

# The College of Physics at Jilin University

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COLLEGE OF PHYSICS, JILIN UNIVERSITY, CHANGCHUN, CHINA



**Fig. 1:** The Main Building (Ding Xin Building) of JLU.

## JILIN UNIVERSITY

Jilin University, located in Changchun City, Jilin Province, China, was founded in 1946. At present, Jilin University has become one of the largest comprehensive universities in China in terms of its students enrollment. The University is strongly supported by state key projects such as “Project 211” and “Project 985”, and has been selected as one of the “Double First-Class Construction” universities.

The present Jilin University was formed in 2004 after a merger of five other universities in Changchun. Jilin University covers a total area of 6.11 million m<sup>2</sup> with seven campuses dispersed in six districts. Today, Jilin University consists of 46 colleges or schools and embraces diverse branches of learning in philosophy, economics, law, education, literature, history, science, engineering, military science, medical studies, management, and art.

Now, our university aims to become a high-level research

university that is first-class in China and renowned internationally, an important base for training highly qualified innovative talents, transformation of high-level scientific research and achievements as well as introducing high-quality social service and advanced culture; also one that enables students to develop in an all-round way, to make faculty proud and be widely recognized at home and abroad.

## HISTORY OF THE COLLEGE OF PHYSICS

The College of Physics at Jilin University was established on the top of Department of Physics at Northeast People’s University (re-named as Jilin University in 1958). In 1952, a number of top physicists in China including Rui-Huang Yu (余瑞璜), Guang-Ya Zhu (朱光亚), Shi-Shu Wu (吴式枢), Qing-Quan Gou (苟清泉), Bing-Quan Huo (霍秉权), and Jian-Xuan Zheng (郑建宣) from Tsinghua University, Peking University, and other universities were

assigned the great mission of establishing the Department of Physics at Northeast People's University. After several years development, the Department of Physics in Northeast People's University ranked as one of the top institutes for Physics in China. In 2001, the Physics Departments in the former Jilin University, Jilin University of Technology, Changchun University of Science & Technology, Norman Bethune Medical University and Changchun Post & Telecommunications College were merged to form the current College of Physics in Jilin University. In 2014, the Physics Teaching and Research Department in the Agronomy Department of Jilin University also joined.

From its establishment to the present time, the College of Physics has made many significant contributions to scientific research and country development and has become one of the leading institutes in China.



Fig. 2: Physics Building at JLU.

In 2017, both Jilin University and the Discipline of Physics were inducted into the list of "World-class Universities and First-class Disciplines Construction". We warmly welcome distinguished scholars, either from China or abroad, to join our efforts.

## FACTTY AND STUDENTS

Today, the College of Physics has about 280 faculty members including 85 full professors and 75 associate professors including some full-time faculty members from Europe, USA and Japan. The college now has four undergraduate subjects: physics, applied physics, nuclear physics, optoelectronic information science and engineering. At present 1135 undergraduate students, 443 graduate students and 105 doctoral students are studying here. From its establishment, talent training is the key task of the College and in terms of the number of the distinguished alumni it is among the top 5 universities in China.

## RESEARCH AND LABORATRIES

Research in the College of Physics is motivated by both fundamental problems in nature and national major demands. Today, the faculties in the college mainly perform the following research: particle physics and quantum field theory, astrophysics and cosmology, nuclear physics, computational methods and software, high pressure physics, condensed matter physics, material science, quantum optics, light emitting devices, wave propagation in complex media and complex structures, ultrasonic nondestructive testing and acoustical materials.

