

英文報告書

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1. 渡航者 (日本語)			
氏名	船野 敬	採択年度	平成 25 年度
部局	理学研究科	電話	
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研究課題名	測度の集中とラプラシアンの幾何学		
海外渡航期間	平成 25 年 5 月 1 日～ 平成 25 年 10 月 1 日		
渡航先 (英語表記)	国名 : Germany 大学等研究機関名 : Bielefeld university 研究室名等 : 受入研究者名 : Alexander Grigor'yan		
2. 渡航の報告 (英文)			
<p>渡航先の研究環境、研究者との交流、研究発表の状況等、渡航中の滞在経験について英語(500~1000語)で記述して下さい。受入研究者と撮影した写真や研究発表で用いた図等について、可能な範囲で別添として提出して下さい。ページ数については増加してもかまいません。</p> <p>この報告は、ジョン万プログラムの成果として、京都大学ホームページ(英文)などに掲載されることがあります。</p>			
<p>During the stay in Bielefeld university, I have studied the analysis and geometry of Laplacian on closed Riemannian manifolds of nonnegative Ricci curvature. I have visited Prof. Alexander Grigor'yan's office several times and discussed the above study after making a reservation. In order to get an idea from him, I have prepared and explained the background of my research problems to him. He gave me several ideas, problems, and questions during the discussion in his office and he always encouraged me. Many students and visitors often came to his office in order to discuss with him and he always tried to take a time for discussion with them even though he looked busy for his duty work. Sometimes I discussed with his students Shun-Xiang Ouyang and Michael Hinz, and we shared several mathematical problems. I gave three talks in a research seminar 「Geometric Analysis」 held at Bielefeld university (cf. „http://www.math.uni-bielefeld.de/~grigor/ga.htm“). In these talks, I have explained the detailed proof of my several results obtained during the stay. Prof. Grigor'yan and Alexander Bendikov asked many questions and gave me many suggestions during my talks. I have shared my office with Prof. Bendikov and often we discussed in our office. The research seminar 「Geometric Analysis」 was held at each weeks and I always attended the seminar. There were a lot of talks in the seminar which is related with my study and I have learned a lot of ideas, backgrounds, new results, and also how to give a nice presentation. I have also attended at a conference 「Stochastics and Real World Models」 held at Bielefeld university. During the conference I met many probabilists, especially Prof. Michael Röckner, Zhi-Ming Ma, and Fengyu Wang, and we discussed together about Dirichlet forms, the analysis and geometry of Laplacian, and the curvature dimension conditions. During the stay at Bielefeld</p>			

university, I took a contact with some analysisist and asked about my reseach problems. I have written a paper „Eigenvalues of Laplacian and multi-way isoperimetric constants on weighted Riemannian manifolds“, which includes my results obtained during the stay, and submitted it to a certain journal (available online at „<http://front.math.ucdavis.edu/1307.3919>“). I gave a talk about the above paper in a conference 「The Ninth Geometry Conference for the friendship between Japan and China」 held at Hokkaido university. For the conference I made a slide by ipad, and I guess my presentation was successful.