

# Tomasz RAK

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## EDUCATION

### AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY

PH.D. IN COMPUTER SCIENCE  
2007 | Krakow, Poland

### RZESZOW UNIVERSITY OF TECHNOLOGY

M.Sc. IN COMPUTER SCIENCE  
1999 | Rzeszow, Poland

## SKILLS

### PROGRAMMING

C/C++/C# • ASP.NET MVC/Core • PHP • HTML • CSS/LESS/SASS • JavaScript/TypeScript/Angular • Shell scripts • SQL • Git • MPI library • openMP interface (*Advanced knowledge of Web technologies, distributed computing, high performance computing and script programming*)

### OPERATING SYSTEMS

Linux • iOS (*Advanced knowledge of computer systems, networks, databases, clusters, web servers, services, cryptography, virtualization and containerization*)

## RESEARCH INTERESTS

### TARGET TECHNOLOGY DOMAINS

Software engineering • Service-oriented computing • O-O programming • Distributed component-base systems • Database and information systems • Event-base systems

### MAIN RESEARCH AREAS

Internet systems architectures • HA and HP clusters • Software and systems engineering • Systems benchmarking, monitoring, simulation and experimental analysis • Analytical and experimental performance modeling • Queueing theory • Petri nets

## EXPERIENCE

### SCIENCE

RZESZOW UNIVERSITY OF TECHNOLOGY | PH.D. ENG., ASSIST. PROF.

1999- | Rzeszow, Poland **RUT** (Research Asst. & Students Teacher)  
I work on the mechanisms of the Web programming, distributed systems performance analysis and computer networks.

AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY | PH.D. ENG.

2005- | Krakow, Poland **AGH** (Research Asst.)

Professor **Prof. Jan Werewka** and my common research work is concern on the architectures of Web-based systems.

### RESEARCH AND DEVELOPMENT

SOFTTEL SP. Z O.O. | SOFTWARE AND SYSTEM ARCHITECT

2002- | Rzeszow, Polska **Softtel**  
Implementation of an innovative system of comprehensive bank service.

ADVANCED TECHNOLOGY SYSTEMS INTERNATIONAL | SOFTWARE AND SYSTEM ARCHITECT

2002-2003 | Krakow, Poland **ABS**  
Design of the system clustered Web application.

SOFTSYSTEM SP. Z O.O. | EXPERT IN THE USE OF IT SOLUTIONS • PROJECT MANAGEMENT

2016-2020 | Rzeszow, Polska **SoftSystem**  
Designing solutions for high-performance Web clinical software for hospitals and medical laboratories (POIR.02.01.00-00-00-0438/16 project).

SOFTSYSTEM SP. Z O.O. | EXPERT IN THE USE OF IT SOLUTIONS •

ARCHITECT OF EXPERT SYSTEM PROTOTYPE

2020-2021 | Rzeszow, Polska **SoftSystem**  
R&D works on the development of an expert system for the analysis of data obtained from breast cancer tissue using nuclear magnetic resonance imaging (RPPK.01.02.00-18-0012/18 project).

SOFTSYSTEM SP. Z O.O. | INTERN IT IN THE ORGAN TRANSPLANTATION PROJECT

2021-2022 | Rzeszow, Polska **SoftSystem**  
Risk stratification in organ transplantation process.

SOFTSYSTEM SP. Z O.O. | SCIENTIFIC DIRECTOR AT THE STAGE OF A RESEARCH PROJECT OF RESEARCH AND DEVELOPMENT CENTER

2022 | Rzeszow, Polska **SoftSystem**  
Preparation of a prototype of an IT laboratory system available in the SaaS model.

## AFFILIATIONS

Queueing theorists list: **pos. 1541**

RUT expert: **Informatics**

## LINKS

WoS:// **G-1895-2012**

ORCID:// **0000-0002-9299-2216**

DBLP:// **Tomasz Rak**

Scopus:// **Author ID: 34977412000**

Google Scholar:// **Tomasz Rak**

ResearchGate:// **Tomasz\_Rak**

LinkedIn:// **tomasz-rak-50775859**

## GITHUB REPOSITORIES

2023:// **25**

2022:// **263**

2021:// **47**

2020:// **18**

2019:// **113**

## ARTICLES AND BOOKS

- **49** articles: scientific (36), popular science (13) **publications** (*National and international*)
- **13** books about programming, computer systems and computer networks: **Helion** (10), **PWN** (1), supporting materials (2)) (*National*)

