Société Mathématique de France

Marie-Françoise Roy and Michel Waldschmidt

Mathematics is an international adventure, and mathematicians are accustomed to cooperating with colleagues all around the world. The American Mathematical Society (AMS) and the French Mathematical Society (SMF) have several agreements, particularly reciprocity membership, publication, and distribution agreements. Most French mathematicians know the AMS, but not all members of the AMS know the SMF. The aim of this article is to fill this gap.

The SMF

The Société Mathématique de France was created in 1872 by Michel Chasles, who happened to be the first French member of the London Mathematical Society. He became the first president of the SMF, elected for one year. The SMF statutes, published in the first issue of the *Bulletin de la Société Mathématique de France*, state that the purpose of this learned society is to promote the progress of science and to propagate studies in pure and applied mathematics. This is done through programs of the society and publications by its members.

Our society was created to provide linkages among French mathematicians. At the time the SMF was founded, this was a quite small community, almost of a familial size. Due to the expansion of

Marie-Françoise Roy is professor of mathematics at the Université de Rennes I and president of the Société Mathématique de France (SMF). Her email address is marie-francoise.roy@univ-rennes1.fr.

Michel Waldschmidt is professor of mathematics at the Université Pierre et Marie Curie (Paris VI) and is immediate past president of the SMF. His email address is miw@math.jussieu.fr.

mathematics, the number of mathematicians working in France today exceeds 5,000, and our society now includes around 2,000 members.

Publications

From the beginning, one important activity of the SMF has been mathematical publication. In 1873, just one year after the SMF was created, the first issue of the *Bulletin de la Société Mathématique de France* appeared. Today, in addition to the paper version, an electronic version of the *Bulletin* is available for subscribers of the printed issues. Our collection of publications has progressively enlarged. Begun in 1964 as a supplement to the *Bulletin*, the *Mémoires* are devoted mainly to monographs. *Astérisque*, created in 1973 on the occasion of the first centenary of the SMF, publishes monographs as well as proceedings of major international conferences and Bourbaki seminars. The *Revue d'Histoire des Mathématiques* was founded in 1995. Other series are Panoramas and Synthèses (survey monographs at a high level), Cours Spécialisés (courses at the graduate level for doctoral students), and Séminaires and Congrès (the electronic version of which is freely accessible on the SMF website). A new series, Documents Mathématiques, was recently started: the first volume, published in 2001, contained correspondence between Alexandre Grothendieck and Jean-Pierre Serre. That volume has been quite successful, and a French-English version has now appeared, published by the AMS. Besides these series, sporadic volumes have been published by the SMF, in particular a reprinting of the Bourbaki Seminars from 1948 to 1968. Our society is now the main publisher in France of

mathematical books and journals at a high level. A large percentage of this material is in French, as the great tradition of publishing mathematics in the French language is still alive: for example, Fields Medalist Laurent Lafforgue wrote all his papers in French. We now have an agreement with the AMS for translations of some SMF monographs that have appeared only in French; these will be published in the series SMF/AMS Texts and Monographs. We also have a distribution agreement with the AMS.

Digitization is a concern of all publishers nowadays. We rely on the NUMDAM program (Numérisation de Documents Mathématiques), which is led by the Cellule MathDoc in Grenoble and participates in the international project of the Digital Mathematical Library.

Meetings

Unlike many mathematical societies, we do not run a big annual conference. Instead, we have a "Journée Annuelle" one Saturday in the middle of June, during which the official yearly General Assembly takes place, followed by scientific activities featuring three or four lectures on a topic of general interest. For instance, on June 15, 2002, the theme was "Mathematical Biology"; on June 14, 2003, it was "Groups and Geometry"; and on June 19, 2004, it was "Operations Research".

Every other year at the "Journée Annuelle" the SMF awards its Prix d'Alembert in recognition of a work that raises public awareness of mathematics. Since 2002 we have also awarded at the same time the Prix Anatole Decerf of the Fondation de France, whose aim is to promote the pedagogy of mathematics. Four years ago we celebrated World Mathematical Year 2000 by awarding four special prizes, Prix d'Alembert des Lycéens, for lectures on mathematics that could be understood by high school students.

Mathematical research is growing at a high speed, and it is of fundamental importance to keep informed of new developments. This is why the SMF organizes on a regular basis the so-called "sessions de la recherche", where specialists in a given subject introduce the state of the art to other mathematicians and to graduate students. In June 2002 the topic was "Random Schrödinger Operators: Methods, Results and Perspectives", and in 2003 it was "Stochastic Aspects of Vision". The next session, for 2004, is on "Dynamics of Conservative Diffeomorphisms of Surfaces: A Topological Point of View". Some of these lectures are published in Panoramas and Synthèses.

We run a number of international conferences with other learned societies; the first one took place in Lyon in July 2001 and was a joint conference with the AMS. The next one took place in Nice (February 2003) with the European Mathematical Society and the Société de Mathématiques Appliquées et Industrielles (SMAI). A third one was held in Toulouse in July 2004 with the SMAI, the Canadian Mathematical Society, the Canadian Statistical Society, and the Société Française de Statistique. Two smaller joint conferences involving the SMF are scheduled for 2005, one with the Scandinavian mathematical societies, the other with the mathematical societies of Bénélux.

