Symposium of History of Mathematics: *Internationalism, Nationalism and Localism. Images and Places of Mathematics in Europe from Napoleon to the Wars of the Twentieth Century*, organized by Maria Teresa Borgato and Erika Luciano, and sponsored by the Italian Society for the History of Mathematics (SISM).

The symposium was held as part of the international congress of the European Society for the History of Science (Bologna ESHS Conference 2020, https://sites.google.com/view/eshsbologna2020/home) which took place virtually in Bologna, from the 31st of August to the 3rd of September 2020 (Book of abstracts available at the congress website).
The organizers considered the theme of the symposium, *Internationalism, Nationalism and Localism. Images and Places of Mathematics in Europe from Napoleon to the Wars of the Twentieth Century*, as an appropriate occasion to gather and connect the many research works which, for some time now, have been examining a period of European contemporary history in which political activity has changed and institutionalized, in various ways, mathematical research and education. Even if mathematics is transversal to countries and societies, it has developed unevenly in different contexts. The symposium had two main focuses: the different aspects of nationalism and internationalism and their impact on the development of mathematics, and the attention paid to material sources: correspondences and manuscripts, mathematical models, libraries and archives.
Fifteen scholars have accepted or agreed to contribute with their presentations. Italy and its relations with France, Great Britain and Germany were especially taken into consideration.

The symposium was attended by numerous researchers and enhanced by their comments and questions. It was divided into four sessions, with topics organized more or less in chronological order. Each session consisted of four presentations, except for the last one in which three talks were followed by a general discussion.

In the first session, we attended four lectures related to the Napoleonic period, its institutions and reforms in Italy, in the wake of the French models. Luigi Pepe provided a broad, general framework, then particular attention was devoted to university, military schools, technical formation, and scientific collections in the talks of Elisa Patergnani and Erika Luciano. The situation of mathematics in Great Britain was also sketched by Brigitte Stenhouse, through the figure of Mary Somerville and her scientific works.

In the second session, our interest was turned to the second half of the nineteenth century, when, with the Risorgimento and political unification, our country as a whole, and mathematics in particular, enjoyed a new enthusiasm. A new generation of mathematicians gave birth to an Italian mathematical school and led it to levels never reached since the age of Galileo. This progress was made possible by the political roles covered by personalities such as Brioschi, Betti, and Cremona, influencing the reforms of public education at all levels, from elementary to higher education.

As evidenced by the interventions and comments, this progress did not start from scratch but from a solid tradition that had also existed during the old regimes. In this session the contributions of Maria Teresa Borgato, Nicla Palladino, Riccardo Rosso, Erwin Neuenschwander highlighted the links with France, Great Britain and above all Germany, countries which both influenced, and were influenced, by Italian mathematics. On the Italian side, special reference was made to Betti, Brioschi, Casorati, and Cremona and, on the other side, to mathematicians such as Cayley and Sylvester, Hermite, Weierstrass and Riemann.

A strong connection with mathematics and more generally with German culture characterized the scientific and literary production of the Italian intellectuals of this period.

In the country's reform programme that these scientists planned, advanced mathematical training was a fundamental prerequisite for the education of new generations.

Another consideration that can be drawn from the works of our symposium is that the two thrusts of nationalism and internationalism both coexisted and guaranteed the success of the country's renewal.

In the third session, the focus shifted to the new century. The pivotal aspects of our symposium were once more highlighted: the role of concrete models in the theoretical study of mathematics, in Livia Giacardi's talk, as well as the importance of technical and engineering studies in the contribution of Salvatore Coen. But the two speeches by Cinzia Cerroni and Aldo Brigaglia forcefully brought us back to the ideal of internationalization, which found its maximum expression in the Circolo Matematico of Palermo.

Finally, in the last session, with the interventions of Claudio Fontanari, Massimo Galuzzi and Maria Giulia Lugaresi, the reference period was the first half of the twentieth century, up to the second post-war years. It is a controversial period in our history, in which mathematics, and our culture, suffered from the constraints imposed by nationalism and fascism. But there was certainly no lack of figures of highly respected mathematicians, some of whom were presented here starting from their epistolary collections, and the books of their personal libraries: we refer, for example, to Francesco Severi, Ludovico Geymonat, and Fabio Conforto.
The works of this symposium cannot exhaust the debate that this period of our history, even if only for mathematics, raises. The organizers thank all participants, in the awareness of not being able to draw a definitive conclusion, but of having presented many topics for reflection and therefore of having done a good job.

Maria Teresa Borgato, Erika Luciano

14th September 2020

Talks

Luigi Pepe: *The Institutes of the Republics and the Kingdom of Italy: French Model and Italian Experiences*

Brigitte Steinhouse: *The representations of British mathematics in the early nineteenth century*

Elisa Patergnani: *Models and textbooks for technical education in Italy*

Erika Luciano: *The theory of practice': Quintino Sella and the role of scientific collections from Turin's Lezioni di mineralogia to Lincei's presidence (1847-1884)*

Maria Teresa Borgato: *Hermite and Brioschi: Scientific and academic relationships at the end of the nineteenth century*

Nicla Palladino – Maria Rosaria Enea – Giovanni Ferraro: *Determinant theory in the 19th century in Italy*

Riccardo Rosso: *Seminar activities and mathematical research in Germany in the second half of the 19th century*

Erwin Neuenschwander: *Striking Parallels: Nation building and renewal of mathematics in Risorgimento Italy and its effects on Germany*

Livia Giacardi: *Geometric Models in Mathematics Teaching in Italy at the Turn of the Twentieth Century*

Salvatore Coen: *Cesare Razzaboni, his work and the renewal of engineering studies in Bologna*.

Cinzia Cerroni: *The Mathematical Circle of Palermo: internationalism and local influences*

Aldo Brigaglia: *Le premier éclair d'un rétablissement des anciens liens qui unissaient les savants de toutes les peuples et de toutes les race, Edmund Landau and the Circolo Matematico di Palermo, 1919 – 1934*.

Claudio Fontanari: *Francesco Severi's personal library*

Maria Giulia Lugaresi: *The Fabio Conforto Fund in the IAC, INDAM and University of Rome Archives*

Massimo Galuzzi: *Ludovico Geymonat. Philosophy, political commitment and mathematics*