

## 醫用超音波原理

### Term Project:

#### Minimum requirements:

- Find a paper in one of the following journals and study it thoroughly.
  1. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control.
  2. Ultrasonic Imaging.
  3. Ultrasound in Medicine and Biology.
  4. Journal of Acoustical Society of America.
- Write down a report based on your study. The report can be in English or in Chinese. It should include a summary of your findings and any related materials that you think are closely related to the paper. Please also attach a photocopy of the paper at the end of your report.

#### Nice to have:

- Related papers in the literature with thorough investigation and reasonable understanding.
- Simulations to support your report.
- Experiments to support your report.
- Your own thoughts on the topic.

#### Preferred topics:

- Beam former implementation.
- Contrast resolution/speckle reduction.
- Doppler processing.
- Transducer modeling.
- Clinical/biomedical applications.