

Chengjie Gary Huang

7251 Preinkert Drive, LeFrak Hall 0221, University of Maryland, College Park, MD | +1(240)9067899 | chuang88@umd.edu

Education

PH.D. IN PHYSIOLOGY | SEPT 2013 – AUG 2018

MCGILL UNIVERSITY, MONTREAL, QC, CANADA

BACHELOR OF SCIENCE IN NEUROSCIENCE | SEPT 2010–MAY 2013

MCGILL UNIVERSITY, MONTREAL, QC, CANADA

Research Training

ANDERSON LAB (SAMIRA ANDERSON) – POSTDOCTORAL RESEARCHER | AUG 2022 – PRESENT

GOUELL LAB (MATTHEW GOUELL) – POSTDOCTORAL RESEARCHER

DEPARTMENT OF HEARING AND SPEECH SCIENCES, UNIVERSITY OF MARYLAND, COLLEGE PARK MD, USA

- Research project on cortical neural processing of attention and lexical access in rollover
- Experiments involving electroencephalography and pupillometry in younger and older listeners
- Evaluating perception of speech sounds through auditory behavioral tasks

LESICA LAB (NICHOLAS A. LESICA) – POSTDOCTORAL RESEARCHER | NOV 2018 – APR 2022

EAR INSTITUTE, UNIVERSITY COLLEGE LONDON, LONDON, UK

- Research project on mechanisms underlying sound level-dependent rollover effect in hearing
- Experiments involving large-scale in-vivo electrophysiology in freely-moving gerbils
- Evaluating perception of speech through understanding neural encoding of speech syllables

CHACRON LAB (MAURICE J. CHACRON) – GRADUATE STUDENT RESEARCHER | SEPT 2013 – AUG 2018

DEPARTMENT OF PHYSIOLOGY, MCGILL UNIVERSITY, MONTREAL, QC, CANADA

- Thesis research on sensory coding and neuromodulation in the hindbrain of weakly-electric fish
- Experiments involving in-vivo electrophysiology, pharmacology and behavioural paradigms

WATT LAB (ALANNA J. WATT) – UNDERGRADUATE STUDENT RESEARCHER | FEB 2012 – AUG 2013

DEPARTMENT OF BIOLOGY, MCGILL UNIVERSITY, MONTREAL, QC, CANADA

- Research project on the effect of enriching experiences on the brains of young adult mice
- Experiments involving behavioural paradigms, immunohistochemistry, and microscopy

Laboratory and Computer Skillsets

In-vivo extracellular and intracellular electrophysiology; pharmacology; PCR; immunohistochemistry

Microsoft Word, Excel, Powerpoint; MATLAB; SPSS; NeuroLucida; Adobe Illustrator

Teaching Experience

COURSE FACILITATOR – NEURAL SYSTEMS AND BEHAVIOUR | JUN 2014 – JUL 2018

MARINE BIOLOGICAL LABORATORY, WOODS HOLE, MA, USA

- Teaching students how to perform experiments the weakly-electric fish module
- Teaching of techniques: electrophysiology, behavioural paradigms, MATLAB data analysis
- Assisting in developing coursework and exercises for the module with faculty

- TEACHING ASSISTANT – NSCI 400 NEUROSCIENCE SEMINAR** | SEPT 2017 - APR 2018
DEPARTMENT OF PHYSIOLOGY, MCGILL UNIVERSITY, MONTREAL, QC, CANADA
 · Attend neuroscience seminars and evaluate undergraduate student reports
- TEACHING ASSISTANT – PHGY 314 INTEGRATIVE NEUROSCIENCE** | SEPT 2013 - DEC 2017
DEPARTMENT OF PHYSIOLOGY, MCGILL UNIVERSITY, MONTREAL, QC, CANADA
 · Holding office hours and answering questions through email for students of the course
 · Developing and giving tutorials/reviews of course material

Professional Development Activities

- HUMAN FRONTIER SCIENCE PROGRAM ANNUAL MEETING – PARIS, FRANCE** | AUG 2022
 · Poster presentation
- ASSOCIATION FOR RESEARCH IN OTOLARYNGOLOGY MEETING (ARO) – VIRTUAL** | JAN 2022
 · Poster Presentation
- BRIDGING THE CONFIDENCE GAP WORKSHOP – UNIVERSITY COLLEGE LONDON, LONDON, UK** | NOV 2020
 · Organizer and Attendee
- HUMAN FRONTIER SCIENCE PROGRAM ANNUAL MEETING – LEUVEN, BELGIUM** | JUL 2020
 · Poster presentation
- 70TH LINDAU NOBEL LAUREATE MEETING – LINDAU, GERMANY (ONLINE)** | JUN 2020
 · Invited Participant
- ASSOCIATION FOR RESEARCH IN OTOLARYNGOLOGY MEETING (ARO) – SAN JOSE, CA, USA** | FEB 2020
 · Poster Presentation
- COMPUTATIONAL AND SYSTEMS NEUROSCIENCE (COSYNE) MEETING - DENVER, CO, USA** | MAR 2018
 · Poster Presentation
- SOCIETY FOR NEUROSCIENCE CONFERENCE - WASHINGTON, DC, USA** | NOV 2017
 · Poster presentation
- 11TH ANNUAL CANADIAN NEUROSCIENCE MEETING – MONTREAL, QC, CANADA** | MAY 2017
 · Poster presentation
- COMPUTATIONAL AND SYSTEMS NEUROSCIENCE (COSYNE) MEETING - SALT LAKE CITY, UT, USA** | FEB 2017
 · Poster Presentation
- 10TH ANNUAL CANADIAN NEUROSCIENCE MEETING - TORONTO, ON, CANADA** | MAY 2016
 · Poster presentation
- INTERNATIONAL CONGRESS FOR NEUROETHOLOGY CONFERENCE - MONTEVIDEO, URUGUAY** | APR 2016
 · Invited speaker and poster presentations
- CANADIAN MATHEMATICAL SOCIETY WINTER MEETING - MONTREAL, QC, CANADA** | DEC 2015
 · Invited speaker
- SOCIETY FOR NEUROSCIENCE CONFERENCE - CHICAGO, IL, USA** | OCT 2015
 · Poster presentation
- SOCIETY FOR NEUROSCIENCE CONFERENCE - WASHINGTON, DC, USA** | NOV 2014
 · Poster presentation
- ORGANIZATION FOR COMPUTATIONAL NEUROSCIENCES MEETING - QUEBEC CITY, QC, CANADA** | JUL 2014
 · Poster presentation

