

# Lectures on Quantum Gases: Fundamentals and Applications

(北京大学海外名家讲学暨量子气体基础与应用系列报告会)

Invited Speakers : Jean Dalibard

Professor of Physics at College of France, Member of the French Academy of Sciences

Date: Nov. 8<sup>th</sup>~10<sup>th</sup>, 2016

Site: Moonlight Hall (月光厅)

Overseas Exchange Center (英杰交流中心), Peking University



## Nov. 8<sup>th</sup>, 2016

8:00-8:30 am, Morning registration

8:30-8:40 am, Xuzong Chen (Peking University)

### Welcome Address

8:40-8:50 am, Group Photo

9:00-9:50 am, Jean Dalibard,

**Introduction, Coherence and superfluidity of cold atomic gases (1)**

9:50-10:10 am, Coffee Break

10:10-10:50 am, Jean Dalibard

**Coherence and superfluidity of cold atomic gases (1)**

10:50-11:30 am, Discussion

## Nov. 9<sup>th</sup>, 2016

9:00-9:50 am, Jean Dalibard

**Low-dimensional quantum fluids and the Berezinski-Kosterlitz-Thouless transition (1)**

9:50-10:10 am, Coffee Break

10:10-10:50 am, Jean Dalibard

**Low-dimensional quantum fluids and the Berezinski-Kosterlitz-Thouless transition (2)**

10:50-11:30 am, Discussion

## Nov. 10<sup>th</sup>, 2016

9:00-9:50 am, Jean Dalibard

**Artificial gauge fields for neutral atoms Conclusions and Outlook (1)**

9:50-10:10 am, Coffee Break

10:10-10:50 am, Jean Dalibard

**Artificial gauge fields for neutral atoms Conclusions and Outlook (2)**

10:50-11:30 am, Discussion

## Organizer:

Xuzong Chen (陈徐宗), School of EECS, Peking University

Wumin Liu (刘伍明), Institute of Physics, CAS

Dingping Li (李定平), School of Physics, Peking University

Xiaoji Zhou (周小计), School of EECS, Peking University

**Secretary Group:** Wei Xiong (熊炜), Minghui Chang (常明慧), Peking University

**Sponsor:** Office of International Relations, Peking University, School of Electronics Engineering and Computer Science, School of Physics, Peking University

## Invited Speakers : Jean Dalibard



Jean Dalibard教授是法兰西科学院院士，法国国家科研中心主任研究员，世界著名冷原子物理科学家。上世纪八十年代，提出磁光阱的思想，后被MIT小组实现，现已成为冷原子的基本装置。然后与他博士生导师、诺贝尔物理奖得主 Claude Cohen-Tannoudji一起提出梯度冷却的思想，获得低于多普勒极限的温度。他是早期研究量子玻色气体超流涡旋的开拓者，也是研究两维量子气体 Berezinski-Kosterlitz-Thouless 相变的先驱。当前的主要研究兴趣是量子拓扑相变。

Jean Dalibard completed his graduate studies at the École Normale Supérieure and the University of Paris VI from 1977 to 1981. After obtaining the degree in physics, master of physical and postgraduate diploma, he obtained in 1981 the postgraduate doctorate with the thesis " *Study of temporal correlations between fluorescence photons* " prepared under the direction of Claude Cohen-Tannoudji . He was appointed associate professor of physics in 1981, as a contingent scientist at the Institute of Optics in the team of Alain Aspect and was seconded to the National Scientific Research Centre as a researcher. After obtaining his doctorate in physical sciences with the thesis " *The role of fluctuations in the dynamics of an atom coupled to the electromagnetic field* " sustained the University of Paris VI in 1986, he was appointed Research Fellow in CNRS, and then promoted as research director 6 years later. He was a lecturer at the Ecole Polytechnic from 1989 to 2002, is professor since 2003. He is guest researcher at the Cavendish Laboratory in 2010 and is a professor at College of France since 2012. He is a quantum optics expert and works at Laboratoire Kastler Brossel . He is a member of Academy of Sciences . Since April 2013, he holds the chair "Atoms and radiation" at the College of France .