



# Summer School

## Introduction to Doctoral

### School of Exact Sciences



26 March 2023 - 1 April 2023



# About the University

Adam Mickiewicz University is the major academic institution in Poznań and one of the top Polish universities. Its reputation is founded on tradition, the outstanding achievements of the faculty and the attractive curriculum. The mission of the University is to advance knowledge through high-quality research and teaching in partnership with business, professions, public services and other research and learning providers.

**20**

Faculties

**4**

Branches

**13567**

Newly enrolled students

**32100**

Students in traditional and extramural programmes

**1168**

Doctoral students

**764**

Participants in postgraduate courses

**125**

Degree programmes

**3006**

Academic staff

**2282**

Administrative staff

**242**

Specialisations

**36**

Postgraduate courses

**241**

Science clubs

**4624**

Publications

**860**

Research projects worth over PLN 1.305 billion

**772**

International students

**NAWA**  
NARODOWA AGENCJA  
WYMIANY AKADEMICKIEJ



ADAM MICKIEWICZ  
UNIVERSITY  
POZNAŃ



# Universities participating in the Summer School

- > Dnipro University of Technology
- > Igor Sikorsky Kyiv Polytechnic Institute
- > Kherson State University
- > Lesya Ukrainka Volyn National University
- > Donbass State Pedagogical University
- > Lviv Polytechnic National University
- > National University of Kyiv-Mohyla Academy
- > Pavlo Tychyna Uman State Pedagogical University
- > Sumy State University
- > Taras Shevchenko National University of Kyiv
- > V. N. Karazin Kharkiv National University
- > Sumy Makarenko State Pedagogical University
- > Vasyl Stefanyk Precarpathian National University
- > Yuriy Fedkovych Chernivtsi National University
- > Zhytomyr Polytechnic State University
- > H.S. Skovoroda Kharkiv National Pedagogical University
- > Petro Mohyla Black Sea State University

# Subject Coordinators

PhD

## Artur Ciesielski

Project manager and visiting professor at the Centre for Advanced Technology. A member of the Young Academy of Europe and two-time winner of the prestigious "Outstanding Pole of France" award in the field of science.



MSc

## Maciej Dymczyk

An optometrist and a PhD student at Adam Mickiewicz University in Poznań. Specialist in negotiating and customer relationship building as well as organising and pilot trips. Experienced in leading and managing a team of up to 70 people.

Prof.

## Antoni Wójcik

Professor in the Department of Quantum Electronics. Member of the Scientific Council of the Physical and Astronomical Sciences Disciplines and the Council of the NanoBioMedical Centre at the Adam Mickiewicz University. His research interests focus on the thermodynamics of small quantum systems, topological effects in quantum walks, relations between particle trapping and Maxwell's demon, and quantum error correction.



# Subject coordinators

Prof.

## Marcin Hoffmann

Vice-Dean for Scientific Affairs of the Faculty of Chemistry. A member of the Council of Scientific Excellence of the 1st term and a Court Expert at the District Court in Poznań in the fields of exact sciences, economic sciences and enterprise. A President of the Management Board of the seed capital fund BIB Seed Capital S.A. His scientific research focuses, among others, on the application of quantum chemistry computational methods in the study of the structure of molecules.



Prof.

## Piotr Pawluć

Head of the Doctoral School of Exact Sciences. Member of the Anti-discrimination Committee, the Doctoral Studies Committee, the Scientific Council of the Discipline of Chemical Sciences and the Programme Board of the Centre for Advanced Technology. Professor in the Department of Organometallic Chemistry. His scientific interests focus on organometallic chemistry, synthesis and reactivity of organosilicon compounds in relations catalysed by transition metal complexes or catalytic C-C bond coupling reactions.



Prof.

## Artur R. Stefankiewicz

Head of the Priority Research Area: Chemistry and Materials Engineering at AMU and Deputy Director at the AMU Centre for Advanced Technology. His main research topics include dynamic combinatorial chemistry, functional metallosupramolecular nanostructures, self-association and encapsulation, and metal-organic frameworks.



# Subject coordinators

prof.

