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## **Historical Network Analysis: A journey through modelling and exploring early modern correspondence**

The application of computational methods from the field of network science gives us new ways to engage with some of the thorniest questions at the heart of 18<sup>th</sup> century studies; they also allow us to ask questions impossible to even imagine before the age of digitization. This lecture discusses key elements of network analysis from the perspective of historians, providing insights into the possibilities and limitations this method offers.

It is the intent of this lecture to illustrate a journey and learning process in modelling historical networks. After an introduction on the basic terminology and concepts of network analysis, we will discuss how we can transform archival sources in network data. This is not an easy task: archival research often presents us with complex, fragmentary and uncertain data that are hard to reconcile with the required precision of digital technology. To bridge this gap, we will discover how the use of multi-layered networks may provide a powerful outcome to tackle both complexity and fragmentation in archival data. Following that, we will see how we can enrich and quantify our archival based network with data-mining from datasets. By doing so, I will show how various network measurements can highlight the different roles that individual nodes play in a network. In explaining these methods, I will use examples from my own research on early modern correspondence networks.