Education and Research in Mathematics

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The purpose of this short introduction is to give a survey of the institutions in Hungary connected with research and the nurturing of young talents in mathematics, for readers who are not familiar with the subject.

1900–1920

After 1883, there were two kinds of secondary schools in Hungary which led to university studies: "gimnázium" and "réálskola". Both started after four years of elementary school and had eight grades. In the humanistic gimnázium Latin and Greek were taught, while the réálskola (like its model, the Austrian "Realschule") put emphasis on science, mathematics, descriptive geometry, and modern languages. Both schools ended with the "érettségi" examination (Reifeprüfung, Matura or Abitur in German, Baccalauréat in French), with written as well as oral examination. Passing the érettségi at a gimnázium gave right to enter any university, while the érettségi at a réálskola gave right to studies at the Technical University, Faculties of Science, and to the Academies of Mining, Forestry, and Economics. The forming of secondary school teachers was directed by Teacher's Colleges attached to the universities. The College in Budapest was created by Mór von Kármán (father of Theodore von Kármán) and had a practice school called "Mintagimnázium" (mintá = model), which was one of the strongest gimnáziums of Hungary (e.g., T. Kármán, E. Teller, D. König, P. Lax studied there). Otherwise, secondary schools were either state schools or church schools. Some of the church gimnáziums were famous top-standard schools; in bringing up talents in mathematics, the Lutheran Evangelical Gimnázium in Budapest (A. Haar, J. Harsányi, J. von Neumann, E. Wigner), the Benedictine Gimnázium in Győr (J. Farkas, J. König,
J. Pál, F. Riesz, M. Riesz), and the Piarist Gymnázium in Budapest (L. Grossschmid, G. Hajós, E. Makai) were the most successful among them.

At the beginning of the century, there were two universities in Hungary: one in Budapest founded in Nagyszombat [today Trnava, Slovakia] in 1635 and another in Kolozsvár [today Cluj-Napoca, Romania] established in 1872. There was also a Technical University in Budapest active in forming engineers and specialists in economics. As research centres in mathematics, the Budapest Technical University and the University of Kolozsvár both played an important role, while the University of Budapest gained considerable influence in mathematical activities only in the first decade of the century.

In the 1910's two more universities were established, one in Pozsony [today Bratislava, Slovakia] and one in Debrecen, with very modest activity in mathematics until the end of the period.

As in other countries, future researchers in mathematics usually took the degree "Doctor of Philosophy" at a university. After having written a "Habilitation" thesis and presented an inaugural lecture, one was awarded the title of "private professor" (magántanár, Privatdozent in German, the term we shall use in the Biographies). This title gave the right to teach at the university (venia legendi) but involved only a minimal financial remuneration. However, secondary school teachers of state schools who became Privatdozents had their teaching load of 18 weekly hours reduced to 12.

The Hungarian Academy of Sciences had about a dozen members engaged in research in mathematics, grouped in the Section for Mathematics and Physics. The Mathematical and Physical Society was founded in 1894 and had about 400 members. Both the Academy and the Society organized sessions with lectures on various subjects in mathematics and physics, mostly connected with the research results of the lecturer.

There were two periodicals in which research papers in mathematics appeared in Hungarian: Matematikai és Természettudományi Értesítő [Mathematical and Scientific Bulletin] published by the Academy, and Matematikai és Physikai Lapok [Mathematical and Physical Journal] published by the Society. The Academy also had a periodical containing papers in foreign languages: Mathematische und Naturwissenschaftliche Berichte aus Ungarn.

Beginning with 1894, the Mathematical and Physical Society organized every year a contest in mathematics for those who have just graduated from