1046-51-1031　　　　　**Hasebe Kazuki\*** (`hasebe@dg.takuma-ct.ac.jp`), Kohda 551, Takuma-cho, Mitoyo, Kagawa 769-1192, Japan. *On Unveiled Relations between Twistor and Quantum Hall Effect.* Preliminary report.

In this talk, I present recently unveiled relations between twistor theory and quantum Hall effect. Since the discovery in 80's, quantum Hall effects have much progressed in condensed matter community regardless of the developments of twistor theory, but recently, it has begun to be recognized that quantum Hall effects share many properties, such as enhanced (conformal) symmetry, fuzzy geometry and incidence relations, with twistor models. I will report such progress and related topics. Firstly, Hopf fibrations are introduced as an underlying common mathematical structure of twistor theory and quantum Hall effect. Next, I review recent developments on higher dimensional generalizations and supersymmetric extensions of quantum Hall effect, and emphasize their relations to twistor and supertwistor models. Finally, I speculate about possible applications to twistor theory from quantum Hall effect, showing several concrete examples. (Received September 14, 2008)