## Karol Kacprzak

Professor in the Department of Medical Chemistry at AMU. His research focuses on the following research topics: quinine alkaloids - chemistry and applications; chiral recognition and analytics of enantiomers; enantiomer separation; catalytic asymmetric synthesis; click chemistry.



PhD

## Kostiantyn Mazur

A Specialist at the International Relations Centre, associated with AMU since 2017. Privately passionate in organising trips to Iceland, Ukraine, Kazakhstan and the Balkans. Enthusiast of landscape and travel photography.

Prof.

## Rafał Dymczyk

Head of the Centre for Filipino Studies and the Interdisciplinary Humanities Research Unit. An avid traveller and lecturer in tourism subjects at Adam Mickiewicz University in Poznań. For many years, he worked as a tour guide on various continents.



# AGENDA



UNIWERSYTET IM. ADAMA MICKIEWICZA W POZNANIU  
Solidarity with Ukraine - European Universities

## Introduction to Doctoral School of Exact Sciences

Dębina Palace, 26.03 - 1.04.2023

### PROGRAM

#### Sunday, 26.03

16:00 - Arriving, accommodation

#### Monday, 27.03

10:00 Official opening / *Ms. Joanna Barszcz, Prof. Rafał Dymczyk, dr Kostiantyn Mazur*  
10:05-11:35 Presentation of Adam Mickiewicz University / *dr Kostiantyn Mazur*  
11:45-13:15 Presentation of EPICUR Consortium / *dr Kostiantyn Mazur*  
13:30-15:00 Interdisciplinary on the own example / *dr Kostiantyn Mazur*

#### Tuesday, 28.03

10:00-11:30 Are optometrists needed nowadays? / *MSc Maciej Dymczyk*  
11:45-13:15 Optics and Optometry - my (everyone's) career in the industry & optic salon management / *MSc Maciej Dymczyk*  
13:30-15:00 Optical research and measurements using advanced equipment / *MSc Maciej Dymczyk*

#### Wednesday, 29.03

10:00-11:30 Experiments with entangled photons, the correct establishment of Bell inequality and pioneering quantum computing" / *Prof. Antoni Wójcik*  
11:45-13:15 The development of 'click' chemistry and bioorthogonal chemistry / *prof. Karol Kacprzak*  
13:30-15:00 Presentation of the Faculty of Chemistry, Faculty of Physics, Doctoral School of Exact Sciences and the Center for Advanced Technologies of the Adam Mickiewicz University / *prof. Marcin Hoffmann, prof. Piotr Pawluć, prof. Artur Stefankiewicz*  
20:30 Camp fire

#### Thursday, 30.03

10:00-11:30 Survival skills for (young) scientist: making decisions, drafting scientific articles and other perks you wish someone told you before / *Prof. Artur Ciesielski*  
11:45-13:15 Survival skills for (young) scientist: making decisions, drafting scientific articles and other perks you wish someone told you before / *Prof. Artur Ciesielski*  
13:30-15:00 Survival skills for (young) scientist: making decisions, drafting scientific articles and other perks you wish someone told you before / *Prof. Artur Ciesielski*  
15:30 Nordic walking

#### Friday, 31.03

10:00 Practical workshops at Center for Advanced Technologies AMU  
13:00 Practical workshops at NanoBioMedical Centre AMU  
16:00 Free time for shopping

#### Saturday, 01.04

Departure

Breakfast time: 08:00-09:45;  
Lunch time: 17:30



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“Thank you for organizing the summer school; it was an enriching and rewarding experience for me. I appreciate the opportunity to participate and learn from the knowledgeable instructors and fellow attendees.

From March 26-April 1, 2023, the "Introduction to Doctoral School of Exact Sciences" summer school was held on the basis of the Adam Mickiewicz University in Poznań (Poland) as part of the NAWA project "Solidarity with Ukraine - European Universities" (Polish universities united in alliances of European universities to help Ukrainian higher education institutions) in Pałac w Dębinie.

