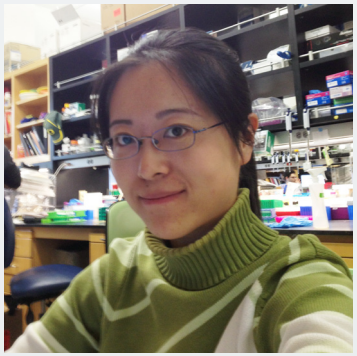

Fangyuan DING

Home Country
China

Degree
Post-Doctorate in Synthetic Biology

Expertise
Biophysics

Research Focus
Bioengineering, Synthetic Biology and System Biology

Host University
California Institute of Technology, United States

Fellowship Awarded
2012

Fangyuan Ding was born in Jinan, the capital city of Shandong province, China, and grew up there until she went to university at the age of 18. She was the only child in her family.

Fangyuan has a BSc in Physics from Nanjing University. As an undergraduate student research project she simulated the metal organic chemical vapor deposition process that is widely used in the semiconductor industry. In 2005, she moved to the Ecole Normale Superieure (ENS) in Paris, France, supported by its Master scholarship program for international students, and in 2008 gained an MSC in Physics. During her Masters' internship, she worked on a novel interlaced optical force-fluorescence technique in the Research Laboratory of Electronics at the Massachusetts Institute of Technology (MIT). Fangyuan received an "Allocation de Research" scholarship from ENS to support her PhD studies. In her subsequent research at ENS, she proposed a new single-molecule sequencing method that has one-base resolution with an error rate ten times better than other single-molecule sequencing techniques and would be high-throughput and low cost.

In her post-doctorate studies, Fangyuan will use the Elowitz Laboratory at Caltech to investigate the self-patterning of mammalian cells. She intends to quantitatively understand natural patterning processes, and then develop the necessary tools to implement or controllably perturb those systems. The project proposes to form a synthetic patterning with minimal controlled components, which is a first step towards the engineering of self-patterning tissues in a biomedical context and advancing regenerative medicine.

Fanguan's long-term goal is to pursue an independent research career addressing bioengineering issues.