

Call for Papers

Conference: *The Mathematisation of Nature in the Middle Ages and the Middle Sciences*

Dates: 5–7 April 2027

Location: Munich

Ludwig-Maximilians-Universität München – *Munich Center for Mathematical Philosophy*

Organisation: Daniel A. Di Liscia. <https://www.philosophie.lmu.de/mcmp/en/people/contact-page/daniel-a-di-liscia-1395aec7.html>; [DFG - GEPRIS - Die vorgalileische Geometrisierung der Bewegung: Giovanni da Casales Quaestio de velocitate und die italienische Rezeption des Traktates De latitudinibus formarum](#)

Overview

This conference addresses the historical and conceptual development of applying mathematical methods to the natural world during the Middle Ages, with a particular focus on the *scientiae mediae* (middle sciences). Scholarship in recent decades has increasingly recognized that the quantification and mathematisation of physical phenomena were not inventions of the Early Modern Scientific Revolution alone, but had deep, subtle roots in medieval scholastic and practical traditions. Fields such as optics (*perspectiva*), astronomy, harmonics, statics, and music transformed how physical reality was conceptualized and measured. In the late Middle Ages, new disciplines arose, such as the doctrine of the latitude of forms (*latitudo formarum*) and the proportions of velocities, which were integrated into this framework. Furthermore, practical activities grounded in theoretical mathematics—such as mechanics, navigation, and architecture—found their way into this or similar classifications of knowledge.

While recent research has illuminated individual thinkers and specific branches of medieval mixed mathematics, the broader systemic question of how nature came to be understood as mathematically structured remains a vibrant field of inquiry. With this conference, we aim to examine the philosophical, technical, and institutional contexts that allowed mathematical tools to bridge the gap between abstract geometry and physical reality. By investigating the theoretical foundations and empirical applications of the *scientiae mediae*, the conference aims to deepen our understanding of medieval scientific thought and its lasting legacy.

Suggested Topics

We invite contributions on topics including, but not limited to:

- **Theoretical foundations of the *scientiae mediae*:** Examinations of how medieval thinkers defined, categorized, and legitimized the subordinate/middle sciences between pure mathematics and natural philosophy.
- **Logical and epistemological aspects:** deduction, definition, and the fundamental role of geometry and arithmetic; causality and empirical foundations.
- **Optics, astronomy, music and the "science of weights":** Investigations into specific mixed mathematical disciplines and their methodologies, instruments, and observational practices.

- **New and alternative "middle sciences":** Mechanics, architecture, navigation, and beyond.
- **Textual and commentary traditions:** Analysis of key medieval commentaries on Aristotle's *Physics*, Euclid's *Elements*, Ptolemy's *Almagest*, Alhazen's *De Aspectibus*, Boethius's *Arithmetica* and beyond. Contributions on Aristotle and the Aristotelian epistemological background of medieval middle sciences are especially welcome.
- **Institutional and practical contexts:** The role of universities, monastic networks, courtly patronage, and practical crafts (e.g., surveying, horology, cartography) in promoting mathematical approaches to nature.
- **Cross-cultural knowledge transmission:** The reception, translation, and adaptation of Arabic, Greek, Hebrew, and Latin texts on mixed mathematics throughout the Medieval Mediterranean and Europe.

Publication

The submitted papers are intended for prompt publication.

Practical Details & Funding

Accommodation and travel expenses within Europe will be covered for speakers (exceptions for travel from outside Europe may be possible upon request).

Submission Guidelines

Submissions should be gathered in a single PDF file and include:

- Paper title
- Abstract of max. 300 words
- Author contact information and institutional affiliation

Deadline for abstract submission: 15 November 2026

Please send your submissions by email to: D.DiLiscia@lrz.uni-muenchen.de

