



## HISTORY OF SCIENCE IN THE MEDIEVAL WORLD SUMMER SCHOOL ЛЯТНА ШКОЛА ПО ИСТОРИЯ НА НАУКАТА В СРЕДНОВЕКОВНИЯ СВЯТ

organized by St. Cyril and St. Methodius University of Veliko Tarnovo,  
with Academic Theatre Ikaros, in cooperation with  
the International Summer Seminar in Bulgarian Language and Culture (University of  
Veliko Tarnovo),  
with the support of the Faculty of Slavic Studies, Sofia University

Second edition: **15–19 July 2024**, Veliko Tarnovo, Bulgaria

The **lecture** sessions will be conducted in a **hybrid** way,  
whereas the **workshops** will be **in person**.

### Organizers

**Divna Manolova** (MSCA Paris Region Postdoctoral Fellow, Université PSL-Observatoire de Paris, SYRTE, CNRS); **Nikolay Kanev** (Faculty of History, St. Cyril and St. Methodius University of Veliko Tarnovo); **Aneta Dimitrova** (Faculty of Slavic Studies, Sofia University “St. Kliment Ohridski”); **Chiara D’Agostini** (Department of Culture and Language, University of Southern Denmark); **Polina Tsoncheva** (Faculty of Modern Languages, St. Cyril and St. Methodius University of Veliko Tarnovo); **Prezlava Georgieva** (Faculty of Slavic Studies, Sofia University “St. Kliment Ohridski”); **Angel Nikolov** (Faculty of History, Sofia University “St. Kliment Ohridski”)

### Instructors

**Marie-Hélène Blanchet** (CNRS, UMR 8167 Orient et Méditerranée, Monde byzantin);  
**Chiara D’Agostini** (Department of Culture and Language, University of Southern Denmark);  
**Aneta Dimitrova** (Faculty of Slavic Studies, Sofia University “St. Kliment Ohridski”);  
**Stephanie Drew** (Centre for Medieval Studies, University of York);  
**Rossina Kostova** (Department of Archaeology, Faculty of History, St Cyril and St Methodius University of Veliko Tarnovo);  
**Divna Manolova** (MSCA Paris Region Postdoctoral Fellow, Université PSL-Observatoire de Paris, SYRTE, CNRS);  
**Angel Nikolov** (Faculty of History, Sofia University “St. Kliment Ohridski”);  
**Shannon Steiner** (Independent Researcher, Practicing Goldsmith).

### Summer School Philosophy and Vision

The School studies the wider medieval world of Afro-Eurasia and aims to shed light on Byzantium and the Slavonic world, and their intellectual heritage as agents in the development of medieval science, which, though significant, nevertheless remain largely unknown to the scholarly community. Even though current scholarship is focused on the so-called ‘Global Medieval’, the medieval Slavonic, Byzantine and Black Sea regions remain a blind spot for both the researchers and the general public outside of Central, Eastern and Southeastern Europe. Thus, the School aims at positioning Byzantium and the Slavonic world on the map of history of medieval science, technology, and medicine thus offering the participants the rare opportunity to get acquainted with their respective heritage.

In its pilot 2022 edition, HSMW Summer School introduced the participants to the medieval epistemic fields (sciences) which study the natural world (the *kosmos*) as a space, namely geography, cosmography, and astronomy. In 2024, **we shift the focus to history of knowledge and to the practitioners and their practices**: from the geographers and the astronomers, the map and

instrument makers, to the users of medieval herbals and the artisans preparing sgraffito pottery and enamel. The participants will acquire fundamental knowledge concerning the place and role of the sciences in the intellectual world of the Middle Ages. They will also develop an understanding of premodern science as a spectrum of disciplines wider than the late antique framework of the four mathematical sciences (arithmetic, music, geometry, and astronomy) and inclusive of all epistemic domains dedicated to the creation, preservation, and transfer of knowledge. The School relies on a discussion-based and experiential / experimental format. That is, the School includes workshops, which will guide the participants into the use of medieval scientific manuscripts, texts, and instruments, and will introduce them to tradition and modern practice of sgraffito ware production in the city of Veliko Tarnovo.

The common discussion language of the School will be **English**.

If the participants know a medieval scholarly language (for this edition: Latin, Greek and/or Old Church Slavonic), this would be an advantage, but it is not an essential requirement for participation.

Please address your informal inquiries to Dr Divna Manolova at [manolova.divna@gmail.com](mailto:manolova.divna@gmail.com).

## Schedule

**Morning Sessions: 11:00–13:00 EEST**

**Afternoon Sessions: 15:30–17:30 EEST**

**15 July 2024**, Monday Morning, Workshop (in person only)

**Workshop with Aneta Dimitrova** (Associate Professor; Sofia University “St. Kliment Ohridski”), *What is This? (“Scientific” Description in the Medieval Bulgarian Literature)*. We will read and translate short Old Church Slavonic definitions or descriptions from the scientific literature (of the human body, of animals and celestial bodies, etc.), trying to guess the described object. We will discuss the use of *termini technici*, borrowed terms and Slavic vocabulary. All the texts will be provided with an English translation.

**15 July 2024**, Monday Afternoon, Lectures (hybrid)

**Aneta Dimitrova**, *Scientific Language in Medieval Bulgaria*

Medieval Bulgarian (and Slavonic in general) science followed Byzantine models and was based on translated texts. For this purpose, the young Slavonic literary language needed borrowed or newly coined words. The lecture will give an overview of the methods the first Slavonic scientific terms and notions came into being.

