**Speaker:** Tetsuya Sakurai (University of Tsukuba)

**Title:** Development of a moment-based parallel eigensolver and its applications

**Abstract:**
In this talk, we present a parallel eigensolver for large-scale interior eigenvalue problems. We have proposed a method for linear and nonlinear eigenvalue problems that uses complex moments obtained by contour integral. This method is called the SS method. We discuss a parallel implementation of the SS method to achieve good parallel scalability according to the hierarchical structure of the method. We also present a method for estimating eigenvalue counts in a given interval. Some numerical examples derived from vibration analysis and nano-materials simulations are shown.

**Time:** Sep. 26 (Fri.) 14:20 – 15:20

**Venue:** R202, Astro-Math Building (NTU Campus)

**Organizer:** Jenn-Nan Wang (NTU)

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