

Islamicate Digital Humanities Network

The Next Generation

7th IDHN Online Conference

Date and Time:

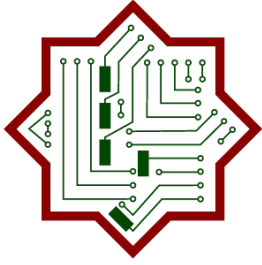
Washington, DC:	Thursday, May 5, 2022	10 am–12:30pm EDT
Berlin:	Thursday, May 5, 2022	04 pm–6:30pm MESZ
Beirut:	Thursday, May 5, 2022	05 pm–7:30pm OET
Abu Dhabi:	Thursday, May 5, 2022	06 pm–8:30pm GST
Tokyo:	Thursday, May 5, 2022	11 pm–1:30am JST

In order to attend the conference, please register at:

<https://georgetown.zoom.us/meeting/register/tJHof-igrT8qEtXZBLrGF1fPd6WMAinZYpEA>.

Program:

10.00 am EDT	Opening Remarks
10.10 am EDT	Thematic Change in Ottoman <i>Fetvas</i> Boğaç A. Ergene (University of Vermont) and Atabey Kaygun (Istanbul Technical University)
10.40 am EDT	<i>Digital Maktaba: AI perspectives for automatic text extraction and catalogation of volumes in non-Latin alphabets volumes (Arabic, Persian, Azerbaijani): challenges of La Pira digital archive</i> Riccardo Amerigo Vigliermo (University of Modena and Reggio Emilia)
11.10 am EDT	<i>Measuring the development of early Arabic script in non-literary texts</i> Leonora Sonogo (Ludwig-Maximilians Universität München) and Johannes Thomann (University of Zurich)
11.40 am EDT	<i>Mapping Intellectual Networks in Ibn Abī Uṣaybi‘ah’s biographical dictionary of physicians</i> Joseph Baxley (Saint Mary’s College)
12.10 pm EDT	Concluding Remarks



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7th IDHN Online Conference: Abstracts and Bios

Boğaç A. Ergene and Atabey Kaygun: *Thematic Change in Ottoman Fetvas*

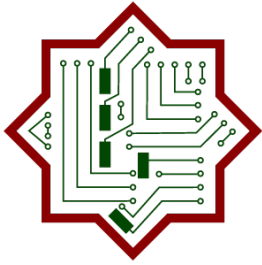
Using a distant reading methodology, the paper examines the thematic compositions of *fetva* compilations by four Ottoman *şeyhülislam* in the early modern era. Our analysis provides a systematic characterization of the types of issues with which the jurists engaged in their opinions and how this thematic engagement might have changed between the sixteenth and eighteenth centuries in ways that may (or may not) reflect the prevalent historical trends in the same era. We observed that women and family-related matters became more prominent in the *fetva* corpora from the sixteenth to eighteenth centuries. Economic concerns also received greater attention. But interest in religious issues, non-Muslims, and taxation declined in the same period. This study is the first attempt to characterize in a comprehensive fashion the prevalent thematic shifts over two centuries in the scholarly literature on the *fetvas*. It also provides a methodological framework for exploring large volumes of legal documentation from different eras for substantive variations.

Boğaç A. Ergene received his Ph.D. degree from the Ohio State University in 2001. He is a Professor of History at the University of Vermont. Ergene is the author of *Local Court, Provincial Society and Justice in the Ottoman Empire* (Brill, 2003) and co-author of *The Economics of Ottoman Justice* (Cambridge University Press, 2016) and *Halal Food: A History* (Oxford University Press, 2018). In addition, he published articles in major history, law, and economic history journals.

Atabey Kaygun was born in Germany in 1971, but grew up in Turkey. He received his undergraduate degree in 1993 and his Master's degree in 1995 from Boğaziçi University in Istanbul. After a year of research visit to International Center for Theoretical Physics in Italy, he moved to the US for his PhD. He received his PhD in Mathematics from the Ohio State University in 2005. After his graduation he did a sequence of postdocs in Canada, Poland, Germany and Argentina before he moved to Turkey permanently in 2009. Currently, he is a professor of Mathematics at Istanbul Technical University. His research interests span both theoretical and applied mathematics. On the applied side, he does statistical data analysis and natural language processing with applications in humanities.

