Analysis and PDE Seminar

Dr. Jaeyong Shin
Department of Mathematics, Yonsei University

TITLE: Global solutions for some Oldroyd type models in hybrid Besov spaces

Date : Apr 3rd, 2024 (Wednesday)
Time : 10am-11am (Hong Kong time)
11am-12noon (Korea time)
Link to ZOOM : https://cuhk.zoom.us/j/99008163597
Meeting ID : 990 0816 3597
Password : 219834

Abstract. In this talk, we consider viscoelastic fluids which have various different properties from Newtonian fluids. One of the most well-known models for viscoelastic fluids was described by Oldroyd (1950) and we deal with Oldroyd type models, which do not have scaling invariance and more interestingly, behave differently in different frequencies (low or high frequencies). Keeping this in mind, we discuss global existence of solutions for Oldroyd type models in hybrid Besov spaces. Furthermore, we will also present temporal decay rates of the solutions. To the best of our knowledge, the decay rates are the first results in this framework, and can improve previous works. This talk is based on a joint work with Hantaek Bae.

All are welcome