## H-INDEX

**Publons (Web of Science)** : 6

• **Scopus** : 6 • **Google Scholar** : 8 •

**ResearchGate** : 7

## PARTICIPATION IN

## CONFERENCES

2022 | **CHSN**

2020 | **ICICEE**

2019 | **CN**

2017 | **CN**

2014 | **ISCIS** **FedCSIS**

2009 | **CEE-SET**

2008 | **IMCSIT**

## INTERNATIONAL INSTITUTIONS

**AAL PROGRAMME | EXPERT**

2019- | Brussels, Belgium **AAL**

## NATIONAL INSTITUTIONS

**NATIONAL AGENCY FOR ACADEMIC EXCHANGE | EXPERT**

2019- | Warsaw, Poland **NAWA**

**FOUNDATION FOR POLISH SCIENCE | EXPERT**

2019- | Warsaw, Poland **FNP**

**MINISTRY OF ENTREPRENEURSHIP AND TECHNOLOGY | EXPERT**

2018- | Warsaw, Poland **MPiT**

**NATIONAL INFORMATION PROCESSING INSTITUTE - NATIONAL RESEARCH INSTITUTE | EXPERT**

2018- | Warsaw, Poland **OPI PIB**

**MINISTRY OF ECONOMY/MINISTRY OF INVESTMENT AND DEVELOPMENT/MINISTRY OF DEVELOPMENT**

2015- | Warsaw, Poland **MiR**

**MINISTRY OF DIGITAL AFFAIRS | EXPERT**

2015- | Warsaw, Poland **MC**

**PROJECT CENTRE DIGITAL POLAND | EXPERT**

2014- | Warsaw, Poland **CPPC**

**NATIONAL CENTRE FOR RESEARCH AND DEVELOPMENT | EXPERT**

2009- | Warsaw, Poland **NCBiR**

## CERTIFICATIONS

**APMG-INTERNATIONAL PRINCE2 CERTIFICATION**

- APMG Foundation PRINCE2 Certificat **P2R/994137**
- APMG Practitioner PRINCE2 Certificat **P2R/542120**

**CENTRAL ANTI-CORRUPTION BUREAU**

- Corruption in public administration
- Corruption in business
- Social effects of corruption

## AWARDS

2022 | Rector's RUT science award

2017 | **Medal of Commission of National Education**

2016 | 3<sup>th</sup> Rector's RUT individual award

2009,2008 | 3<sup>th</sup> Rector's RUT team and individual awards

2004-2006 | 2<sup>nd</sup> Rector's RUT team awards

2003 | 1<sup>st</sup> Rector's RUT individual award

# ACCOMPLISHMENTS

- 2014-2020 | Polish Expert of European Union national programmes:  
Operational Programme Smart Growth • Operational Programme Digital Poland
- 2006-2007 | The modeling and analysis of interactive Internet systems realizing the service of high - frequency offers (National grant **3T11C 022 30-2006**)
- The conference Technical Program Committee/International Advisory Committee:
 

2023	<b>ICNS</b>	<b>ICACDS</b>	<b>ICDCECE</b>	<b>CNCIT</b>				
2022	<b>ICINT</b>	<b>ICDSIS</b>	<b>ICDCECE</b>	<b>ICNS</b>	<b>ICACDS</b>	<b>ICIEA</b>	<b>CECNet</b>	<b>ISAI</b>
	<b>UBICOMM</b>	<b>ICICSA</b>	<b>ICEI</b>	<b>CHSN</b>	<b>ICMNW</b>	<b>ICATIECE</b>		
2021	<b>ICDCOT</b>	<b>ICACDS</b>	<b>CN</b>	<b>ICNS</b>	<b>CHSN</b>	<b>CONSILIO</b>	<b>MIND</b>	<b>ICMNWC</b>
	<b>CSCNS</b>	<b>MysuruCon</b>	<b>ICICA</b>					
2020	<b>ICEECCOT</b>	<b>ICACDS</b>	<b>CN</b>	<b>ICNS</b>	<b>CHSN</b>	<b>CONSILIO</b>	<b>MIND</b>	<b>ICISSC</b>
	<b>ICACI</b>	<b>AEMIT</b>	<b>ISAIC</b>	<b>ICCTC</b>				
2019	<b>ICEECCOT</b>	<b>ICACDS</b>	<b>CN</b>	<b>ICAIT</b>	<b>ICATIECE</b>	<b>CTCE</b>		
2018	<b>ICEECCOT</b>	<b>ICACDS</b>	<b>CN</b>					
2017	<b>ICEECCOT</b>		<b>CN</b>	<b>CSMA</b>				
2016	<b>ICEECCOT</b>	<b>ICACDS</b>		<b>CSSR</b>	<b>CNCT</b>			
- Book/Journal Reviewer:
 

2023	<b>Entropy</b>				
2022	<b>Processes</b> 0.41 SJR	<b>Informatics</b> 0.45 SJR	<b>Mining</b>	<b>IJERPH</b>	
	<b>Sensors</b>	<b>Sustainability</b>	<b>AEI</b>		
	<b>Network</b>	<b>Electronics</b>	<b>Applied Sciences</b>		
	<b>AppliedMath</b>				
2021	<b>SCS</b>	<b>PUC</b> 0.42 SJR	<b>Mathematics</b> 0.5 SJR		
	<b>ARJOM</b>				
		<b>Technologies</b>			
2020	<b>JAMCS</b>	<b>APJCP</b> 0.51 SJR	<b>MM</b> 0.32 SJR		
	<b>JCS</b> 0.16 SJR	<b>JS</b> 0.39 SJR	<b>CSIT</b>		
2019	<b>AJPS</b>	<b>CJAST</b>	<b>CAI</b> 0.19 SJR		
2018	<b>Measurement</b> 0.72 SJR				
- Book/Journal Guest Editor:
 

2023	<b>CEE</b> IF: 3.818	<b>Electronics</b> IF: 2.690		
2022	<b>PRL (Elsevier)</b> IF: 4.757			
2020	<b>MM (Elsevier)</b> IF: 1.525	<b>Atlantis Press</b>	<b>IET</b>	<b>IGI Global</b>
- Author of ICT Exams:
 

2011	<b>Network Administration</b>	<b>Linux</b>
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