



been signed between the Faculty of sciences of Sfax and the Faculty of Mathematics in Kyushu University (Japan). We hope we will be fully in position to develop some sharp and specific areas of Mathematics through the convention and to include some new frameworks for the future.

First of all, I would like to present hereafter a glimpse on the history of Kyushu University which has been founded as Fukuoka Medical College combined with Kyoto Imperial University in 1911 and renamed as Kyushu Imperial University in 1949 as Kyushu University. As for the faculty of Mathematics, it was named in early 1939 as the Department of Mathematics in Faculty of Sciences and in 1953 as the Graduate School Division of Sciences and finally in 1994 as the Faculty of Mathematics. Kyushu University currently includes the organization of sixteen Graduate Faculties ranging between Humanities, Social and Cultural Studies, Human-Environment Studies, Law, Economics, Languages and Cultures, Sciences, Mathematics, Medical Sciences, Dental Sciences, Pharmaceutical Sciences, Engineering, Design, Information Science and Electrical Engineering, Engineering Sciences, Agriculture. There are in addition 3 research institutes:

Medical institute for bio-regulation, Research institute for applied mechanics, Institute for materials chemistry and engineering. As for the human staff, that university hires at the time being 744 full Professors, 677 Associate Professors, 118 Assistant Professors and 789 Research Associates. I point out here that Kyushu University is one of the 7 ex-imperial universities in Japan, thus one of the leading universities for research and education. International exchange is also greatly encouraged at Kyushu University. Concerning the Faculty of Mathematics, the teaching and research staff consists of 32 full Professors, 29 Associate Professors, 1 Assistant Professors and 9 Research Associates as it stands on January 1, 2007. The toll of Graduate students are as follows: (Master course 118, Doctor Course 52 and Undergraduate students in Faculty of Sciences 1292). The Faculty of mathematics was established in 1994 as a result of the merger of 3 existing departments of mathematics at the Faculty of Sciences, Faculty of Engineering and in the College of Liberal Arts. Faculty mathematicians are responsible for teaching mathematics to the first and second year students of the disciplines requiring mathematics as well as undergraduate mathematics majors.

The fields of the researches range from the deepest core of pure mathematics to the most advanced applied mathematics including: number theory, complex analysis, operator algebra, probability theory, partial differential equations, numerical analysis, computational mathematics, statistics, programming, control theory, mathematical physics and the theory of computation.

The scientific main subjects of the agreement are Representation theory of Lie groups and harmonic analysis on Lie groups or on their homogeneous spaces which possesses enormous amounts of substances as a significant and indispensable area in mathematics, and have been growing by making close interrelationship with various other mathematical domains, such as number theory, algebraic geometry, differential geometry, operator algebra, partial differential equations, mathematical physics, etc.

We now have a project of collaboration in order to contribute a further development of this vast mathematical area under the title "Geometric analysis on solvable homogeneous spaces". Actual details of research are further divided into several parts: Analysis related to induced representations, Analysis on homogeneous Siegel domains and on homogeneous cones, Uncertainty principle and Estimate of the Fourier transform norm. Other topics such as problems related to proper actions. These subjects have been, and are being pursued by the research unit "Representations of Lie groups and Special functions" directed by A. Baklouti at Sfax University. On the other hand, Nomura and his collaborators (Hideyuki Ishi and Chifune Kai) have been, and are working on geometric analysis on homogeneous Siegel domains or on homogeneous open convex cones, which are related to some of the above subjects. These objects are, in general, not symmetric spaces, and are treated as homogeneous spaces of split (hence exponential) solvable Lie groups, so that they would supply highly non-trivial particular cases. Moreover, Masato Wakayama (Kyushu University) and the research unit directed by him have made significant contributions to Harmonic analysis on symmetric spaces in relation to number theory. We hope that their expertise also will play part of our non-symmetric harmonic analysis.

Though we will start the exchange in the field of representation theory (non-commutative harmonic analysis), both organizations (Faculty of Mathematics, Kyushu University and Department of Mathematics, Faculty of Sciences, Sfax University) have still other mathematical research areas in common such as dynamical systems, quantization, partial differential equations, control theory, combinatory, and statistics. We hope that by concluding the agreement, the exchange enhances the research progress and expand to other fields in both organizations.

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