

Partial Differential Equations Seminar

Title Global solutions for some Oldroyd type models in hybrid Besov spaces

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Abstract: 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 some previous works. This talk is based on a joint work with Hantaek Bae.



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