

## Research topics for graduate students for 2023

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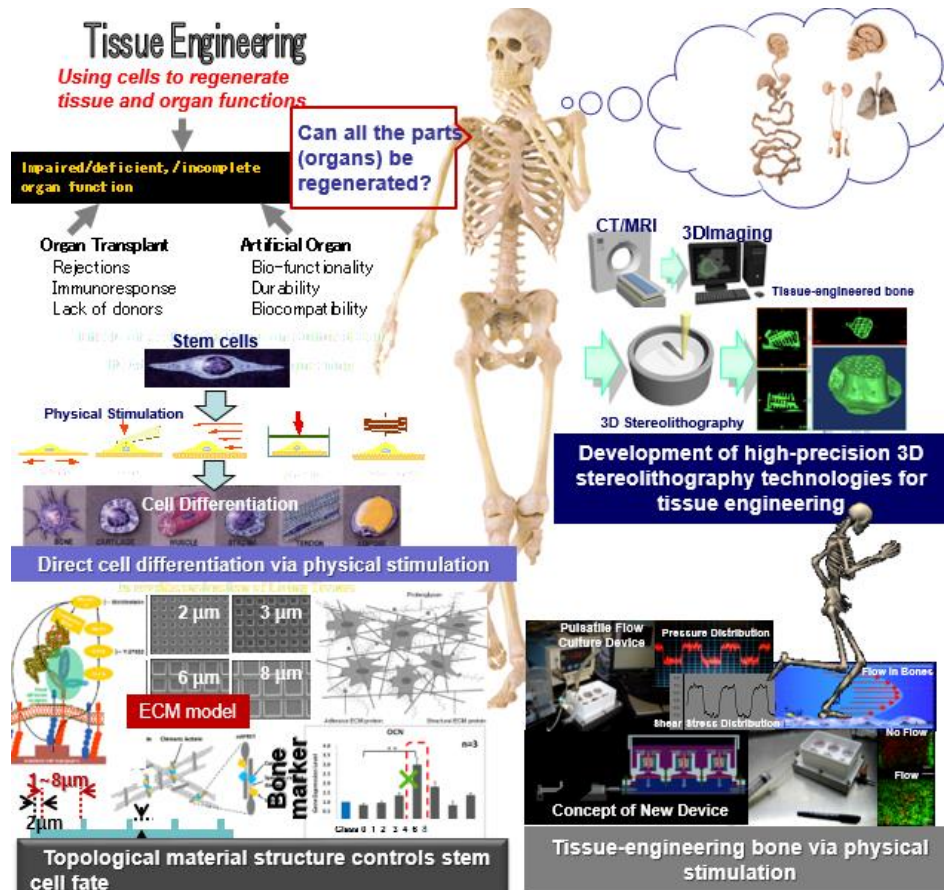
Acceptable course(s)

- Master's Degree
- Doctoral Degree



#### Research Topics

Furukawa Laboratory aims to **develop fundamental technologies necessary for tissue engineering**. Using rapid prototyping technology, we hope to create organs with definable 3D structures. Also by designing devices for physical stimulation, we focus on further increasing the functionality of tissue-engineered organs. With iPS cells and bone marrow-derived stem cells as cell sources, we are tissue-engineering cartilage, blood vessel, bone and uterus tissue that will be appropriate for future medical treatments. In particular, the tissue-engineered cartilage synthesized at this lab are being utilized by orthopedics for clinical experiments and have shown promising results. Like such, we at this lab are actively developing new technologies for tissue-engineering with clinical feedbacks.



#### Articles Related to Research Topics

- [1] Narintadeach Charoensombut, Kinyoshi Kawabata, Jeonghyun Kim, Minki Chang, Tsuyoshi Kimura, Akio Kishida, Takashi Ushida, Katsuko S Furukawa, *J Biosci Bioeng.* 2022 Jan;133(1):83–88. 2021.
- [2] Koichiro Maki, Michele M. Nava, Clementine Villeneuve, Minki Chang, Katsuko S. Furukawa, Takashi Ushida and Sara A Wickstrom, *Journal of Cell Science* (2021), vol. 134(2), jcs247643.
- [3] Jeonghyun Kim, Takashi Ushida, Kevin Montagne, Yasushi Hirota, Osamu Yoshino, Takehiro Hiraoka, Yutaka Osuga, and Katsuko S Furukawa. *Scientific Reports.* 2020, 10(1):9014

Lab. Web page: [http://www.furukawa.t.u-tokyo.ac.jp/english/home\\_en.html](http://www.furukawa.t.u-tokyo.ac.jp/english/home_en.html)

<http://www.tissue.t.u-tokyo.ac.jp/index-e.html>