

The Portuguese Mathematical Society (SPM) at 75

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The Portuguese Mathematical Society (SPM) was founded in December 1940 thanks to the efforts of a small but very active group of young Portuguese mathematicians determined to stir the then stagnant waters of Portuguese scientific life.

This informal group, which went down in history as the “*Movimento Matemático*” (Mathematical Movement), together with the state body “*Instituto para a Alta Cultura*”, had a remarkable influence on the mathematical community in Portugal over the 1930s and 1940s.

Among its many initiatives, the *Movimento* founded in 1937 the research journal *Portugaliae Mathematica* (nowadays a title property of the SPM and edited by the EMS Publishing House) and in 1940 the *Gazeta de Matemática* (currently also owned and published by the SPM). The SPM was, from the beginning, a focal point for a considerable number of Portuguese researchers, students and teachers interested in the modernisation of mathematical studies and activities in the country. By virtue of its 1940 statutes, the society was, from the start, actively involved in three main areas of intervention: research, teaching and the popularisation of mathematics.



Figure 1: From left to right: Maurice Fréchet, Pedro José da Cunha (first president of SPM), and António Aniceto Monteiro (first Secretary-General of SPM and one of the main boosters of the *Movimento Matemático*). Lisbon, 1942 (photo source: http://antonioanicetomonteiro.blogspot.pt/2011_04_01_archive.html).

To get an idea of the formidable task facing the society at the time, remember that, even by the 1940s, Portugal was still an extraordinarily backward country: with about 8 million inhabitants, half of whom were illiterate, it had a total of about 9000 university students (0.1% of the total population!) in its three universities.

The challenge of raising the cultural level of the population under such difficult initial conditions was further hampered by the political regime at the time: since the second half of the 1920s, Portugal was ruled by a right-wing dictatorship that was very close to the Fascist re-

gime in Italy and also quite averse to raising the educational level of the population above the bare minimum skills provided by the officially compulsory four years of elementary schooling.

The tense relations of the regime with the young generation of scientific researchers and democratic activists of the 1930s and 1940s came to a dénouement in the political repression following the rigged 1945 general election. This resulted in the expulsion of a large number of university staff and students, followed either by their imprisonment or exile, which caused the disappearance of much of the activities of the *Movimento*. A somewhat peculiar consequence of these troubled times was the fact that the SPM had a semi-clandestine existence for the next 30 years: it was never duly recognised by the Government as a collective body within the juridical order of the country until after the termination of the dictatorial regime by the 1974 revolution.

Since 1974, the SPM has been completely reborn in its three statutory fields of action.

In addition to the reinvigoration of its periodicals *Portugaliae*, *Gazeta* and *Boletim da SPM* (first published in 1951), the activities of the society have also expanded and acquired an appreciable visibility in contemporary Portugal.



Figure 2: The current periodicals of SPM: *Portugaliae Mathematica*, *Gazeta de Matemática*, and *Boletim da SPM*.

Foremost among the SPM interventions has been a strong public action for the raising of mathematics teaching and assessment standards in Portugal at the elementary and secondary school levels. This is reflected not only in the many regular interventions in debates and public statements about the educational system, national exams, school curricula and training of teachers but also in the participation of the SPM as a consulting member of the official government body charged with production of the end of cycle national exams at the elementary and secondary school levels. Through its Life Long Learning Centre, the SPM provides a number of activities targeting the mathematical upgrade of teachers at all levels of

pre-university teaching, from 1st year elementary school onwards. Finally, the SPM is one of the officially credited entities for the evaluation of mathematics school manuals and thus has an important role in the evaluation of the school manuals used in Portugal.

Nurturing young people's interest in mathematics and involvement in science and technology is also one of the goals of the SPM. The society has been active in organising the Mathematics Olympiad in Portugal for more than 30 years, as well as training the Portuguese teams for international competitions. The SPM also collaborates with other scientific and academic associations, schools, museums and other institutions in organising youth events, such as maths fairs and maths games championships.

In the area of mathematical research, in addition to being responsible for its research journal *Portugalia Mathematica*, the SPM has two regular meetings: the National Meeting in even years and the Summer School in odd years. Besides these, a regular biannual meeting is jointly organised with our Spanish counterpart, the *Real Sociedad Matemática Española*, and a few more sporadic initiatives exist, such as the joint meeting with the EMS and the American Mathematical Society (the first such event between the EMS and the AMS) that took place in Porto in the Summer of 2015 with more than 900 participants; this was the largest meeting ever organised by the SPM. In the context of science policy, the SPM is a member of the “*Comissão Nacional de Matemática*”, a body that advises the Portuguese government about matters concerning mathematics research. This body includes the relevant scientific societies (the SPM and the Portuguese Statistics Society), as well as all the research centres in mathematics and statistics housed in Portuguese universities.

Finally, in the popularisation of mathematics, the SPM has been very active in a variety of ways. A series of public lectures for general audiences have regularly taken place in several cities all over the country, in schools, museums, science centres, bookshops and shopping malls.

Regarding publishing for the general public, in addition to the *Gazeta*, agreements with some Portuguese commercial publishers have allowed the production of a number of books, although in recent years, dire economic constraints have forced a strong curtailment of this activity.

In spite of the difficult economic situation, over the last few years, an important SPM initiative in raising public awareness of mathematics was possible due to a project funded by the Portuguese Government and the European Union. The “*Isto é Matemática*” (This is Mathematics) series of 91 short movies (<http://www.spm.pt/istoematematica/>) was broadcast weekly over two years on a Portuguese TV cable channel and became a very popular show. The first 13 episodes have been translated into English and disseminated by the RPA Committee of the EMS (<http://www.mathematics-in-europe.eu/>). An agreement with the Universidad de El Salvador for translation into Spanish of the first 13 episodes is currently under negotiation. The popularity of the award winning first series led to the financing of a new series of 52 epi-



Figure 3: “*Isto é Matemática*” (This is Mathematics) the popular SPM TV series.

sodes by Vodafone Portugal and these are currently in production and will start being broadcast in November.

Summing up, in all areas of activity its founders envisioned as important 75 years ago, the SPM has been able to imprint its mark on Portuguese society and, in some cases, its presence and intervention has extended far beyond the most optimistic expectations. Currently with 954 individual members and 10 institutional members (mainly, but not exclusively, mathematics departments of Portuguese universities), the SPM is a strong voice in defence of research, teaching and popularisation of mathematics in Portugal.

In recent years, the financial difficulties experienced in the country (with reflections felt in economic life, both at a personal level and in the curtailment of funding for higher education research and training programmes, as well as financial support for activities by scientific societies) has resulted in a situation with potential nefarious consequences for Portuguese science, a perspective that deeply worries all Portuguese scientific societies, including the SPM.



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