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**Tome II**

**Justification, Creativity, and  
Discoverability in Science**

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## Preface

This volume is a collection of selected papers that were presented at the international conference of the *Académie Internationale de Philosophie des Sciences* (AIPS) entitled *Justification, Creativity, and Discoverability in Science*, and held in the *Palazzo Vistarino* of the *Università di Pavia* in Italy from 26 September to 1 October 2022, chaired by the editor of these proceedings on behalf of the AIPS (cf. Figure 1).

The presentations delivered at the conference in Pavia delved into the role of justification and creativity within scientific thought, also aiming to instigate the innovative problem of *discoverability* that affects various areas of current scientific enterprise changes in theories and concepts. Some speakers tackled the intricacies of justification and creativity within science, mathematics, and technology, emphasizing the complex relationship between scientific exploration and technological advancement, the ontological regimes, the role of abduction, induction, and thought experiments, theory change, the role of belief and of justification of axioms. The following is the list of presentations given at the conference in alphabetic order; presentations that are represented by a paper in this volume are marked by an asterisk  $\star$ .

$\star$ **Alai, Mario.** *Can we recognize future-proof science, and how?*

$\star$ **Buzzoni, Marco.** *Method, creativity, and serendipity in scientific research.*

$\star$ **Cordero, Alberto.** *Ontological commitment, creativity, and justification in science.*

$\star$ **Desclés, Jean-Pierre.** *Plausible hypothesis constructed by abduction: some examples of discovery in sciences.*

$\star$ **Dieks, Dennis.** *Continuity and discontinuity in theory change.*

**Fano, Vincenzo.** *Thought experiments in empirical science. Necessary but unreliable.*

$\star$ **Ghins, Michel.** *Justifying scientific beliefs: an anti-pragmatist and anti-naturalist perspective.*

$\star$ **Grosshans, Hans-Peter.** *The concept of creativity in respect to the sciences—Reflections on some problems.*

$\star$ **Heinzmann, Gerhard.** *Justification, creativity and discoverability in mathematics: the example of predicativity.*

**Kahle, Reinhard.** *Justifying axioms.*

$\star$ **Magnani, Lorenzo.** *Discoverability—The critical need for and ecology of human creativity.*

$\star$ **Minazzi, Fabio.** *On scientific creativity and its constraints.*

**Rheinberger, Hans-Jörg.** *On the moment of creativity in science—Two vistas*





FIGURE 1. Palazzo Bellisomi Vistarino, remodeled by Francesco Croce (1696–1773) in the mid-18th century in the style of Lombard Rococo for the aristocratic Bellisomi family. *Left*. First courtyard. Picture: Fabio Romanoni, October 2020. *Right*. Frescoes by Giovanni Angelo Borroni (1684–1772). Picture: Università di Pavia, 2018.

★**Schurz, Gerhard.** *The optimality of meta-induction: A new account to Hume’s problem.*

**Zovko, Jure.** *The role of judgment in scientific discovery.*

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