Riccardo Amerigo Vigliermo: *Digital Maktaba: AI perspectives for automatic text extraction and catalogation of volumes in non-Latin alphabets volumes (Arabic, Persian, Azerbaijani): challenges of La Pira digital archive*

Managing and sharing cultural heritages also in supranational and multi-literate contexts is a very hot research topic. This paper presents the Digital Maktaba project, showing the first steps for designing an innovative workflow and tool for the automatic extraction of knowledge from documents written in multiple non-Latin languages (Arabic, Persian and Azerbaijani languages). From here the necessity to select a wide digital archive on Islamic sciences: for this reason, the “Giorgio La Pira” library in Palermo on Histories and Islamic Doctrines of the Fondazione per le Scienze Religiose (FSCIRE), leader institution of the international infrastructure RESILIENCE on Religious Studies, represents an interesting case-study thanks to its wide digital library in different alphabets. The tool leverages different OCR, text processing techniques and linguistic corpora to provide both a highly accurate extraction and a rich metadata content, overcoming typical limitations of current state-of-the-art systems; this will enable, in the near future, the developing of an automatic cataloguer which we hope will ultimately enable a better preservation and conservation of culture in such a demanding scenario. The future development of intelligent techniques, based also on Incremental ML and object fusion will help us get the most out of the libraries output and improve system performance based on past user actions. By



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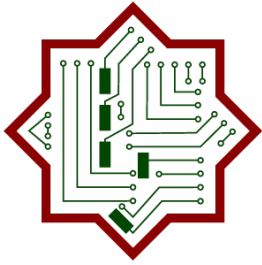
exploiting linguistic resources and linguistic analysis features (e.g., morphological analysis, disambiguation, etc.) we will enhance the management of new documents to be catalogued. At the same time, it will be necessary to define the underlying database and storage technologies (possibly based on big data management systems) evaluating their interfacing (input/output) with other bibliographic tools.

Riccardo Amerigo Vigliermo attended the Istituto di studi orientali at the University of Rome La Sapienza from 2012 and 2015, obtaining his Bachelor's degree with full marks by submitting an Islamic law dissertation on the use of the item of *ijtihād* in the Moroccan family law reform. During this period, he studied the Arabic and Persian languages and won a scholarship to improve his linguistic skills through Arabic courses in al-Asun Faculty of the 'Ayn Shams University in Cairo. After his graduation he moved to Naples where he attended the University of Naples L'Orientale from 2016 to 2018, specializing in Arabic and Persian languages and translation and attending an internship in Arabic language didactics. He graduated from University of Naples L'Orientale in 2018 with a thesis on the comparison of the Sayyid Qutb and Yūsuf al-Qaradāwī's interpretations of the *jihād* koranic verses. From the beginning of the 2020 he focused pretty much on the application of Arabic and Persian languages to Machine Learning, NLP, and TR fields. By the end of 2020 he was nominated collaborator at MIM.FSCIRE where he started working on a catalogation of non-latin texts project. From January 2021 he became a Junior researcher at Department of Education and Human Sciences of the University of Modena and Reggio Emilia (UNIMORE) where he worked on a project called: *Catalogation of non-latin alphabet texts. New approaches between digital humanities and AI, under the broader context of CLUSTER project*. From November 2021 he is a PhD student in Digital Humanities at UNIMORE where is working on his project, *Digital Maktaba*, for an innovative system of conservation and management of multi-alphabetic and multicultural heritages.

Leonora Sonego and Johannes Thomann: *Measuring the development of early Arabic script in non-literary texts*

We would like to present the APD-Paleo Tool. The Paleography Project is a spin-off of the APD, the Arabic Papyrology Database, which since 2003 has been digitizing texts of edited Arabic documents from the Early Islamic Period, mainly from Egypt. The APD has always included palaeographical information, namely the use or omission of diacritical dots and vowels signs, which is carefully documented by a five-layer text structure. But modern typography and electronic fonts offer only limited options to display the complex development of premodern handwriting. In 2018, we started adding paleographic data, based on an article Eva Grob published in 2013. She evaluated a number of paleographic parameters for their correlation with date. Some of them are categoric, like dāl with or without hook, while others are continuous, like the slant of alif compared to the lateral margin, ranging from -15° to 15° . We decided to focus on continuous parameters and to measure three angles characterising handwritten Arabic texts, more precisely, the orientation of alif/lām, the baselines of graphic words, and the orientation of the writing line. In spring 2021, we uploaded data for some 90 documents on <https://www.apd.gwi.uni-muenchen.de/apd/paleography.jsp>. The evaluation of the measurements will be presented in a book chapter. Generally speaking, there seems to be a correlation between date and the transition from horizontal to hanging scripts, but there is also a high insecurity in the measurements, and an enormous variation between different genres, and, at least for letters, a large variation between greeting formulae and regular text. The next step we plan is to quantify the similarity of texts written by the same person or in a specific village.

