for	
Effective Optimization of SDM Optical Networks, Engineering	
Applications of Artificial Intelligence, vol. 95.	
M. W. Przewozniczek, M. M. Komarnicki, <u>The influence of</u>	2018
fitness caching on modern evolutionary methods and fair	
computation load measurement, Proceedings of the Genetic	
and Evolutionary Computation Conference Companion,	
(GECCO 18), pp. 241-242.	
	<ul> <li><u>learning</u>, IEEE Transactions on Evolutionary Computation, vol. 24, no. 6, pp. 1097-1111.</li> <li>M. W. Przewozniczek, R. Datta, K. Walkowiak, M. Komarnicki, Splitting the fitness and penalty factor for temporal diversity increase in practical problem solving, Expert Systems With Applications, vol. 145, pp.1-11.</li> <li>M.W. Przewozniczek, R, Goścień, P. Lechowicz, K. Walkowiak, Metaheuristic Algorithms with Solution Encoding Mixing for Effective Optimization of SDM Optical Networks, Engineering Applications of Artificial Intelligence, vol. 95.</li> <li>M. W. Przewozniczek, M. M. Komarnicki, The influence of fitness caching on modern evolutionary methods and fair computation load measurement, Proceedings of the Genetic and Evolutionary Computation Conference Companion,</li> </ul>

**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	<i>Dark Gray Box Optimization - developing of the new class of highly effective optimizers</i>
	Sources of funding	Polish National Science Center (NCN)
	Name of the call	OPUS-10
	Implementation period	2022-2026
2	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Development of evolutionary methods dedicated to solving multi- and many-objective problems with the use of linkage learning techniques
	Sources of funding	Polish National Science Center (NCN)
	Name of the call	SONATA-BIS-10
	Implementation period	2021-2026
3	Role in the project (e.g., principal	Principal Investigator



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	investigator, work	
	package leader, etc.)	
	Project title	Developing new strategies of dynamic controlling
		the number of evolving subpopulations in co-
		evolutionary optimization
	Sources of funding	Polish National Science Center (NCN)
	Name of the call	SONATA-10
	Implementation	2015-2020
	period	
4	Role in the project	Research Associate
	(e.g., principal	
	investigator, work	
	package leader, etc.)	
	Project title	Cloud-based Situational Analysis for Factories
		providing Real-time Reconfiguration Services
	Sources of funding	European Union
	Name of the call	The SAFIRE program
	Implementation	2016-2019
	period	
5	Role in the project	Researcher
	(e.g., principal	
	investigator, work	
	package leader, etc.)	
	Project title	Advanced methods for optimization of optical
		networks with spatial flexibility
	Sources of funding	Polish National Science Center (NCN)
	Name of the call	OPUS 10
	Implementation	2016-2019
	period	

# 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	
1.	Utrecht University (Dirk Thierens) & Centrum Wiskunde & Informatica	
	(Peter Bosman): Genetic Algorithms development, problem structure	
	decomposition	
2.	University of Sao Paolo (Renato Tinos): Genetic Algorithms development,	
	Gray-box optimization	
3.	University of York (Leandro Soares Indrusiak): Multi-objective optimization,	
	Evolutionary Computation in real-life problems solving	



#### **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.).

See <u>http://www.przewozniczek.eu/</u> for more details.

# 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.

See <u>http://www.przewozniczek.eu/</u> for more details.

#### 7. Prizes and awards

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

See <u>http://www.przewozniczek.eu/</u> for more details.

#### 8. Other significant achievements

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

See <u>http://www.przewozniczek.eu/</u> for more details.