Research, Informatics and Graduate Studies

https://sites.gtiit.edu.cn/research/?post_type=jobs&p=4828

PhD/Master (MSc) Positions in Synthetic Biology and Intelligent Control (GS-2021003) – Group of Assoc. Prof. Peng Xu

Description

The Chemical Engineering Program (Group of Peng Xu), Synthetic Biology and Intelligent Control Laboratory (SBIC-Lab, 合成生物智能控制课题组), is looking for 3-4 PhD/MS students to pursue their graduate study in:

- Metabolic Engineering / Green manufacturing
- Synthetic Biology / Bio-Intelligence and bio-computing
- Feedback control theory / Biochemical reaction network
- Bio-mathematical modeling / Microbiome interactions

□□□□□□□□□□□□□□3-4 □□□ / □□□□□□□□□□

- 代谢工程 / 绿色制造
- 合成生物学 / 生物智能与生物计算
- 反馈控制理论 / 生化反应网络
- 生物数学模型 / 微生物菌群互作

Contract duration: 3 + 1 years.

About the University □□□□□□

Guangdong Technion – Israel Institute of Technology (GTIIT) is a satellite university of Technion – Israel Institute of Technology, located in Shantou, China. Technion is world-renowned for its exceptional research and education. Since 2004, three faculty members in Technion received the Nobel prize, consistently ranked as a top-100 university (ARWU-Shanghai Ranking).

广东以色列理工学院是世界著名研究型大学以色列理工在汕头的分校，由李嘉诚基金会和广东省创建。所招的硕士、博士生学籍注册在以色列理工，有副导师（Technion母校老师）共同指导。在以色列理工完成课业后回GTIIT完成课题研究，通过答辩后最终获得以色列理工的学位，所获得学位受教育部及国际认可。

About the Group □□□□□□□

Prof. Xu has interacted with international research teams and thought-leaders in the past 8 years to solve challenges in health, medicine, energy and environment. Professor Xu will join GTIIT, as an Associate professor of Guangdong-Technion Chemical Engineering program in Spring 2021. He was an Assistant Professor at the Department of Chemical, Biochemical and Environmental Engineering at University of Maryland Baltimore County from 2016 to 2020. He obtained his PhD in Chemical and Biological Engineering from Rensselaer Polytechnic Institute (2013) and completed his postdoc training in the Stephanopoulos lab at MIT (2016).

Dr. Xu has received a number of awards and recognitions, including the Chinese Government Award for Outstanding Self-Financed Students Abroad (2012), the Bill & Melinda Gates Award (2018), the Biotechnology & Bioengineering (B&B) Daniel IC Wang Award (2020). He served in the editorial board for the journal *Metabolic Engineering* (IF = 7.3) and the journal *Current Opinion in Biotechnology* (IF = 8.3). Professor Xu published more than 65 journal articles with a google scholar citation of 3540 and an H-index of 28, on world-leading journals including *Nature Biotechnology, Nature Communications, Nature Chemical Biology, Proceedings of*

Position
PhD/Master

Program
Chemical Engineering

Research Area
Metabolic Engineering / Green manufacturing

Synthetic Biology / Bio-Intelligence and bio-computing

Feedback control theory / Biochemical reaction network

Bio-mathematical modeling / Microbiome interactions

Contact
Assoc. Prof. Peng Xu

Email: pxu999@gmail.com

Application Deadline
10 April 2021

Date posted
March 23, 2021

Location
Guangdong Technion – Israel Institute of Technology (GTIIT), China & Technion-Israel Institute of Technology, Israel.

Fees & Finance

How to Apply

National Academy of Sciences, Trends in Biotechnology, Metabolic Engineering, Biotechnology & Bioengineering, Current Opinion in Biotechnology and ACS Synthetic Biology et al.

Project Details

The SBIC-Lab, led by Professor Peng Xu, focuses on applying chemical engineering analysis, control theory, molecular tools and computational models to decode biological intelligence, drive the convergence of synthetic biology and artificial design for green manufacturing, better health and medicine. The research team will focus on (1) Decoding biological intelligence for cellular design and computation; (2) Microbial metabolic engineering for manufacturing value-added compounds; (3) Understanding the interplay of antimicrobial resistance and gut microbiota; (4) Microbiome, natural products and precision medicine *et al*.

The research topics of the positions include:

- Chemical biology, molecular biology and genetic engineering;
- Feedback control theory, gene circuits and bio-intelligent design;
- Bio-computing based on biochemical reaction network;
- Yeast genome engineering and genome evolution;
- Natural product synthesis and human/animal gut health;
- C1 feedstock utilization.

Keywords

Synthetic biology, Metabolic engineering, Intelligent control, Biocomputing, Natural Products, Human Microbiome, Biochemical reaction network, Molecular Biology, Microbiology, Medicine, Oleochemicals, Sustainability, Health, Artificial Intelligence, Computational modeling

Application

– BS degree or MS degree in Chemical Engineering, Bioengineering, Biotechnolopgy, Chemistry, Microbiology, Chemical Biology, Mathematical Biology, Molecular biology, Control theory or Machine learning

– Strong background in biochemistry and molecular biology (essential)

– Strong interest in synthetic biology and metabolic engineering (preferred)

– Strong skills in both experimental work and computational simulations (preferred)

– Good communication skills, both presentation and writing (essential)

– Ability to explore unknows, think out of box, work independently as well as in a dynamic team environment

– Self-motivated, curiosity-driven, ready to renew and challenge yourself

We work in a collaborative international environment. The selected graduate students will have opportunities for: (1) international collaborations and conference travel to interact with world experts in China, Europe and the United States; (2) industrial partnership and professional development; (3) communication skills training on presentation and writing; (4) publishing original scholarly articles on high impact journals.

Application Procedures□□□□□

– Application deadline: **10 April, 2021**

– Send required documents electronically to: pxu999@gmail.com

-The PhD candidate must fulfill the requirements for admission to the Technion Graduate School and needs to comply with its regulations leading to the PhD/Master degree: https://graduate.technion.ac.il/en/prospective-students/

– Lab homepage: https://pengxulab.weebly.com/

– Are you seeking a firm footing to change the world with biology, chemistry and engineering? Please don't hesitate to contact Prof. Xu (pxu999@gmail.com) inquiring the positions in SBIC-Lab @ GTIIT.