

## Citation for the 2003 ICMI Felix Klein Medal to Guy Brousseau

The first Felix Klein Award of the Internal Commission on Mathematical Instruction (ICMI) is awarded to Professor Guy Brousseau. This distinction recognises the essential contribution Guy Brousseau has given to the development of mathematics education as a scientific field of research, through his theoretical and experimental work over four decades, and to the sustained effort he has made throughout his professional life to apply the fruits of his research to the mathematics education of both students and teachers.

Born in 1933, Guy Brousseau began his career as an elementary teacher in 1953. In the late sixties, after graduating in mathematics, he entered the University of Bordeaux. In 1986 he earned a 'doctorat d'état,' and in 1991 became a full professor at the newly created University Institute for Teacher Education (IUFM) in Bordeaux, where he worked until 1998. He is now Professor Emeritus at the IUFM of Aquitaine. He is also Doctor Honoris Causa of the University of Montréal.

From the early seventies, Guy Brousseau emerged as one of the leading and most original researchers in the new field of mathematics education, convinced on the one hand that this field must be developed as a genuine field of research, with both fundamental and applied dimensions, and on the other hand that it must remain close to the discipline of mathematics. His notable theoretical achievement was the elaboration of the theory of *didactic situations*, a theory he initiated in the early seventies, and which he has continued to develop with unflagging energy and creativity. At a time when the dominant vision was cognitive, strongly influenced by the Piagetian epistemology, he stressed that what the field needed for its development was not a purely cognitive theory but one allowing us also to understand the social interactions between students, teachers and knowledge that take place in the classroom and condition what is learned by students and how it can be learned. This is the aim of the theory of didactic situations, which has progressively matured, becoming the impressive and complex theory that it is today. To be sure, this was a collective work, but each time there were substantial advances, the critical source was Guy Brousseau.

This theory, visionary in its integration of epistemological, cognitive and social dimensions, has been a constant source of inspiration for many researchers throughout the world. Its main constructs, such as the concepts of *adidactic* and *didactic situations*, of *didactic contract*, of *devolution* and *institutionalization* have been made widely accessible through the translation of Guy Brousseau's principal texts into many different languages and, more recently, the publication by Kluwer in 1997 of the book, 'Theory of didactical situations in mathematics - 1970-1990'.

Although the research Guy Brousseau has inspired currently embraces the entire range of mathematics education from elementary to post-secondary, his major contributions deal with the elementary level, where they cover all mathematical domains from numbers and geometry to probability. Their production owes much to a specific structure – the COREM (Center for Observation and Research in Mathematics Education) – that he created in 1972 and directed until 1997. COREM provided an original organisation of the relationships between theoretical and experimental work.

Guy Brousseau is not only an exceptional and inspired researcher in the field, he is also a scholar who has dedicated his life to mathematics education, tirelessly supporting the development of the field, not only in France but in many countries, supporting new doctoral

programs, helping and supervising young international researchers (he supervised more than 50 doctoral theses), contributing in a vital way to the development of mathematical and didactic knowledge of students and teachers. He has been until the nineties intensely involved in the activities of the CIEAEM (Commission Internationale pour l'Etude et l'Amélioration de l'Enseignement des Mathématiques) and he was its secretary from 1981 to 1984. At a national level, he was deeply involved in the experience of the IREMs (Research Institutes in Mathematics Education), from their foundation in the late sixties. He had a decisive influence on the activities and resources these institutes have developed for promoting high quality mathematics training of elementary teachers for more than 30 years.