Leonora Sonego, born in Switzerland, graduated from Zurich University in French philology, Arabic studies and history. Since her graduation in 2011, she has worked for the Arabic Papyrology Database at LMU Munich's chair of Islamic and Arabic studies. Her publications include "Qur'an Quotations in Papyrus Legal Documents" in *Qur'an Quotations Preserved on Papyrus Documents, 7th-10th Centuries*, herausgegeben von



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Andreas Kaplony und Michael Marx, 86–111 (Leiden: Brill, 2019) and “Paleographic innovation and document structures” to be published in a collective volume edited by Dr. Ursula Hammed (Bsees) and Michail Hradek.

Johannes Thomann is visiting scholar at the Institute of Asian and Oriental Studies (IAOS) of the University of Zurich. He received his Ph.D. from Zurich University (1992). Between 1992 and 2020 he was research associate at the Orientalisches Seminar of Zurich University and later at the IAOS. His research focuses on the sciences in the premodern Islamic world, especially on astronomy and astrology. From 1999 to 2010 he worked as developer of the “Arabic Papyrology School” (<http://www.naher-osten.lmu.de/aps>). From 2014 to 2020 he was vice project manager and technology director of “Arabic Papyrology Database (APD)”, Ludwig-Maximilian-Universität Munich (<http://www.naher-osten.lmu.de/apd>; cf. J. Thomann: “The Arabic Papyrology Database”, *Digital Scholarship in the Humanities*, Vol. 30, Supplement 1, 2015, pp. i185–i186). Since 2015 he is a corresponding research associate of the project “Ptolemaeus Arabus et Latinus (PAL)” at the Bavarian Academy of Science in Munich (<https://ptolemaeus.badw.de>). His latest publications are *Reverse Engineering Applied to Ephemerides: Analysis and Edition of the Arabic Ephemeris of 1326/7 CE (MS Cairo, Dār al-Kutub, mīqāt 817)* (book chapter in *Editing and Analysing Numerical Tables*, ed M. Husson et al., 2021) and *Ibn Sahl al-Ṣāwī’s Description of an Instrument with a Gear Mechanism for Precision Measurements of Stellar Altitudes* (ZGAIW XXIII, 2022).

Joseph Baxley: *Mapping Intellectual Networks in Ibn Abī Uṣaybi‘ah’s biographical dictionary of physicians*

This is some of the work from the third chapter of my dissertation. I sought to explain in five chapters the origins and character of intellectual exchange between the Franks of the First Kingdom of Jerusalem (1099-1187) and their Byzantine, Armenian, Syrian Orthodox, and Melkite neighbors. In this chapter specifically I looked at the biographical information of intellectuals in the biographical dictionary of Ibn Abī Uṣaybi‘ah. I attempted to ascertain both how important the city of Jerusalem was in comparison to other major centers in the region and the major associations of those scholars who were associated directly with Jerusalem. In doing so, I built a tool in cooperation with the Notre Dame Center for Digital Scholarship that performed Arabic text processing and created network diagrams. From this, I was able to evaluate the relative importance of Jerusalem as well as how the networks of scholars who were associated with it changed before, during, and after the first kingdom period. This has important implications for Jerusalem as well as for the intellectual life of the Crusader States.

Joseph Baxley is a Visiting Assistant Professor at Saint Mary’s College in Notre Dame, IN. He has earned his PhD in the History and Philosophy of Science at the University of Notre Dame where he researched intellectual and cultural exchange in the Crusader States, particularly between the Frankish rulers of Jerusalem and their Eastern Christian neighbors. In this context, he has worked on mapping networks of scholars in Arabic biographical dictionaries of physicians.