

**Lie Groups and Representation Theory Seminar
at the University of Tokyo**

リー群論・表現論セミナー

- DATE November 6 (Tue), 2012, 16:30–18:00
- PLACE Room 126, Graduate School of Mathematical Sciences
- SPEAKER **Takayuki Okuda** (奥田隆幸) (the University of Tokyo)
- TITLE An explicit construction of spherical designs on S^3
- ABSTRACT The existence of spherical t -designs on S^d for any t and d are proved by Seymour–Zaslavsky in 1984. However, explicit constructions of spherical designs were not known for $d > 2$ and large t . In this talk, for a given spherical t -design Y on S^2 , we give an algorithm to make a spherical $2t$ -design X on S^3 which maps Y by a Hopf map. In particular, by combining with the results of Kuperberg in 2005, we have an explicit construction of spherical t -designs on S^3 for any t .