

# Max Liao

Electrical and Biological Engineer

## Contact Information

### Address

2687 Briarlake Rd NE  
Atlanta, GA 30345

### Telephone

404 314 7825

### Mail

max.liao@gmail.com

### LinkedIn

www.linkedin.com/  
in/liao-max

## Work Eligibility

U.S. Citizen

## Computer Skills



## Technical Skills

Lab Experience  
PID Controllers  
Micro controllers  
Embedded Systems  
3D Printing  
PCB Design  
Antenna Design  
Technical Writing  
Organic Chemistry

## Highlights

- Electrical engineer with multidisciplinary background
- Thesis work: researching improvements in dissolved carbon analysis with higher precision, faster speeds, and more adaptable usage than commercial instruments
- Prototype used embedded systems to improve analytical chemistry techniques
- Agile methodology training

## Experience

### 08/15 - 12/17 Research Assistant

Skidaway Institute of Oceanography

Developed a precision UV-wet chemical oxidation dissolved organic carbon (DOC) analyzer for aqueous samples

- Quantitatively measures changes in DOC with a sub-uM target precision two orders of magnitude greater than current commercial devices
- Device is more easily transportable, provides faster analysis, and removes system dependency on blank evaluations
- Optimized with goal of automated and shipboard analyses of DOC for fresh and salt water

### 04/15 - 09/15 Electrical Engineer

PhytoSynthetic

Maintenance and research for improvements to a fluorometer for grow chamber monitoring at the University of Georgia horticultural greenhouse

### 01/13 - 01/15 Test Engineer

Cisco Systems

Install and maintain a continuous integration test framework for set top boxes

- Develop and automate test software and procedures in Python and C
- Generate specification and prototype test equipment per product test and repair requirements
- Software/hardware technical support for development teams
- Document and manage additional equipment builds

### 05/12 - 08/12 Research Intern

Old Dominion University

PCB design for a tactile sensor for biomedical/robotic applications

## Education

### 2015 - 2017 Master of Science in Biological Engineering

University of Georgia

Research Assistant at Skidaway Institute of Oceanography

Advisers: Dr. Aron Stubbins and Dr. Mark Haidekker

### 2008 - 2012 Bachelor of Science in Electrical Engineering

Georgia Institute of Technology

Senior Design

- Android application and device for tracking bicycling pedaling speeds
- Undergraduate Research Opportunities Program  
Adviser: Dr. Manos Tentzeris
- Design of a multiple antenna energy harvesting circuit involving frequency selective surfaces

### 2018 Georgia Tech Coding Boot Camp

Georgia Institute of Technology

Full Stack Web Development

## Certifications

### OS Preference

Windows ★★★★★  
GNU/Linux ★★★★★  
MacOS ★★★★★

12/2017

#### Coastal and Oceanographic Engineering

[University of Georgia](#)

Graduate certificate for multi-disciplinary program in engineering and marine sciences emphasizing marine instrumentation and numerical modeling of near-shore and coastal processes. Includes course work in engineering and marine sciences as well as a research and design component at the graduate level.

### Languages

English ★★★★★  
Mandarin ★★★★★  
Spanish ★★★★★

### Other Info

Can read/write Spanish

For the Chinese job market:

我可以讲和理解中文,但是还不会读和写.

## Publications

Max Liao

#### **A Precision UV-Wet Chemical Oxidation Dissolved Organic Carbon Analyzer**

MS Thesis. University of Georgia, 2017

Wenting Gu, Peng Cheng, Arindam Ghosh, Max Liao, Boxiong Liao, Ali Beskok, Zhili Hao  
**Detection of distributed static and dynamic loads with electrolyte enabled distributed transducers in a polymer based microfluidic device**

*Journal of Micromechanics and Microengineering*, Vol. 23, March 2013, 035015 (15pp),  
doi:10.1088/09601317/23/3/035015 (featured in IOPselect)

Wenting Gu, Peng Cheng, Arindam Ghosh, Max Liao, Boxiong Liao, Ali Beskok, Zhili Hao  
**A polymer based microfluidic resistive sensor for detecting distributed loads**

*ASME International Mechanical Engineering Congress and Exposition (IMECE2012)*,  
Nov. 9-15, 2012, Houston, Texas, IMECE201287672 (Best Paper Award in the MEMS Division)

Max Liao

*Electrical and Biological Engineer*