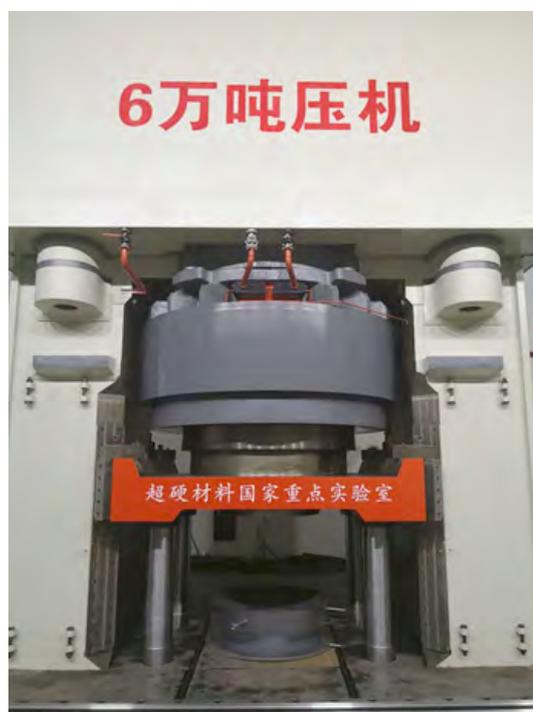
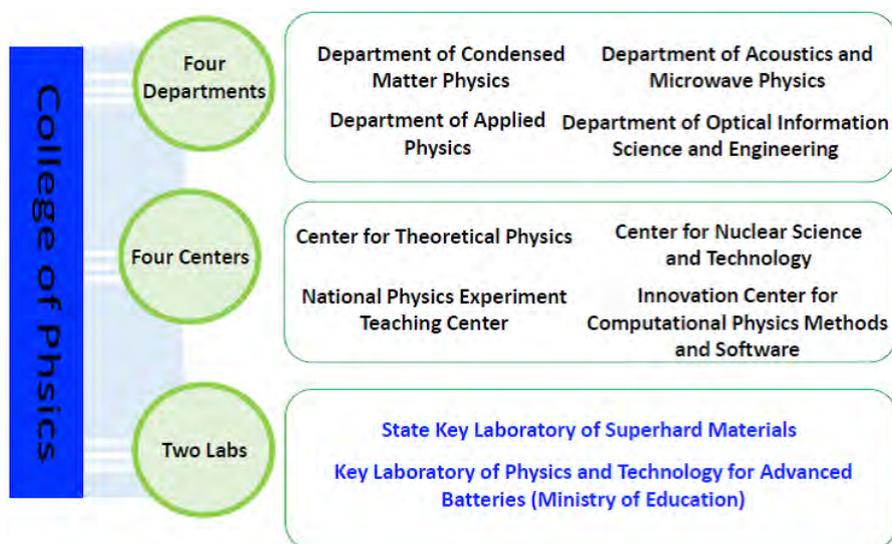


Fig. 3: The Press of 60,000 tons.

In the past five years, scholars in the College have been awarded two National Prizes and the first Walter Kohn Prize from the ICTP and the Quantum ESPRESSO Foundation. The significance and capabilities of the scientific research have improved steadily. During this period, about 200 projects, including one "Major National Science and Technology Infrastructure" project, were completed or are on-going, and the research funding is increasing each year.

The College of Physics at Jilin University has the following divisions and research institutes:



## INTERNATIONAL EXCHANGE

### Sino-Russia Joint Training Program

With the development of the “One Belt and One Road” strategy, China has increased close cooperation with countries of the Silk Road Economic Belt. Before this strategy, from 2002 Jilin University began to develop a Sino-Russia Joint Training Program in the Physics major with Tomsk Polytechnic University (TPU). Students in this program undertake basic physics courses at Jilin University (including Russian) and then study at TPU for the next stage. Students who complete the program obtain a graduation certificate and degree certificate from both universities. In 2008, the program was included in

the national college entrance examination scheme. In 2013, Jilin University and the Russian National Research University of TPU got approval from the Ministry of Education for the undergraduate program.

### Other Programs

In addition to the Sino-Russia Joint Training Program, the College of Physics has also established student exchange and research collaborations with many world-leading institutes such as Stony Brook University, Oxford University, the University of Sheffield, Nagoya University and so on. Each year, we send more than 100 students and faculty to visit them and invite many world-leading physicists to give lectures or conduct research here.



**Yanming Ma** is a professor in physics and the dean of the College of Physics at Jilin University. He received his PhD in condensed matter physics from the State Key Lab of Superhard Materials at Jilin University in 2001. After a couple of years of post-doc research in the Steacie Institute for Molecular Sciences, National Research Council, Canada and Laboratory of Crystallography, ETH, Zurich, he became a full professor at Jilin University. He was appointed dean of the College of Physics in 2017. He was awarded the second class prize of the state natural science award in 2015 and the first Walter Kohn Prize from the International Center for Theoretical Physics (ICTP) and Quantum ESPRESSO Foundation in 2016 for his development of efficient methods for the determination of crystal structures based on density-functional theory and for the prediction of novel phases of materials under high pressure.