Sophia University
Mathematics Colloquium

When: Friday, November 15, 2019, 17:30－18:30

Where: Room No. 398, Bldg.4, Yotsuya-Campus

Speaker: Yasuyuki Oka (Daido University)

Title: Upper bounded estimate of lifespan for solutions to a semilinear heat equation on the stratified Lie groups

Abstract:

In this talk, we consider the upper estimates for the lifespan of local weak solutions for the initial value problem of a semilinear heat equation on the stratified Lie groups with r - step for a sufficient small initial data. The stratified Lie groups include the Euclidean space as r=1 and the Heisenberg group as r=2. Hence our results with regard to the lifespan for the stratified Lie groups are an extension of the results of the Euclidean space and the Heisenberg group. The proof is shown by using a test function method based on Pohozaev and Voron in the case of the Heisenberg group modified according to Ikeda and Sobajima. Regarding the main results in this talk, Georgiev and Palmieri show the same results independently of us.

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