

"YUME" MENGHE XU

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EDUCATION

University of Tokyo

M. Eng. in Chemical System Engineering, Graduate School of Engineering, 2017

Thesis: A region-specific analysis of woody-biomass energy system under domestic resource limitation

Advisor: Tatsuya Okubo

University of Tokyo

B. Eng. in Chemical System Engineering, School of Engineering 2015

Thesis: Synthesis of Cu SSZ-13 Zeolite Using Preliminary Mechanochemical Treatment

Advisor: Tatsuya Okubo

Fab Academy A course on how to envision, prototype and document ideas through hands-on experience with digital fabrication tools. Jan.-Jul. 2020

WORK EXPERIENCE

WonderLab Inc. A Tokyo, Japan based EdTech startup that produces educational apps for children aged 4-10.

Content Director, Global Business Development Director 2018-Present

- Originated ideas and planned out UI for content as a block-based programming activity to make music inside WonderBox – a monthly subscription service where children can access STEAM app-based content of various topics.
- Directed content development for WonderBox and Think!Think! – an app with over 100 mini games to develop critical thinking skills – as a project manager inside teams with engineers and graphic designers.
- Conducted testing with children for product improvement.
- Investigated potential market for Think!Think! in China and the United States by exhibiting at EdTech conventions and conducting user interviews.

Komatsu Summer School A 7-days liberal arts focused summer camp for high school students, run by university students around the world that takes place annually in Ishikawa, Japan.

Representative Director 2017-Present

Executive Committee Member 2014-2016

- Managed a team of 40 university students to deliver each year's summer school by raising fund, managing budget, designing and promoting the program, recruiting high school students as participants.

- Initiated events to strengthen the alumni network.

Komagome Gakuen High School A private high school in Tokyo, Japan.

Part-time STEM course teacher

2019-Present

- Designed and delivered a weekly STEM course where students build mechanical models with LEGO and program with Arduino IDE, in collaboration with Saitama University STEM education center.

Self-initiated STEAM Learning Experience Designer

2019-Present

Designed and delivered STEAM workshops on various topics including robot crafting & programming, interactive art making and music making to elementary school, middle school, high school learners. Some in collaboration with educational organizations, others organized by me.

Taktopia & Co. An education consulting company that designs learning experience for schools and organizations in Japan.

Learning Designer

2017-2018

- Worked with middle schools and high schools to design and carry out workshops and study tours based on their learning objectives.

PUBLICATION

Hirokazu Sugiyama, Yusuke Morikawa, Mai Matsuura, **Menghe Xu** (2018). "Relevance of regulatory constraints in designing pharmaceutical manufacturing processes: A case study on waste solvent recovery." *Sustainable Production and Consumption*, 17, 136-147.
<https://doi.org/10.1016/j.spc.2018.09.003>

CONFERENCES

Menghe Xu, Yusuke Morikawa, Mai Matsuura, Hirokazu Sugiyama. "Designing solvent recovery processes in drug substance manufacturing." Poster presented at the 81st Annual Conference of the Society of Chemical Engineers, Japan. (2016)

Hirokazu Sugiyama, Yusuke Morikawa, Mai Matsuura, **Menghe Xu**. "Quantitative analysis on the relevance of regulatory constraints in designing pharmaceutical manufacturing processes." *Proceedings of 13th International Symposium on Process System Engineering*, Elsevier, *Computer Aided Chemical Engineering*, 44, 2119–2124 (2018)

HONORS & AWARDS

Dean's Award, School of Engineering, the University of Tokyo	2016
Honorable Scholarship for outstanding international students, Hirose Foundation, ¥150,000/month	2010-2017
Outstanding student presentation at the 81 st Annual Conference of the Society of Chemical Engineers, Japan.	2016
Winner of business contest, Boeing Externship Program	2015

SKILLS

Languages: Mandarin Chinese (native), English (proficient), Japanese (proficient)

CAD: Fusion360, Inkscape, Illustrator

Fabrication: 3D printing, Laser cutting, CNC machining, Welding

Electronics: EAGLE, Arduino IDE

Creative coding: Processing, p5.js, Sonic Pi