

Interdisciplinary Collaborations with International Partners in Zhejiang University

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Along with the economic globalization, the international dimension of higher education has become increasingly important in the last decade of the 20th century, particularly in the 21st century. Interdisciplinary research now is an international trend of cutting-edge research with the continuous progress and development of science and technology. Practice shows that interdiscipline is the source of generating new disciplines, an important way to get original scientific achievements, also an inevitable choice to solve significant technical and social problems. For example, interdisciplinary outcomes in the Nobel Natural Science Award showed an increasing ratio in the last 20 years. Interdisciplinary collaborations with international partners play an important role in the internationalization of higher education.

Zhejiang University, with a history of 117 years, is one of the leading comprehensive research universities in China. We provide high quality education that prepares our students to be thoughtful leaders and useful citizens with a global vision and social responsibility, as well as in interdisciplinary & innovative research that addresses pressing issues and challenges. With a strong commitment to making a truly international university with academic excellence, it has been making great efforts to develop an international approach with Chinese features. The University has been encouraging the international exchange of staff and students, especially in the field of interdisciplinary collaborations.

Partnership Program to Facilitate Substantial Interdisciplinary Collaboration

Zhejiang University, together with the Massachusetts Institute of Technology (MIT), participates in the development of the Singapore University of Technology and Design (SUTD), Singapore's new publicly-funded university. Partnering with MIT and Zhejiang, SUTD aims to incorporate western and eastern innovation cultures, and to be deeply engaged in the world of ideas, practice and entrepreneurship. Its education and research mainly fall into four categories: Architecture and Sustainable Design, Engineering Product Design, Engineering Systems and Design, and Information Systems Technology and Design.

Zhejiang-California International NanoSystems Institute (ZCNI) was co-established by Zhejiang University and California NanoSystems Institute. ZCNI focuses on nano-materials, biomedicine, and information technology. The cooperation of a cross-platform and related laboratory promote the development of interdiscipline.

Haining international campus of Zhejiang University, which is a platform for transnational education, collaborative research and technology transfer is now under construction. We aim to build a world-class international campus at the forefront of the times, for the mutual benefit of our partner institutions and Zhejiang University. Based on the strengths of all our partner

universities and cultures, they will conduct collaborative teaching, research, and service activities. Those university partners include Imperial College London, University of Illinois at Urbana-Champaign, University of Edinburgh, and Carnegie Mellon University. We are also willing to establish strategic partnerships with more world-class universities.

Going Out and Bringing In Strategy, Participating in Interdisciplinary Research

Qiushi Academy for Advanced Studies (QAAS), Zhejiang University, was established in 2006. Its research work mainly focuses on neural engineering, which is frontier and exploratory. In the last eight years, QAAS has built a solid foundation of high level interdisciplinary research. It has achieved a great reputation and became a prototype of interdisciplinary studies among biomedical engineering, computer science, material science and clinical medicine. Now the study in invasive brain computer interface has been a leading position domestically, and has an important influence internationally.

QAAS insists to extensively carry out international cooperation, which creates a harmonious atmosphere to inspire the young people's innovation to solve practical problems. By keeping the strategy of "going out and bringing in," an innovative training system is well established for graduate students from different backgrounds.

By performing the "going out" strategy, young researchers and students were exchanged with world-class renowned research labs to establish close cooperation in the brain-computer interface field, which helps them have a clear career plan and build self-confidence. At the same time, more graduate students were encouraged to participate in various short-term academic exchanges and international conferences with their academic achievements.

Regarding the "bringing in" strategy, we also actively bring in the frontier international research and employ internationally renowned experts and scholars as visiting professors at Zhejiang University. In 2011, we invited Dr. John Donoghue, whose group developed the first human brain machine interfaces, to be our guest professor. In 2013, Dr. Andy Schwartz, who built the first non-human primate brain-control self-feeding demo in the world, came to visit our lab and spoke highly of our work. By occasionally inviting many renowned scholars to the university and organizing high-level international seminars, we provide face-to-face opportunities for graduate students to meet with top experts and carry out extensive international cooperation. Right now, QAAS has not only formed closer connections with internationally renowned research labs but also attracted an increasing number of passionate research scientists to participate in our research.

Internationalization has become a formidable force and brought to Chinese universities great opportunities as well as challenges. Sharing best practices for world class universities while maintaining a clear knowledge of the situation in China, we will strive to build a broader and higher level interdisciplinary and academic exchanges collaborations with international partners. In that case, we will be in a win-win situation.