DANIEL R. MCCLOY

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OVERVIEW

I am a scientist trained in acoustic phonetics, speech perception, and auditory neuroscience, and a developer of open-source scientific software. My interest broadly centers on the perception and representation of speech sounds. I am a certified Software Carpentry instructor and a skilled writer of tutorials and documentation.

Current position: Research Scientist at the University of Washington's Institute for Learning & Brain Sciences, where I analyze magnetoencephalography (MEG) data relating to literacy and dyslexia, and contribute to the development of MNE-Python neuroscience analysis software.

ACADEMIC DEGREES

- PhD in Linguistics (University of Washington, 2013, PDF).
- MA in Linguistics (University of Washington, 2009, PDF).
- BS in Neurobiology, BA in Philosophy (University of Washington, 2002).

OTHER EDUCATION

- Postdoctoral training in psychophysics and auditory neuroscience (LABS^N, 2013-2018).
- Kavli Summer Institute in Cognitive Neuroscience (UC Santa Barbara, 2017).
- Machine Learning (Stanford University / Coursera, 2016).
- International Chinese Language Program (National Taiwan University, 2008).

TEACHING EXPERIENCE

- **Instructor**: Software Carpentry Workshops "The Unix shell", "Version control with git", "Programming with Python", "R for reproducible scientific analysis" (UW eScience Institute: 2016, 2017, 2018, 2019; Benaroya Research Institute: 2020).
- **Instructor**: Introduction to Phonetics (2010, 2011).
- **Teaching Assistant**: Introduction to Linguistics, four sections (2008–2009).
- **Co-facilitator**: "New Majors" proseminar for incoming Philosophy students (2001, 2002).

TECHNICAL SKILLS

- **Programming**: Python, R, praat, Bash, GNU Make, Octave/MATLAB.
- **Scientific computing**: git/GitHub, cloud deployment, machine learning, data visualization.
- **Research hardware**: Pupillometry, eye tracking, EEG, MEG, microphones, audio processors.
- **Document generation**: Sphinx, Jupyter, Pandoc, Markdown, R Markdown, reStructuredText, LaTeX, Beamer, HTML, CSS, Javascript.

SOFTWARE & CORPORA

- **Core developer** of MNE-Python: analyze & visualize EEG & MEG data. (repo)
- **Co-developer** of PHOIBLE: a database of over 3000 phonological inventories. (repo | docs)
- **Co-developer** of UW/NU Corpus: a 2-dialect, 20-talker corpus of 200 parallel sentences of English.
- **Co-developer** of expyfun: run psychophysics experiments in Python. (repo)
- **Developer** of phonR: analyze & visualize vowels in R. (repo | CRAN)
- **Developer** of "Praat Semi-Auto": scripts to streamline manual measurements in acoustic phonetics, when automated methods are not precise enough. (repo)

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PEER-REVIEWED ARTICLES (12 TOTAL, 6 FIRST-AUTHORED)

Structured bibliographic information is available in this BibTeX file. *Omitted here:* invited talks (3), conference proceedings (4), technical reports (1), conference presentations (13).

- O'Brien, **McCloy** & Yeatman (2019). *J. Acoust. Soc. Am.*, *146*(1), 245–255. (DOI | preprint | repo)
- **McCloy** & Lee (2019). *Lang. Cogn. Neurosci.*, *34*(5), 662–676. (DOI | suppl. | preprint | repo)
- **McCloy**, Larson & Lee (2018). *J. Acoust. Soc. Am.*, *144*(5), 2764–2771. (DOI | suppl. | preprint | repo)
- O'Brien, **McCloy**, Kubota & Yeatman (2018). *Sci. Rep.*, *8*(1), 16842. (DOI | preprint | repo)
- **McCloy**, Lau, Larson, Pratt & Lee (2017). *J. Acoust. Soc. Am.*, *141*(4), 2440–2451. (DOI | suppl. | preprint | repo)
- Hasegawa-Johnson, Jyothi, **McCloy**, Mirbagheri, di Liberto, Das, Ekin, Liu, Manohar, Tang, Lalor, Chen, Hager, Kekona, Sloan & Lee (2017). *IEEE/ACM Trans. Audio, Speech, Lang. Process.*, *25*(1), 46–59. (DOI | preprint | repo)
- **McCloy**, Larson, Lau & Lee (2016). *J. Acoust. Soc. Am.*, *139*(3), EL57–EL62. (DOI | preprint | repo)
- **McCloy** & Lee (2015). *J. Acoust. Soc. Am.*, *138*(1), 97–114. (DOI | preprint | repo)
- **McCloy**, Wright & Souza (2015). *Lang. Speech*, *58*(3), 371–386. (DOI | preprint)
- Barrack, **McCloy** & Wright (2014). *Indogermanische Forschungen*, *119*(1), 149–158. (DOI | preprint)
- Souza, Gehani, Wright & **McCloy** (2013). *J. Amer. Acad. Audiol.*, *24*, 689–700. (DOI | preprint)
- Moran, **McCloy** & Wright (2012). *Language*, *88*(4), 877–893. (DOI | preprint | data and code (.zip))

ACADEMIC SERVICE: CONFERENCES & COMMITTEES

- **Member**: LSA Committee on Scholarly Communication in Linguistics (2014–2018).
- **Session organizer**: "Quantitative Methodology in Physiological and Psychophysical Data Analysis," 171st Meeting of the Acoustical Society of America, Salt Lake City (2016).
- **Member**: LSA Technology Advisory Committee (2013–2014).
- **Conference chair**: 24th Northwest Linguistics Conference, Seattle (2008).
- **Referee**: LSA Annual meeting (2014, 2016), Northwest Linguistics Conference (2008, 2012).

ACADEMIC SERVICE: MENTORSHIP & OUTREACH

- **Organizer**: MNE-Python New Developers Code Sprint (2021).
- **Mentor**: 2 graduate students, 1 undergraduate, and 3 high school students (2011-2019).
- **Volunteer**: Pacific Science Center's Paws On Science Weekend (2016).

GRANTS, FELLOWSHIPS, AND AWARDS

- "Improving Usability of Core Neuroscience Analysis Tools with MNE-Python", CZI Essential Open Source Software for Science (2020-2021).
- Postdoctoral fellowship (NIH T32), UW Auditory Neuroscience Training Program (2016–2018).
- NIH LRP award (2014–2016).
- Postdoctoral fellowship (NIH T32), UW Department of Speech and Hearing Sciences (2013–2014).
- "Research Excellence Award," UW Department of Linguistics (2013).
- FLAS fellowship, Modern Standard Chinese, U.S. Department of Education (2007–2008).

PROFESSIONAL AND SCHOLARLY AFFILIATIONS

International Phonetic Association (2014–present), Acoustical Society of America (2011–present), Linguistic Society of America (2009–present), Association for Research in Otolaryngology (2014–2018), *Phi Beta Kappa* (2002–present).