Miu Christopher Tamamitsu

2016/10

Nano- and Bio-photonics laboratory,
Electrical Engineering, University of California, Los Angeles
420 Westwood Plaza, Eng. IV, 14-128C

Phone: +1-310-567-9621
E-mail: chem.tama@gmail.com
tamamitsu@ucla.edu

PERSONAL INFORMATION

Citizenships	Japan / USA
Languages	Japanese (native) / English (fluent)
TOEFL iBT	R: 29, L: 27, S: 27, W: 25, Total: 108 (2015/04)
GRE general	V: 151, Q: 170, A: 4.0 (2015/10)

EDUCATION

2016/09 – present	M.S. / Ph.D. in Electrical Engineering, University of California, Los Angeles
2015/04 – 2016/03	M.S. in Chemistry, University of Tokyo (degree not obtained)
2011/04 – 2015/03	B.S. in Chemistry, University of Tokyo (GPA: 3.6/4.0)

RESEARCH EXPERIENCE

2015/04 – 2016/03: **High-speed coherent Raman scattering spectroscopy**

- Performed theoretical establishment and experimental demonstration of an ultrafast coherent anti-Stokes Raman scattering spectroscopy method enabled by a scanning Fourier-domain delay line.
- Constructed a high-speed dual-comb coherent anti-Stokes Raman scattering spectroscopy platform.
- **Relevant skills**: coherent Raman scattering, chromatic dispersion compensation of femtosecond laser pulses, optical delay line, Fourier-transform signal processing using Matlab.
- Advisors: Prof. Keisuke Goda and Prof. Takuro Ideguchi at U-Tokyo.

2014/04 – 2015/03: **Ultrafast single-shot imaging**

- Theoretically analyzed and experimentally constructed a setup of an ultrafast single-shot imaging method termed sequentially timed all-optical mapping photography (STAMP) for visualization of shockwave-cell interactions.
- Proposed and experimentally demonstrated a snapshot spectral imaging technique for enhancement of STAMP's imaging performance.
- **Relevant skills**: high-speed imaging, spectral imaging, spectral shaping, tuning of mode-locked Ti:Sa femtosecond laser, image processing using Matlab.
- Advisors: Prof. Keisuke Goda and Prof. Keiichi Nakagawa at U-Tokyo.

SCHOLARSHIP

2016/09 – 2018/08: The Nakajima Foundation Scholarship

- Funding from the Japanese private foundation for Ph.D. study at UCLA.
- $25,000/year tuition and $1,600/month living expenses for two years, plus additional three-year living expenses depending on academic status.

PEER-REVIEWED JOURNAL PUBLICATIONS

1. **M. Tamamitsu**, Y. Sakaki, T. Nakamura, G. K. Podagatlapalli, T. Ideguchi, and K. Goda, "Ultrafast broadband Fourier-transform CARS spectroscopy at 50,000 spectra/s enabled by a scanning Fourier-domain delay line," *Journal of Vibrational Spectroscopy*, published online (2016), http://dx.doi.org/10.1016/j.vibspec.2016.07.007.
2. **M. Tamamitsu**, Y. Kitagawa, K. Nakagawa, R. Horisaki, Y. Oishi, S. Morita, Y. Yamagata, K. Motohara, and K. Goda, "Spectrum slicer for snapshot spectral imaging," *Optical Engineering* **54**, 123115 (2015), http://dx.doi.org/10.1117/1.OE.54.12.123115.
3. **M. Tamamitsu**, K. Nakagawa, R. Horisaki, A. Iwasaki, Y. Oishi, A. Tsukamoto, F. Kannari, I. Sakuma, and K. Goda, "Design for sequentially timed all-optical mapping photography with optimum temporal performance," *Optics Letters* **40**, 633 (2015), http://dx.doi.org/10.1364/OL.40.000633.

INTERNATIONAL CONFERENCE PRESENTATIONS

1. S. Morita, **M. Tamamitsu**, Y. Kitagawa, K. Nakagawa, Y. Yamagata, R. Horisaki, Y. Oishi, K. Motohara, and K. Goda, "Fabrication process of slicing mirror for hyperspectral imaging and its performance evaluation," *Euspen's 16th International Conference & Exhibition*, Nottingham (2016).

JAPANESE CONFERENCE PRESENTATIONS

1. Y. Sakaki, **M. Tamamitsu**, T. Nakamura, G. K. Podagatlapalli, T. Ideguchi, and K. Goda, "Ultrafast Fourier-transform coherent Raman scattering spectroscopy with a scanning Fourier-domain delay line," *The 63rd JSAP Spring Meeting*, Tokyo Institute of Technology (2016).
2. Y. Kitagawa, S. Morita, Y. Yamagata, S. Ozaki, **M. Tamamitsu**, K. Nakagawa, K. Goda, and K. Motohara, "A fabrication of an image slicing mirror by ultra-precision cutting for astronomical instruments," *The 40th Optical Symposium*, University of Tokyo (2015).