**Marie-Hélène Blanchet** (Directrice de recherche; CNRS, UMR 8167), *Was Theology Also a Science in Byzantium?*

The status of theology within the Byzantine curriculum was closely linked to that of the other sciences. We will examine how theology was conceived and practised in late Byzantium, focusing in particular on the presentation of theological texts in the manuscripts and the illustrations they contain.

**16 July 2024**, Tuesday Morning, Workshop (in person only)

**Divna Manolova** (PhD; Université PSL-Observatoire de Paris, CNRS), *Calculating the Medieval Cosmos*: workshop on using a medieval portable sundial and a medieval astrolabe. With the help of both paper instruments and diagrams preserved in Late Byzantine manuscripts, the participants will familiarize themselves with the construction of both instruments and will practice performing elementary calculations, such as determining the precise time of sunrise and sunset.

**16 July 2024**, Tuesday Afternoon, Lectures (hybrid)

**Chiara D'Agostini** (PhD; University of Southern Denmark), *Exploring Byzantine Geography: Challenges and Opportunities*

This lecture aims to explore the multiple facets of the geographical subject and its position within Byzantine education. This overview will offer the opportunity to rethink the model of education as well as to challenge the concept of science in the premodern world.

**Divna Manolova**, *To Imagine and Calculate the Cosmos: An Introduction to Astronomy in Byzantium*

The lecture introduces the principal Byzantine scientific approaches towards the study of the natural world and situates them within the broader disciplinary frameworks of Byzantine intellectual history and history of medieval science. The specific focus is on cosmology and astronomy and on related diagrams preserved in Byzantine manuscripts (11<sup>th</sup>–15<sup>th</sup> centuries).

**17 July 2024**, Wednesday Morning, Workshop (in person only)

**Workshop with Stephanie Drew** (HSMW Alumna; University of York), *Finding Your Way Around Medieval Herbals*: Using codices of the *Herbarium* of Pseudo-Apuleius, candidates will practise working within international collections to trace developmental links. We will identify 'marker' plant species as navigation tools and consider what they might reveal about the transmission and adaptation of scientific knowledge over time.

**17 July 2024**, Wednesday Afternoon, Lectures (hybrid)

**Stephanie Drew**, *Reading the Images*

Making connections between text and zoomorphic images: using fragmented data from different sources and cultures to interpret zoological information in early medieval manuscripts and considering some of the ways in which intercultural transmission can alter the presentation of information.

**Angel Nikolov** (Associate Professor; Sofia University "St. Kliment Ohridski"), *Ancient Magic in the Age of the Enlightenment: Medieval Book Amulets as Textbooks and Popular Reading among the Bulgarians in the 18th–19th Centuries*

The lecture focuses on the late transformations, marginalization and disappearance of an older medieval tradition characteristic of the culture of Orthodox Bulgarians, Serbs and Vlachs: the copying and carrying as apotropaia of small-format manuscript miscellanies ('book amulets') containing Slavic translations of various apocrypha, prayers, as well as calendar, divination, prognostic, medicinal and other works, each perceived as a textual amulet.

**17 July 2024, 17:30–18:30: Digital Humanities Special Session** (hybrid)

**Marie-Hélène Blanchet**, *The RAP Database (Repertorium Auctorum Polemicorum)*

RAP is the first complete inventory of writings dedicated to the evolution of the relations between the Western and Eastern parts of the Christian Church. The RAP database retrieves the data related to polemical literature from the *Pinakes* database of Greek manuscripts, checked and completed by the RAP team, and from the two new Latin and Slavic databases, which are currently being filled.

**Divna Manolova**, Presentation of two current DH projects with Byzantine Studies and History of Science components: *Byzantine Science Bibliography (BSB)* and *EIDA (Editing and analysing hIstorical astronomical Diagrams with Artificial intelligence)*.

**18 July 2024**, Thursday Morning, Workshop (in person only)

**Workshop with Rossina Kostova** (Associate Professor; St Cyril and St Methodius University of Veliko Tarnovo), *Tarnovo Sgraffito Ware: Medieval Tradition and Modern practice*: Medieval Tarnovo was one of the widely recognized centers of sgraffito ware production in the Balkans in the 13<sup>th</sup> -14<sup>th</sup> c. A unique chance for preserving and developing its heritage is given now days by a

pottery family who maintains a workshop in the old city of Veliko Tarnovo. A mother and her son produce a great variety of sgraffito pottery following medieval examples found in excavations in medieval Tarnovo, but also invent their original style in sgraffito technique. A video will present their technology of production and a visit to their workshop in the city will provide a direct impression of the art of the sgraffito ware.

**18 July 2024**, Thursday Afternoon, Lectures (hybrid)

**Shannon Steiner** (Independent Researcher, Practicing Goldsmith), *The Technological Power of Making Art in Medieval Byzantium*

This lecture explores how artisans contributed to Byzantine scientific knowledge through their direct engagement with matter and its physical potential and limitations. In a dialectical relationship embodied in extant scientific texts and surviving works of art, artisans and philosophers applied their expertise collectively to communicate the Empire's mastery over nature.

**Rossina Kostova**, *Byzantine Sgraffito Pottery: Technology, Workshops, and Cultural Impact*

The lecture will address three main aspects of the Byzantine sgraffito pottery: 1) The technology of sgraffito decoration and the main types of sgraffito ware from the 11<sup>th</sup> to the 15<sup>th</sup> c.; 2) The archaeological and technological data for sgraffito ware workshops; 3) Sgraffito pottery in the cultural setting of the medieval Balkans: Byzantine import and local centers of production.

**19 July 2024**, Friday. Excursion / Departure

Optional excursion lead by Angel Nikolov to the medieval fortification of Hotalich (<http://www.hotalich.bg/>).