

Chatdanai Lumdee, PhD

E-mail: chatdanai.L@gmail.com

Phone: (+46) 076-077-4359

Website: clumdee.github.io

CORE COMPETENCES

- Expert in micro- and nano-fabrication and characterization techniques
- Expert in optical experimentation and characterization techniques such as microscopy and spectroscopy
- Expert in magneto-optical measurements such as Faraday and MOKE
- Well versed in utilizing electronic equipment including oscilloscopes and spectrum analyzers
- Experienced problem solver in and system designer for advanced scientific experiments using tools such as LabVIEW
- Excellent proficiency in data processing, analysis, and visualization using Python (Jupyter Notebook, Numpy, Pandas, Matplotlib, Seaborn, etc.), Matlab, and Origin
- Knowledge in machine learning, data modeling, and validation (e.g. scikit-learn)
- Detail oriented experimentalist who formulates plan based on theories, observations, and critical thinking
- Great technical writer and presenter (Thai and English) with a proven record of publications in top-tier scientific journals and presentations at international conferences
- A team player with experiences working in multi-cultural ecosystems
- In love with learning and improving oneself and the team as well as tackling challenges



Please find my website for additional information about me e.g. blog posts and code projects

EDUCATION

Ph.D. in Optics and Photonics

08/2010 – 12/2015

CREOL/The College of Optics and Photonics, University of Central Florida – Orlando, Florida, USA

GPA: 3.95/4.00

B.Eng. in Nano Engineering (major in Nanoelectronics)

08/2006 – 05/2010

Chulalongkorn University – Bangkok, Thailand

GPA: 3.91/4.00, Graduated with First Class Honors

RESEARCH CAREERS (check these links for [publications](#) and [presentations](#))

Postdoctoral Research Scientist

04/2016 – present

Department of Physics, University of Gothenburg/Chalmers – Gothenburg, Sweden

Research topics: magnetoplasmonics, nanomagnetism

Research description: We are exploring the interplay between nanoscale optics and magnetism with the aim to develop a technological platform for the next generation of data storage units (a European Union's project in EU Horizon2020 program).

Responsibilities:

- Fabrication and characterization (structurally, optically, and magneto-optically) of hybrid metallic-magnetic nanostructures that enhance inter-coupling between optics and magnetism
- Performing numerical simulation with Lumerical to predict and to confirm experimental observations
- Data analysis and visualization with Python to get insights, to distill, and to summarize results
- Design and optimize experiment and construct experimental control systems with Labview
- Working with collaborators from various places (on this and other side projects) e.g. Stanford University, Uppsala University, Technical University of Denmark, etc.

Graduate Research Scientist

08/2010 – 01/2016

CREOL/The College of Optics and Photonics – Orlando, Florida, USA

Research topics: nanophotonics, surface plasmon resonances, gap-plasmons

Research description: I spent my time studying how nanoscale objects and light interact. This research area is the core foundation of several emerging technologies including single-molecular sensing, surface enhanced photocatalysis, and heat-assisted magnetic recording.

Responsibilities:

- Optical characterization of *single* nanoparticles with various microscopy and spectroscopy techniques such as darkfield, fluorescence, and Raman scattering.
- Performing electromagnetic simulation to validate and add insights to experimental results (CST MICROWAVE STUDIO)
- Data analysis and visualization with Matlab and Origin
- Design and optimize experimental setup to improve measured data and pinpoint hypotheses
- Writing and presenting results in scientific journals and at conferences

PROFESSIONAL SERVICES

- SPIE UCF Student Chapter President (2012–2013)
- Volunteer teaching assistant – Electronics II (EEL 4309) at UCF (Summer 2013)
- Reviewed and assisted in reviewing articles for scientific journals (ACS Nano, ACS Photonics, Applied Physics Letters, The Journal of Physical Chemistry)