

# **Philosophical Perspectives on Sciences**

International Conference:

## **Hypothesis in science.**

**The 550<sup>th</sup> anniversary of the birth of Nicolaus Copernicus**

19-21 October 2022

Nicolaus Copernicus University, Collegium Minus,  
Faculty of Philosophy and Social Sciences, street Fosa Staromiejska 1a, Toruń, Poland

### **Wednesday, 19 October 2022**

8:30 Registration, Collegium Minus, “Harmonijka”, room I, ground floor

Room IX, 1st floor

9:00 Opening Conference

- Radosław Sojak, Dean of the Faculty of Philosophy and Social Sciences, Nicolaus Copernicus University
- Zbigniew Nerczuk, Director of Institute of Philosophy, Nicolaus Copernicus University
- Wojciech Cichosz, Dean of the Faculty of Theology, Nicolaus Copernicus University
- Michał Oleksowicz, *Nicolaus Copernicus and Hypothetical Thinking*

Room IX

*Chairman:* Tomasz Jarmużek

10:00 **Invited lecture.** K. Brad Wray: *Osiander and Hypotheses*

11:00-11:30 *Coffee Break*

Room IX

Chairman: Peter Vickers

11:30-12:00 Artur Koterski: *Similarities and Differences Between Bilikiewicz's Concept of the Spirit of Time and Kuhnian Paradigm*

12:00-12:30 Vida Mia S. Valverde: *Hypothesis, Robustness, and Scientific Practice* [online]

12:30-13:00 Atocha Aliseda: *On Hypothesis Refinement by Existential Instantiation*

13:00-15:00 *Break for Lunch*

Room IX

Chairman: Michał Oleksowicz

15:00-16:00 **Invited lecture.** Peter Vickers: *Identifying Future-Proof Science*

Room IX

Chairman: Niccolò Guicciardini

16:00-16:30 Ken Aizawa: *Mechanistic Constitution and Hypothetical Reasoning* [online]

16:30-17:00 Przemysław R. Nowakowski: *From Hypotheses to Systematicity and Back*

17:00-17:30 *Coffee Break*

Room IX

Chairman: Mateusz Chwastyk

17:30-18:00 Klodian Coko: *Hypothesis and Consilience in the Nineteenth Century*

18:00-18:30 Sean M. Muller: *Normative Factors in Hypothesis Formation and Selection* [online]

19:30 *Conference Dinner*

Room 1

Chair: Emily Sullivan

11:30-12:00 Lucia Oliveri and Davide Dalla Rosa: *Kant on "Saving" Hypotheses in Science* [online]

12:00-12:30 Adam Grobler: *Causality and Conditionalization*

12:30-13:00 Patryk Popławski, Rafał Palczewski: *Is Scientific Knowledge Factive?*

Room 1

Chairman: Paweł Kawalec

16:00-16:30 Petar Nurkić: *Bridging the Gap Between Philosophical Controversies and Scientific Contributions – Perovic's Account of the Inductive-Hypothetical Method*

16:30-17:00 Szymon Miłkoś: *Will the Success of Causal Discovery Methods Herald the End of Hypothetical Thinking?*

Room 1

Chairman: Adam Grobler

17:30-18:00 Tetiana Gardashuk: *Hypothesis and Uncertainty in the Climate Science*

18:00-18:30 Jeremy Attard: *Epistemological Status of Fundamental Principles in Science with Applications to Rationality in the Social Sciences*

**Thursday, 20 October 2022**

Room IX

*Chairman:* Włodzisław Duch

9:00-10:00 **Invited lecture.** Emily Sullivan: *Idealizations in Explainable AI* [online]

Room IX

*Chairman:* Radosław Sojak

10:00-11:00 **Invited lecture.** Niccolò Guicciardini: *Newton's Hypotheses in the Proof of the Copernican System*

11:00-11:30 *Coffee Break*

Room IX

*Chairman:* K. Brad Wray

11:30-12:00 Luis G. Lopez: *Understanding Phenomena with Machine Learning Models* [online]

12:00-12:30 Andrzej Bielecki, Paweł Polak, Marzena Bielecka: *Epistemology of Computer Simulations in Biology*

12:30-13:00 Mateusz Chwastyk: *Theoretical Approaches for Biological Structures Understanding*

13:00-15:00 *Break for Lunch*

Room IX

*Chair:* Atocha Aliseda

15:00-16:00 **Invited lecture.** Stephen M. Barr: *Rationality, Hypotheses, and the Explanatory Power of Modern Physics* [online]

Room IX

*Chairman:* Jeremy Attard

16:00-16:30 Emanuele Rossanese: *The Atomic Hypothesis and its role in Field Theories*

Room 1

*Chair:* Benedetta Spigola

11:30-12:00 Marcin Miłkowski, Witold Hensel: *What Makes Hypotheses Accurate? An Empirical Study* [online]

12:00-12:30 Isadora Cristina de Sousa Monteiro: *Hooke's Attempt to Prove the Copernican Hypothesis* [online]

12:30-13:00 Daniel Nieto: *Émilie du Châtelet's Hypotheses in Action: How Motion Works* [online]

Room 1

*Chairman:* Petar Nurkić

16:00-16:30 Juan Redmond, Rodrigo Lopez-Orellana: *Modelling in Science and Surrogate Reasoning: For an Interactive and Dynamic Perspective of the Generation of Hypotheses in the Practice of Modelling in Science* [online]

16:30-17:00 *Coffee Break*

Room IX

*Chair:* Tetiana Gardashuk

17:00-17:30 Wojciech Grygiel: *The Proposals of Symmetry as Hypotheses in the Philosophy of Physics of Albert Einstein*

18:00-18:30 Valeria Ascheri: *Hypothesis: A Methodological and Personal Tool in Developing Scientific Theories* [online]

Room 1

*Chairman:* Emanuele Rossanese

17:00-17:30 Mauro Dorato, Benedetta Spigola: *Cassirer's Conception of Hypothesis and the Origin of Special Relativity*

18:00-18:30 Joel Alvarez: *Galileo on Faith and Reason* [online]

19:30 *Toruń by Night with Nicolaus Copernicus*

## Friday, 21 October 2022

Room IX

*Chairman:* Mateusz Klonowski

9:00-10:00 **Invited lecture.** Paweł Kawalec: *Weaving Hypotheses into Knowledge Threads*

10:00-10:30 *Coffee Break*

Room IX

*Chairman:* Piotr Roszak

10:30-11:00 Piotr Homola: *Duogenism: An Example Systemic Way to Reconcile Faith, Reason, and Science*

11:00-11:30 Grzegorz Karwasz: *Real Advances in Experimental Physics Need Bold Working Hypothesis* [online]

11:30 *Closing the Conference*