CIRM in Luminy

Mathematicians need to work together, either in small groups or by participating in conferences. This is why the SMF created the Centre International de Rencontres Mathématiques (CIRM) in Luminy in 1981. This center is comparable to Oberwolfach in Germany or the Banff International Research Station in Canada. At the CIRM the superb mountain setting of those two institutes is replaced by the proximity of the Mediterranean Sea and the *calanques* (limestone fjords), but the main idea is the same, namely, to offer to mathematicians the best possible conditions for working together. The CIRM mathematical library is the biggest in the south of France (70,000 volumes), and a number of journals are obtained through exchange agreements with the SMF.

As a center for research and training, the CIRM organizes international meetings, bringing together mathematicians and researchers in related fields (like theoretical physics, computing, artificial intelligence, information theory, and mathematical biology) from France and all over the world. Also, the CIRM provides training for young researchers through intensive courses or summer courses. The center's capacity was recently increased, and more than sixty people can now be accommodated. A new program of the "Research in Teams" type was started in 2001 and offers scientific and housing facilities for small research groups. The CIRM is continuing to expand its activities, and a new auditorium is under construction. A subscription to CIRM's recent guests has been opened for helping this construction.

Education

The SMF is active in a variety of matters related to mathematics, and problems in education are one of our main concerns. The SMF contributed to the creation of a think-tank group on the teaching of mathematics, which was later officially launched by the minister of education, who appointed a committee with Jean-Pierre Kahane as president. A report of its work was published in 2002 ["L'Enseignement des Sciences Mathématiques" ("Learning of the Mathematical Sciences"), Éd. Odile Jacob] and is being translated into English. Recently Jean-Christophe Yoccoz was appointed president of this committee.

The program of school teaching deserves the attention of professional mathematicians, but it is also important to introduce mathematics on a lighter basis to high school students. This is the goal of a number of associations created or supported by the SMF, such as Animath and Math en Jeans, where young people enjoy their free time by doing mathematics.

Every year the Committee for Education of the SMF runs a meeting to study matters related to school teaching. In January 2002 a roundtable took place on the theme "Mathématiques et enseignement des sciences" ("Mathematics and Teaching of the Sciences"). The following January we dealt with the forthcoming reform of academic education in Europe: "Les Mathématiques dans les nouveaux cursus universitaires (licence master doctorat)" ("Mathematics and the New University Degree Programs"). This past January we organized a discussion on "Mathématiques dans les années de licence: spécialisation et pluridisciplinarité" ("Mathematics in the University Years: Specialization and Multidisciplinarity").

The SMF maintains contacts with organizations like the Association des Professeurs de Mathématiques de l'Enseignement Public, which is an association of high school mathematics teachers, and the Union des Professeurs de Spéciales. The SMF is also one of fourteen associations and learned societies that are concerned about the lack of interest in science among young people and that are acting together by alerting politicians as well as the general public. The shortage of students in science is an important issue and a subject of a number of debates. There is no unanimity on what the solution might be. A number of individual mathematicians are offering their own proposals for curricular reform, while the SMF tries to propose solutions that are likely to be welcomed by a large majority of scientists.

Activities with Other Learned Societies

We mentioned the SMAI, which was founded in 1983 by a group of French applied mathematicians. Our two societies have close links, and a number of joint activities are taking place. One of them, which is joint with the Société Française de Physique, aims to promote cooperation with developing countries, and our three societies recently created a joint committee, Sciences de Base et Coopération (Basic Sciences and Cooperation), for this purpose. France hosts the Centre International de Mathématiques Pures et Appliquées, which organizes schools in many developing countries, and our societies support this activity. Lack of funding is always the main difficulty, despite the support of UNESCO.

Another joint activity of the SMF and the SMAI is oriented towards young mathematicians. The group Opération Postes aims to distribute widely and in real time information related to open positions (for professors or *maîtres de conférences*). The French bureaucratic system for filling academic positions is somewhat complicated and would take a good deal of space to explain. Indeed, this system is usually modified every few years, so the current one may change in the near future.

Popularizing mathematics is one goal of our society. For many years such activity was not well supported by leading French mathematicians. That situation changed ten years ago, when Jean-Pierre Bourguignon was president of the SMF. World Mathematical Year 2000 had a strong positive effect on such activities. The above-mentioned prizes of the SMF also contribute to this goal. In addition, a booklet called *Explosion des Mathématiques* was released in July 2002, thanks to the joint efforts of the SMF and the SMAI; the purpose is to promote mathematics to a wide audience. The booklet may be downloaded for free on the server of the SMF. With the SMAI, the association Femmes et Mathématiques, and the Société Française de Statistique, we prepare another, similar booklet devoted to careers in mathematics. We also organized with the SMAI, the Institut des Hautes Études Scientifiques, and the magazine *Pour la Science* a one-day conference on "The Hidden Face of Mathematics", held March 18, 2004, at the Pompidou Center (Beaubourg). We anticipate joint activities with the Société Française de Physique for the World Year of Physics in 2005.

Nowadays communication plays an essential role in all that mathematicians do. When it comes to communication within the French mathematical community, the *Officiel des Mathématiques* (which has been freely available on the website of SMF since 1998) provides information on seminars in France, while our *Gazette des Mathématiciens* can be thought of as an analogue of the AMS *Notices*, bringing together information on different topics of interest for our members.

Our website, `http://smf.emath.fr`, provides a wealth of information about our society, including a directory of members; online order forms for books and journals; and information about our publications, conferences, and meetings, as well as various position papers.

As already noted, our two societies, SMF and AMS, have reciprocity agreements. We encourage members of the AMS to join the SMF as reciprocity members.

Further Information: Société Mathématique de France, Institut Henri Poincaré, 11, rue Pierre et Marie Curie, 75231 Paris cedex 05, France; `http://smf.emath.fr`; `smf@dma.ens.fr`.