

# 原子分子光物理研究部 学术报告

Speaker: Prof. Dr. Ying-Dan Wang

(Institute of Theoretical Physics, CAS)

Venue: Meeting Room @4<sup>th</sup> Floor,

Frequency Standard Building

Time: 9:15am, Jan. 07 (Wednesday)

Title: Optomechanical 3-mode systems



**Abstract:** I will discuss the physics in 3-mode optomechanical systems, especially the state transfer process and the entanglement generation. I will show you that this system serves a good interface to transfer between optical signals with microwave signals<sup>[1]</sup> and there are various protocols to improve transfer fidelity against system noise<sup>[2]</sup>. I will also discuss how to use reservoir engineering to enhance the intracavity entanglement<sup>[3]</sup> and the optimal condition for the bipartite output entanglement and the large enhancement of bandwidth by introducing time-delay to the filter function<sup>[4]</sup>.

**More about the Speaker:** Y. Wang received her Ph.D. in 2006 at ITP, CAS. She spent more than 4 years on her postdoc research at NTT Japan and Basel University Switzerland. She joined McGill University as Research Associate from Feb. 2011 to April 2013, and as Research Scientist at RIKEN Japan from May 2013 to May 2014. Now she is an associate professor under the “Thousand Talent Program for Young Outstanding Scientists” (中组部青年千人计划).