

google scholar citation of 4440 and an H-index of 33, on world-leading journals including *Nature Biotechnology*, *Nature Communications*, *Nature Chemical Biology*, *PNAS*, *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

Selection Criteria

- BS degree or MS degree in Chemical Engineering, Bioengineering, Biotechnology, 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 unknowns, think out of box, work independently as well as in a dynamic team environment
- Self-motivated, curiosity-driven, ready to explore unknowns and face challenges

We work in a collaborative English-speaking 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

- MS Application deadline: **10 April, 2022**
- **PhD Application deadline: Any time in the year**
- Send required documents electronically to: peng.xu@gtiit.edu.cn

- 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/>
- Google Scholar page: <https://scholar.google.com/citations?user=vqLnxtEAAAAJ&hl=en>
- Are you seeking a firm footing to change the world with biology, chemistry and engineering? Please don't hesitate to contact Prof. Xu (peng.xu@gtiit.edu.cn) inquiring the positions in SBIC-Lab @ GTIIT.