John Kyle Cooper

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Objective

Striving to gain research experience in the field of auditory neuroscience and apply that knowledge to the engineering of hearing aids and cochlear implants in a medical industry setting.

Education

KU Leuven, PhD in Biomedical Sciences – Leuven, Belgium — Oct 2021 – Oct 2025

University of Rochester, MSc in Biomedical Engineering – Rochester, New York — Aug 2019 – May 2021

Texas A&M University, BSc in Biomedical Engineering – College Station, Texas — May 2019

- Biomedical Engineering Fast-Track Program
- Germany Biosciences Program, Bonn, Germany
- Greece Engineering Ethics, Thessaloniki, Greece

Teaching Experience

R Programming Teaching Assistant, KU Leuven – Leuven, Belgium — 2024

- Assist audiology students with basics of the R programming language and statistics.

Biomaterials Teaching Assistant, University of Rochester – Rochester, New York — 2020

- Assisted students with learning the basic concepts of biomaterials by leading lab sessions, review sessions, and weekly office hours. Underwent weekly discussion with the teaching professor to improve the teaching methods and learning environment for the students.

Research Experience

FWO Strategic Basic Research PhD Fellow, KU Leuven – Leuven, Belgium — Nov 2021 – present

- PIs Dr. Tom Francart, Dr. Astrid van Wieringen
- Awarded FWO Strategic Basic (SB) Research PhD Fellowship to work with the experimental Oto-Rhino-Laryngology (expORL) lab to develop a realistic and objective measure of speech understanding for both normal hearing and hearing impaired listeners using electroencephalography (EEG).

BAEF Fellow, KU Leuven – Leuven, Belgium — Oct 2021 – Oct 2022

- PI Dr. Tom Francart
- Awarded Belgian American Educational Foundation (B.A.E.F.) fellowship to work with the expORL lab to develop a realistic and objective measure of speech understanding for normal-hearing listeners using EEG.

Research Assistant, University of Rochester – Rochester, New York — Aug 2019 – May 2021

- PI Dr. Ross Maddox
- Serve as a lab manager through subject recruitment & scheduling, ordering lab supplies, and assisting with the lab experiments.
- Conduct 70 EEG experiments for an NSF funded study aimed to investigate potential neural differences in the auditory brainstem between musicians and non-musicians.

Research Assistant, Texas A&M University – College Station, Texas — Aug 2016 – May 2019

- PI Dr. Brian Applegate
- Conducted research focused on understanding cochlear pathophysiology and function using picometer sensitive, spatially resolved vibrometry in the ear.
- Wrote undergraduate thesis on the application of multi-tonal complex stimuli with Optical Coherence Tomography imaging for vibrometric analyses of inner-ear structures.

- Undergraduate Summer Research Grant Recipient (2018).

Design Teammate, Lynntech Inc. – College Station, Texas Sept 2018 – May 2019

- Worked with a group of biomedical engineers on an orthotic rehabilitation device.
- Tasked with documentation, 3-D modeling, construction, and programming of the device.

Design Teammate, Enmodes GmbH – Aachen, Germany Jan 2017 – May 2017

- Assisted in the R&D of the Ras-Q (world's first long-term respiratory system).
- Modeled a prototype for presentation to the company.

Technical Skills

Programming: Python, MATLAB, R, HTML, CSS

5 years of EEG experience: Brain Vision & Biosemi software

Virtual Reality Development: Pupil Labs, HTC Vive, & Unreal Engine

3-D design & printing: SolidWorks & Blender

Presentations

Talk, IERASG – Cologne, Germany Sept 2023

- Effects of Mouth Movements on Speech Intelligibility in Naturalistic Audiovisual Environment.

Poster, ISAAR – Nyborg, Denmark Aug 2023

- Optimizing Recording Times For Auditory Trfs - Back-To-Back Modeling Approach.

Poster, Society for Neuroscience – San Diego, California Nov 2022

- Effects of language understanding on hemispheric lateralization in brain activity.

Poster, BMES Conference – Atlanta, Georgia Oct 2018

- Calibration of Multi-Tonal Complex for Optical Coherence Tomography Imaging System.

Honors

- Fulbright Semifinalist for Open Study/Research Award to Belgium (2021)
- BME Graduate Student Teaching Assistant Award Honorable Mention (2020)
- Undergraduate Research Scholar (2019)
- Eagle Scout (2014)