

MACIEJ RYBCZYŃSKI

RESEARCH • TECHNOLOGY • DATA LEADERSHIP

Kielce, Poland | maciej.rybczynski@ujk.edu.pl | +48 41 349 6468 (office)
ujk.edu.pl/strony/mryb/ | ORCID: 0000-0002-3638-3766

25+

YEARS OF EXPERIENCE

15

RESEARCH GRANTS

~200

SCIENTIFIC PUBLICATIONS

14

RECTOR'S AWARDS

PROFESSIONAL PROFILE

Research and technology leader with 25+ years of experience connecting advanced analytics, scientific computing and complex project delivery. Combines quantitative expertise with sustained responsibility for teams, research infrastructure and institutional priorities. Translates difficult problems into structured, evidence-based programmes; coordinates specialist teams; and communicates findings to technical and nontechnical stakeholders. Brings leadership and analytical capabilities to R&D, technology operations, data-led organisations and cross-sector management roles.

LEADERSHIP & PROFESSIONAL EXPERIENCE

JAN KOCHANOWSKI UNIVERSITY OF KIELCE | 1999–PRESENT

Head, Center for Computing and Computer Modeling

2021 – PRESENT

- Direct a university research-computing center supporting specialist users, computational modeling and data-intensive projects across academic disciplines.
- Set service priorities and coordinate computing resources, technical requirements, and practical problem-solving to sustain research workflows.
- Connect researchers with systems expertise, facilitating productive collaboration between scientific teams and infrastructure specialists.

Head, Division of Computer Physics and Computer Science

2016 – PRESENT

- Lead an interdisciplinary academic unit spanning computational physics and information technology, balancing research, teaching and organizational priorities.
- Develop team capabilities through knowledge transfer, mentoring and joint research activities.

Deputy Director for Research, Institute of Physics

2016 – 2024

- Advanced institute-level research planning, cross-team coordination and external partnerships.
- Served on the University Senate (2016–2024), contributing to institutional governance.

LEADERSHIP STRENGTHS

- Team and resource leadership
- Strategic prioritization
- R&D programme coordination
- Structured problem-solving
- Stakeholder communication
- Talent development and mentoring

TECHNICAL TOOLKIT

DATA & ANALYTICS

Python • SQL • Statistical modeling •
Databases • Numerical simulation

COMPUTING & IT

HPC • Parallel computing • Linux/Unix •
Networks • Basic C++ and shell scripting

EMERGING DOMAINS

Machine-learning training • Cybersecurity
fundamentals • Zero Trust and defense-in-
depth concepts

INTERNATIONAL REACH

Long-standing collaboration with CERN
research programmes, including NA49 and
NA61/SHINE. Multiple visits to CERN over
approximately four years, combined with
scientific teamwork and large-scale data
collection and analysis.

WORKING APPROACH

Evidence-based decisions. Clear technical
communication. Independent ownership
paired with cross-functional collaboration.

RESEARCH, TEACHING & ACADEMIC CAREER

PROFESSOR OF PHYSICS | 2023–PRESENT

Earlier appointments: Associate Professor (2016–2023); Assistant Professor (2007–2015); Assistant (1999–2006).

- Develop and deliver research involving quantitative data analysis, statistical models, Monte Carlo methods, and large-scale computational simulations.
- Participate in competitive national and international grants; coordinate complex deliverables and contribute to collaborative publications.
- Teach and mentor students at bachelor’s, master’s and doctoral levels, developing analytical judgement and independent problem-solving.
- Publish and present research findings and provide peer-review expertise to leading international physics journals.

SELECTED ACHIEVEMENTS & PROJECTS

OPEN SCIENTIFIC SOFTWARE / GLISSANDO

Co-author of GLISSANDO, a Monte Carlo simulation framework for the initial stages of high-energy nuclear collisions. The tool supports reproducible computational research and is interfaced with the CERN ROOT analysis environment.

FUNDED RESEARCH PROGRAMMES / PROJECT LEADERSHIP

Served as principal investigator or researcher on 15 research grants. Led a National Science Centre project on fluctuations and correlations in multiparticle production, integrating modeling, data analysis and international scientific collaboration.

CERN COLLABORATION / LARGE-SCALE DATA

Contributed to the NA49 and NA61/SHINE experimental programmes, working with multinational groups on particle-production data collection, analysis and interpretation.

COMMUNICATION, MENTORING & SERVICE

- Author or coauthor of approximately 200 scientific papers; speaker at 80 international conferences and workshops.
- Supervisor and mentor of dozens of undergraduate, graduate, and doctoral students across research and analytical topics.
- Peer reviewer for journals including Physical Review Letters, Physical Review C/D, Physics Letters B and European Physical Journal titles.

CROSS-DISCIPLINARY TEACHING

- Deliver courses and workshops that connect computing, network technologies, data skills and cybersecurity principles to practical problem-solving.
- Adapt highly technical material for students, researchers and broader audiences, emphasizing clarity, critical thinking and applied reasoning.

EDUCATION

2023 • Professor of Physical Sciences

Academic title conferred by the President of Poland.

2014 • Habilitation (DSc), Physics

Jan Kochanowski University, Kielce.

2006 • PhD, Physics (with distinction)

Sołtan Institute for Nuclear Studies, Warsaw.

1999 • MSc, Physics

Pedagogical University of Kielce.

SELECTED PROFESSIONAL TRAINING

DATA SCIENCE & AI

Google Advanced Data Analytics; IBM Data Science; Machine Learning (Stanford); Deep Learning (DeepLearning.AI).

CYBERSECURITY

Google Cybersecurity Professional; IBM Cybersecurity Analyst; Red Team Specialist; Blue Team Bootcamp.

PROGRAMMING & INFRASTRUCTURE

Python for Everybody; Databases for Data Scientists; CCNA Exploration; Linux Foundation Certified System Administrator (LFCS).

LANGUAGES

Polish / Native

English / Fluent

German / Basic

Russian / Basic

HONORS & PROFILE

Recipient of 14 awards from the Rector of Jan Kochanowski University for professional contributions.

ORCID: 0000-0002-3638-3766