

様式 2 帰国報告書 (ITP Research Report)

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Research Report of JSPS-ITP (The international sending-elevating project for young mathematicians based on singularity, topology and mathematical analysis: Hokudai model)
Name: Hisa-aki Kawamura Name of ITP Partner Institute: Institut Fourier, UFR de Mathématiques, Université de Grenoble I Period of ITP-Stay: 01/05/2010 - 30/04/2011
Research Report: In the name of my scientific visit financed by the International Training Program of JSPS for the second time since 2008, I have spent a whole year at the Fourier Institute (UFR de Mathématiques, Université de Grenoble I) from May 2010 to April 2011. As one of my research achievements in those days, I constructed some $p$ -adic families of Siegel modular forms, that is, automorphic forms on the symplectic group by means of the lifting techniques in the sense of Saito-Kurokawa, Duke-Imamoglu-Ikeda and Miyawaki-Ikeda for the well-known families of elliptic modular forms. The existence of such families has been already observed by myself during my first visit to Grenoble in 2008, and eventually, I could reach a satisfactory conclusion in that regard. During my stay, I had the six invited talks concerning on the above-mentioned results as follows.  (1) <i>Certaines constructions de familles <math>p</math>-adiques de formes modulaires de Siegel de degré pair</i> , Deuxième Rencontre Clermont-Ferrand et Grenoble, Université de Grenoble I, May 24th 2010. (2) <i>Sur certaines constructions de familles <math>p</math>-adiques de formes modulaires de Siegel en degré pair</i> , Séminaires de théorie des nombres, Institut Mathématiques de Luminy, October 26th 2010. (3) <i>On some constructions of <math>p</math>-adic families of Siegel modular forms</i> , The 30th meeting of the joint French-German intercity seminar on automorphic forms, Université de Lille I, December 8th 2010. (4) <i>Some constructions of <math>p</math>-adic families of Siegel modular forms of even genus</i> , Seminar über Zahlentheorie, Universität Mannheim, March 8th 2011. (5) <i>On a generalized Duke-Imamoglu-Ikeda lifting of ordinary elliptic modular forms of <math>p</math>-power level</i> , Seminar über Zahlentheorie, Universität Mannheim, March 8th 2011. (6) <i>Certain constructions of <math>p</math>-adic families of Siegel modular forms and their applications</i> , Number Theory Lunch Seminar, Max-Planck-Institut für Mathematik, March 16th 2011.  Together with my coorganizers Alexei Pantchichkine and Siegfried Böcherer, I also organized a mini-workshop on automorphic forms, special values of L-functions, $p$ -adic congruences and Shimura varieties at the Fourier Institute from February 9th to the 10th in 2011. At the event, we had fruitful discussions on various issues with 12 participants. In addition, as a speaker, I gave a 60-min talk entitled “ <i>Certaines constructions de familles <math>p</math>-adiques de formes modulaires de Siegel et leurs applications</i> ” there.