

SCIENTIFIC RESEARCH BACKGROUND AND THE FOUNDATION OF DOCTORAL SCHOOLS AT FACULTY OF SCIENCES

Petrică C. POP

June 20, 2025

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- Historical Background of Scientific Research
- Why Establish Doctoral Schools?
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- Doctoral Schools at the Faculty of Sciences
- Outcomes, Internationalization and Collaborations
- Conclusions and a small surprise

1. Purpose of the presentation:

- To explore the historical and academic context of scientific research at the Faculty of Sciences.
- To understand the motivation and structure behind founding doctoral schools.

2. Importance:

- PhD education is the cornerstone of innovation and academic excellence.

Historical Background of Scientific Research

- The Faculty of Sciences has a long-standing tradition of academic excellence. In 1961, our city Baia Mare became a university center, establishing the 3-year Pedagogical Institute, with the faculties: Romanian language and literature, **Mathematics**, Natural and agricultural sciences.
- Major milestones:
 - Establishment of core departments: **Mathematics**, Computer science (Informatics), Chemistry, Economic studies, Biology.
 - Notable alumni and research contributions.
- Evolution from basic teaching to cutting-edge research, emergence of specialized research centers

Why Establish Doctoral Schools?

- Need for structured, high-quality PhD education.
- Objectives:
 - Foster deep academic inquiry.
 - Train future researchers and academics.
 - Enhance global competitiveness of the university.

- The Foundation of Doctoral Schools is based on:
 - Accumulated research expertise in key disciplines.
 - Availability of qualified supervisors.
 - Infrastructure (labs, libraries, international links).
- Formalization under national and EU higher education reforms.

Doctoral Schools at the Faculty of Sciences:

- The existing Doctoral Schools at the Faculty of Sciences:
 1. Doctoral School of Mathematics since 2005.
 2. Doctoral School of Food product engineering since 2023.
 3. Doctoral School of Informatics since 2024.
- Each with specialized research areas and curricula.

Outcomes, Internationalization and Collaborations

- Stronger academic publication record. Publications in high-impact journals and global rankings impact.
- The Technical University of Cluj-Napoca (UTCN) is included in the Shanghai Ranking for Mathematics, specifically in the 2024 edition, marking the second consecutive year of recognition in this prestigious ranking.
- Important Contribution to science, education, and society.
- Joint PhD programs and cotutelle agreements.
- Exchange programs and international conferences.

- Doctoral schools build a rich legacy of research and innovation.
- They serve as engines of intellectual and scientific progress.
- Continued support and strategic planning are key to success.

Thank you for your attention!