

Computational Analysis of Medieval Hebrew Manuscripts

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The extant Hebrew and Hebrew-character manuscripts constitute unique remains of medieval Jewish literary culture, having survived centuries of migrations, persecutions, and censorship, often when the communities themselves no longer exist. To study them is to follow the various ways in which ancient Jewish heritage travelled from the Eastern homeland to Diaspora communities, spread from Central Asia in the east to France and Portugal to the west, from England in the north to Yemen in the south.

The National Library of Israel in its Ktiv project has digitized some 100,000 medieval Jewish manuscripts. We are PIs in an ERC-funded Synergy project, “MiDRASH: Migrations of Textual and Scribal Traditions via Large-Scale Computational Analysis of Medieval Manuscripts in Hebrew Script”, designed to make much of this treasure trove accessible as searchable text, and then leverage those texts for philological and historical study.

Unfortunately, only some 3500 are securely dated. We are in the process of using state-of-the-art machine learning algorithms to undertake paleographic analysis of tens of thousands of those manuscripts, and propose fine-grained regional and chronological typologies. With the results in hand, we plan to map out the migration, genesis, and evolution of written works within medieval Jewish communities—on a hitherto unimaginable scale.

BIO

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