Employees of the Faculty of Biomedical Engineering of KPI named after Igor Sikorsky - Liliya Dronko and Golembiovskaya Olena. This is already the sixth international school held by the University. Adam Mickiewicz for his Ukrainian partners. In general, representatives of 18 Ukrainian universities took part in this event.

Meaningful lectures, development of one's own creative and innovative ideas and projects during brainstorming, an evening of Ukrainian cuisine, a salsa master class, a trip to the Center for Advanced Technologies AMU, as well as a visit to the Faculty of Chemistry, Physics and Biology.

The program's content was well-structured, and the topics covered were relevant and engaging. The interactive nature of the sessions allowed for a deeper understanding of the subject matter, and I particularly enjoyed the hands-on activities and group discussions. The faculty's expertise and passion for their fields were evident, and it made the learning experience even more enjoyable.

On March 27, Dr. Kostiantyn Mazur presented the Adam Mickiewicz University and the EPICUR Consortium, spoke about the principles of an open university and shared the practice of attracting young people as future applicants through the popularization of science among high school students - the Colored University project.

On March 28, Maciej Dymczyk held interesting lectures on optometry, and the prospects of this direction in business and production, and also organized a competition of ideas among the participants of the summer school.

On March 29, Professor Karol Kacprzak introduced the participants to new trends in modern science, in particular, he talked about click chemistry and bioorthogonal chemistry.

Instead, Professor Marcin Hoffmann presented the faculties of chemistry and physics, as well as the Center for Advanced Technologies of the Adam Mickiewicz University in Poznań.

On March 30, Professor Artur Ciesielski shared his own experience and survival skills for a young scientist: decision-making, writing scientific articles, etc.

On March 31, impressive visits to the AMU Center of Advanced Technologies and faculties, as well as an introduction to the AMU Doctoral School of Exact Sciences by Professor Piotr Pawluć. The logistics and arrangements were well-handled, and I didn't encounter any issues during my stay. The support staff was friendly and helpful, making the entire event run smoothly. Overall, I had a fantastic time at the summer school, and I will undoubtedly apply the knowledge and skills I gained in my future endeavours.

Once again, thank you for the opportunity to be part of this summer school, and I look forward to any future events AMU may organize.”

**~ Olena Golembiovskaya, Associate Dean (Research), Associate Professor, Faculty of Biomedical Engineering, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”**







"I am Alina Ovcharenko, I work as an associate professor at the Department of Chemistry at the Dnipro University of Technology, Dnipro, Ukraine.

At the end of March, I completed a research internship at the University of Adam Mickiewicz under the program "Introduction to Doctoral School of Exact Sciences". In my opinion, it was useful to listen to lectures not only on my subject but also on similar disciplines. It was also interesting to learn about the work of a Polish university, how education is conducted, scientific work, and recreation. Professor Artur Ciesielski's lectures, in my opinion, were especially useful for specialists in all fields. I learned a lot for myself and already used the acquired knowledge in my work.

The idea of combining specialists from different cities in Ukraine and specialities together is interesting. It helped us get to know each other and learn about related disciplines and research in other fields. I hope for further cooperation with the girls and am already consulting with them about their disciplines.

I also liked the fact that we all lived together and had a lot of time to communicate. Of course, the charming residence in "Pałac w Dębinie" was also remembered.

A sense of constant support and understanding was given by Mr. Kostia Mazur, who was always in touch. Of course, I was very impressed by the new, large and modern university with a huge amount of valuable equipment. As a chemist, I was impressed by the ventilation system and the absence of the harmful smell of chemicals in the laboratories.

It was my first foreign business trip. I am glad that it was Poland. This is not only because our languages, customs, cultural values and even landscapes are similar. What I remembered was the hospitality, openness and availability of the management and teachers, the desire to teach and help all participants of this program.

After the trip, I came back smarter and more motivated!"

**~ Alina Ovcharenko, associate professor at the Department of Chemistry at the Dnipro University of Technology, Dnipro, Ukraine**





**The summer school "Introduction to Doctoral School of Exact Sciences" was an unforgettable educational and intercultural experience, resulting in closely-knit cooperation between Ukrainian universities and the Adam Mickiewicz University, Poznan.**

