



Distinguished Lecture Series

Top Signs to Consider Nonlocal Modeling



28 April 2021 (Wednesday)

10:00-11:00 a.m. GMT+8 (Hong Kong Time)



Online via Zoom

(Meeting ID: 935 1964 4563)



ABSTRACT

In recent years, nonlocality has been given increasing attention in the modeling of various complex systems, especially in the presence of anomalies and singularities. The effective modeling and simulation of nonlocal interactions have led to new challenges. In particular, it is interesting to ask what are the signs for one to consider nonlocal modeling as a potentially helpful approach in application. We will present examples to address this question. We will further discuss some related mathematical and computational issues, as well as recent works.

Professor Qiang Du

Fu Foundation Professor of Applied Mathematics,
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Over the years, Qiang Du has developed mathematical models and computational algorithms for various complex and multiscale systems that include examples like quantized vortex states in superconductors and BECs, deformation of biological membranes, critical nucleation and microstructure evolutions in materials phase transformation, and anomalous diffusion in heterogeneous environments. Recognition for Qiang Du's work includes the Feng Kang prize in scientific computing (2005), the Eberly College of Science Medal (2007), SIAM (Society of Industrial and Applied Mathematics) Outstanding Paper prize (2016), ACM Gordon Bell Prize finalist (2016), SIAM Review SIGEST Award (2020), an invited speaker of the International Congress of Mathematicians (ICM 2018) and his selection as a 2013 SIAM Fellow, 2017 AAAS (American Association for the Advancement of Science) Fellow and 2020 AMS (American Mathematical Society) Fellow.

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