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## Giovanni Poleni and the Early Development of Electrical Science in Northern Italy

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The mechanism of diffusion of electrical knowledge in Italy during the first half of the eighteenth century remains an open issue. To what extent did Italian scholars' original research drive it, and how much did it rely on foreign itinerary demonstrators, called "the Saxons" at the time, who allegedly introduced rotational electrical machines south of the Alps?

This paper explores Giovanni Poleni's (1683-1761) engagement with electricity from 1742 to 1748, when the interest in this emerging field rapidly diffused through Northern Italy. First Experimental Philosophy professor at the University of Padua and primarily known for his contributions to hydraulics and civil engineering, his role as an active researcher in electrical science remains largely understudied.

By examining Poleni's national and international correspondence with key figures such as Scipione Maffei, George M. Bose, and Pieter van Musschenbroek, and his unpublished compendium *Physices Elementa Mathematica*, this study sheds light on the complex network of intellectual exchanges that shaped scientific inquiry across Enlightenment Europe, exploring the dissemination of theoretical knowledge and experimental practices, and highlighting the crucial yet often overlooked role of itinerant demonstrators and instrument makers. Additionally, it provides new evidence concerning the authorship of *Dell'Elettricismo* (1746), the first Italian book on electricity.

### Short Biography

Lorenzo is a PhD student in the History of Physics at the University of Padua. His research focuses on 18th-century electrical science and Giovanni Poleni, exploring his unpublished work and extensive national and international correspondence.

He holds a B.Sc. in Physics from the University of Padua and two M.Sc. degrees: History and Philosophy of Science from Utrecht University and Physics from the University of Pavia.

During the past five years, he worked as a mathematics and physics teacher in secondary education schools across the Venetian Lagoon region, setting up interdisciplinary projects that bridge science, history, philosophy, literature, and art.

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