

Evaluation of the 2023 PŘF UHK Dean's Prize Competition

A total of 51 applications were submitted for the 2023 PŘF UHK Dean's Prize Competition by 31 December 2022, of which:

- 38 in category a) Scientific Publication in a Journal with IF;
- 0 in category b) Foreign Monograph Published by a Reputable Publishing House;
- 3 in category c) Patents and Applied Results;
- 10 in category d) National and International Scientific Grants.

The competition was governed by Dean's Decision No. 7/2019.

The final ranking was decided by a committee consisting of the Dean, Vice-Deans and Heads of Departments at the meeting of the Dean's Advisory Board held on 12 January 2023. The PŘF UHK Dean hereby officially announces the final ranking of applications in each category:

A) Scientific Publication in a Journal with IF:

1st place:

Awarded authors: **A new optimization algorithm based on average and subtraction of the best and worst members of the population for solving various optimization problems**

Ocenění autoři: Štěpán Hubálovský, Pavel Trojovský

2nd place:

Awarded authors: **A new optimization algorithm based on mimicking the voting process for leader selection**

Oceněný autor: Pavel Trojovský

3rd place:

Awarded authors: **Deep fake detection using a sparse auto encoder with a graph capsule dual graph CNN**

Ocenění autoři: Štěpán Hubálovský, Pavel Trojovský

4th place:

Awarded authors: **LOSIK CLASSES FOR CODIMENSION-ONE FOLIATIONS**

Ocenění autoři: Yaroslav Bazaykin, Anton Galaev

5th place:

Publication title: **Evaluation of deepfake detection using YOLO with local binary pattern histogram**

Awarded authors: Štěpán Hubálovský, Pavel Trojovský

6th place:

Publication title: **Small-molecule inhibitors of cyclophilin D as potential therapeutics in mitochondria-related diseases**

Awarded authors: Annamária Halečková, Ondřej Benek, Lucie Zemanová, Kamil Musílek

7th place:

Publication title: **OCSTN: One-class time-series classification approach using a signal transformation network into a goal signal**

Awarded authors: Dalibor Cimr, Toshitaka Hayashi, Richard Cimler, Filip Studnička, Damián Bušovský

8th place:

Publication title: **Analyticity of resolvents of elliptic operators on quantum graphs with small edges**

Awarded authors: Denis Borisov

9th place:

Publication title: **ERROR ESTIMATES FOR A CLASS OF CONTINUOUS BONSE-TYPE INEQUALITIES**

Awarded authors: Pavel Trojovský

10th place:

Publication title: **Investigation of ochratoxin a in blood sausages in the Czech Republic: Comparison with data over Europe**

Awarded authors: Darina Picková, Jakub Toman, Petra Mikysková, František Malíř

B) Foreign monograph published by a renowned publishing house:

1st – 10th place: NO AWARD

C) Patents and Applied Results:

1st place:

Patent: **Mono Pyridinium salts for the reactivation of organophosphate-inhibited acetylcholine esterase**

Awarded authors: Kamil Musílek, David Maliňák, Ondřej Benek

2st place:

Proven technology: **A system for analyzing nitrogen stress in plants**

Awarded authors: Filip Studnička, Jan Šlégr, Dalibor Cimr, Jitka Kühnová, Richard Cimler

3st place:

Utility model: **Storage portable case**

Awarded authors: Filip Studnička, Jan Matyska, Jan Štěpán, Jitka Kühnová, Richard Cimler

4nd – 10th place: NO AWARD

D) National and international scientific grants:

1st place:

Project title: **IT4Neuro(Degeneration)**

Registration number: CZ.02.1.01/0.0/0.0/18_069/0010054

Awarded researchers: Miroslav Lísa, Kamil Musílek, Ondřej Benek, Annamária Halečková, Monika Schmidt, Lucie Zemanová, Jana Svobodová, Petra Lišková

2nd place:

Project title: **PREVENTION OF AGING - Simultaneous modulation of ABAD and mTOR signaling pathway**

Registration number: NV19-09-00578

Awarded researchers: Kamil Kuča, Eugenie Nepovimová, Lucie Zemanová, Rudolf Andrýs, Žofie Chrienová

3rd place:

Project title: **Asymptotic and spectral analysis of operators in mathematical physics**

Registration number: GA22-18739S

Awarded researchers: Jiří Lipovský

4th place:

Project title: **PharmaBrain**

Identification number: EF16_025/0007444

Awarded researchers: Kamil Musílek, David Maliňák, Miroslav Lísa, Adam Skarka, Rudolf Andrýs

5th place:

Project title: **Development of methods for comprehensive monitoring of metabolic changes in disorders of the central nervous system**

Registration number: GA22-13967S

Awarded researchers: Miroslav Lísa, Eva Cífková, Oleksandr Kozlov, Maria Khalikova

6th place:

Project title: **Biodistribution and real-time monitoring of free or apoferritin-encapsulated quaternary cholinesterase reactivators**

Registration number: GA22-14568S

Awarded researchers: Kamil Musílek, Dávid Maliňák, Rudolf Andrýs, Eliška Prchalová

7th place:

Project title: **Therapeutic potential of novel mTOR inhibitors in the aging process**

Registration number: GA20-22037S

Awarded researchers: Eugenie Nepovimová, Patrik Olekšák, Lucie Zemanová, Rudolf Andrýs, Žofia Chrienová

8th place:

Project title: **Combining supercritical fluid chromatography and mass spectrometry as a new tool for the characterization of lipids and polar metabolites**

Registration number: GA20-12289S

Awarded researchers: Miroslav Lísa, Eva Cífková, Oleksandr Kozlov

9th place:

Project title: **Modified nucleophiles for the reactivation of cholinesterases inhibited by organophosphorus compounds**

Registration number: GA21-03000S

Awarded researchers: Dávid Maliňák, Adam Skarka, Rudolf Andrýs, Zuzana Kohoutová, Karolína Knittelová

10th place:

Project title: **Small molecule inhibitors of mitochondrial permeability transition for the treatment of myocardial reperfusion injury**

Registration number: NU22J-02-00006

Awarded researchers: Ondřej Benek, Rudolf Andrýs, Adam Skarka, Katarína Jurková, Michaela Vašková

In Hradec Králové on 13 January 2023.

Ass. Prof. RNDr. Jan Kříž, Ph.D.
Dean of the Faculty of Science, UHK



EUROPEAN UNION
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