Publications

- Huang, C.G.**, Metzen, M.G., Chacron, M.J. (2019). Descending pathways mediate adaptive optimized coding of natural stimuli in weakly electric fish. *Science Advances*.
- Huang, C.G.***, Metzen, M.G.*, Chacron, M.J. (2018). Feedback optimizes neural coding and perception of natural stimuli. *eLife* 7: e38935.
- Metzen., M.G.*, **Huang, C.G.***, Chacron, M.J. (2018). Descending pathways generate perception of and neural responses to weak sensory input. *PLoS Biology* 16: e2005239.

Huang, C.G., Chacron, M.J. (2017). SK channel subtypes enable parallel optimized coding of behaviorally relevant stimulus features: a review. *Channels*. 11: 281-304.

Huang C.G., Chacron M.J. (2016). Optimized parallel coding of second-order stimulus features by heterogeneous neural populations. *Journal of Neuroscience*. 36: 9859-9872.

Huang C.G., Zhang Z.D., Chacron M.J. (2016). Temporal decorrelation by SK channels enables efficient neural coding and perception of natural stimuli. *Nature Communications*. DOI 10.1038/NCOMMS11353.

Huang C.G., Chacron M.J. (2014). Differential neural responses to naturally occurring envelopes in the electrosensory system. Poster presentation for OCNS. *BMC Neuroscience*. 15(Suppl 1):P192

*indicates co-first authorship

PDFs of publications available upon request.

Awards and Fellowships

- Association for Research in Otolaryngology (ARO) Travel Award | JAN 2022
- UCL Research-Led Initiative Award | MAR 2020
- Association for Research in Otolaryngology (ARO) Travel Award | MAR 2020
- Human Frontier Science Program Postdoctoral Long-Term Fellowship | MAY 2019
- McGill Physiology Research Day Oral Presentation Prize | MAY 2018
- McGill Dept. of Physiology GREAT Travel Award | MAY 2018
- J.P. Collip Fellowship in Medical Research | SEPT 2017
- Computational and Systems Neuroscience (COSYNE) Travel Award | FEB 2017
- McGill Faculty of Medicine MedStar Award | FEB 2017
- Cameron-Davis & Davis Fellowship | SEPT 2016
- McGill Dept. of Physiology GREAT Travel Award | MAY 2016
- McGill Graduate Student Excellence Award | JAN 2016

Extracurricular Activities

JOURNAL PEER REVIEWER | MAY 2021 – PRESENT

- Nature Communications
- Journal of Neuroscience Research

UCL EAR INSTITUTE/INSTITUTE OF OPHTHALMOLOGY MENTOR | MAR 2021 – APR 2022

UNIVERSITY COLLEGE LONDON, EAR INSTITUTE, LONDON, UK

- Volunteer mentor to aid in the mentoring scheme between two UCL departments
- Mentoring one PhD student each year on their academic career

UCL EAR INSTITUTE POSTDOCTORAL GROUP FACILITATOR | JAN 2019 – APR 2022

UNIVERSITY COLLEGE LONDON, EAR INSTITUTE, LONDON, UK

- Manage and organize Postdoctoral Group Meetings every month
- Responsible for managing mailing list and communications among postdoctoral researchers
- Organize seminars and Works in Progress for postdoctoral researchers

BRIDGING THE CONFIDENCE GAP ORGANIZER | NOV 2020

UNIVERSITY COLLEGE LONDON, LONDON, UK

- Organizer of Early Career Researcher Workshop called “Bridging the Confidence Gap”
- Project funded by successful application of UCL Researcher-Led Initiative Award
- Maintenance and organizing post-workshop book club

PINT OF SCIENCE COMMUNICATIONS TEAM VOLUNTEER

| MAY 2020

UNIVERSITY COLLEGE LONDON, LONDON, UK

- Maintain communication and organization of different teams involved with Pint of Science London
- Advertise Pint of Science events using various media
- Organize Launch Event evening for Pint of Science

WORLD HEARING DAY VOLUNTEER

| MAR 2019

UNIVERSITY COLLEGE LONDON, LONDON, UK

- Communicate and educate the public about the auditory system and hearing science
- Taking interviews with local newspapers regarding the importance of hearing research

References are available upon request.