

## **Evolution of massive binary stars and its implications for the chemical evolution**

*Wednesday, 28 June 2017 09:55 (25 minutes)*

A large fraction of massive stars are found to be in close binary systems. Binary interactions including exchanges of mass and angular momentum via mass transfer and tidal synchronization can greatly affect the evolution of massive stars. This has many important implications for hydrogen-deficient supernovae, hypernovae, formation of compact binaries (neutron stars and black holes), and nucleosynthesis. In this talk, I will review recent progresses in the theoretical studies of massive binary stars and discuss how binary star evolution is related to some aspects of chemical evolution of galaxies. In particular, I will emphasize the role of rotationally induced chemical mixing resulting from binary interactions, non-conservative mass transfer, and prolonged delay times of core-collapse supernova progenitors.

**Presenter:** YOON, Sung-Chul (Seoul national university)

**Session Classification:** Session 5 (Chair: N. Tominaga)