

Aditya Chander

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EDUCATION

- 2019-present *Yale University*
PhD candidate, Music Theory
Advisors: Ian Quinn, Richard Aslin
Dissertation topic: dynamic expectation adaptation for harmonic structure
Qualifying exams passed with Distinction, August 2021
- 2017-2019 *Stanford University*
MA, Music, Science and Technology
Advisor: Takako Fujioka
Capstone project: "Violinists Employ More Expressive Gesture and Timing Around Global Musical Resolutions: A Motion Capture Study" (published in *Music Perception*)
- 2014-2017 *University of Cambridge*
BA (Hons), Music
Double First Class Honours with Distinction

HONORS / AWARDS

- 2023 Travel Award, International Conference for Music Perception and Cognition
- 2023 Shortlisted for Young Researcher Award, International Conference for Music Perception and Cognition
- 2022 Grant from Allen Forte Research Fund, Yale University (\$3000)
- 2019-2021 Richard J. Franke Fellowship
- 2020 Honourable Mention, World Bach Competition (violin)
- 2017-2019 Denning Family Fellowship; Christensen Fellowship; & Friends of Music Scholarship (Stanford University)
- 2014-2017 College and Bundy Scholarship; Lincoln Award; College, Lincoln and Dorothy Kolbert Prizes for Music; & Mynors Bright Prize (Magdalene College, University of Cambridge)

LAB MEMBERSHIPS

Visiting PhD Researcher, MIND Lab, Northeastern University, September 2023-Present. PI: Professor Psyche Loui.

PhD Researcher, LLAMB Lab, Haskins Laboratories, June 2020-Present. PI: Dr. Richard Aslin.

Graduate Research/Technical Assistant, Neuromusic Lab, CCRMA, Stanford University, June 2018–August 2019. PI: Professor Takako Fujioka.

MANUSCRIPTS IN PROGRESS

Kim, Kunwoo, Noah Fram, Barbara Nerness, Cara Turnbull, **Aditya Chander**, Elena Georgieva, Sebastian James, Matt Wright, and Takako Fujioka. “Performance monitoring through altered auditory feedback in musical actions with score and improvisation: A turn-taking piano-duet EEG study”. Under revision.

Quinn, Ian, **Aditya Chander**, and Stefanie Acevedo. “Tonicity and information in three pop harmony corpora”. Invited chapter in prep for *The Oxford Handbook of Music and Corpus Studies*, edited by Daniel Shanahan, J. Ashley Burgoyne, and Ian Quinn. Oxford University Press.

PUBLICATIONS

Chander, Aditya, and Richard N. Aslin. 2023. ‘Expectation Adaptation for Rare Cadences in Music: Item Order Matters in Repetition Priming’. *Cognition* 240 (November): 13pp. <https://doi.org/10.1016/j.cognition.2023.105601>.

Chander, Aditya, Madeline Huberth, Stacey Davis, Samantha Silverstein, and Takako Fujioka. 2022. ‘Violinists Employ More Expressive Gesture and Timing Around Global Musical Resolutions: A Motion Capture Study’. *Music Perception* 39 (3): 268–88. <https://doi.org/10.1525/mp.2022.39.3.268>.

PUBLISHED CONFERENCE PROCEEDINGS

Chander, Aditya, and Ian Quinn. 2023. “The decline of harmonic schemata in popular music chord loops”. In *Proceedings of the 17th International Conference on Music Perception and Cognition*, 34-39. Tokyo, Japan.

Acevedo, Stefanie, **Aditya Chander**, and Ian Quinn. 2023. “Tonicity and information in three pop harmony corpora”. In *Proceedings of the 17th International Conference on Music Perception and Cognition*, 42-47. Tokyo, Japan.

CONFERENCE POSTERS AND PRESENTATIONS

2023. Fram, Noah, **Aditya Chander**, Barbara Nerness, Kunwoo Kim, Cara Turnbull, Elena Georgieva, Sebastian James, Matt Wright and Takako Fujioka “Performance monitoring through altered auditory feedback in musical actions with score and improvisation: A turn-taking piano-duet EEG study”. International Conference on Music Perception and Cognition, Tokyo, Japan.

2023. Kim, Kunwoo, Noah Fram, Barbara Nerness, Cara Turnbull, **Aditya Chander**, Elena Georgieva, Sebastian James, Matt Wright and Takako Fujioka. “Performance monitoring through altered auditory feedback in musical actions with score and improvisation: A turn-taking piano-duet EEG study”. International Conference on Music Perception and Cognition, Tokyo, Japan.

2023. Glotzer, Giacomo, **Aditya Chander**, and Robb Rutledge. "Statistical learning informs predictive models of musical value." International Conference on Music Perception and Cognition, Tokyo, Japan.
2023. Acevedo, Stefanie, Aditya Chander, and Ian Quinn. "Tonicity and information in three pop harmony corpora." International Conference on Music Perception and Cognition, Tokyo, Japan.
2023. **Chander, Aditya**, and Ian Quinn. "The decline of harmonic schemata in popular music chord loops." International Conference on Music Perception and Cognition, Tokyo, Japan.
2023. Glotzer, Giacomo, **Aditya Chander**, and Robb Rutledge. "Variable-order Markov chains inform predictive models of musical value." Computational Psychiatry Conference, Dublin, Ireland.
2023. Chander, Aditya. "Harmonic Expectation and Distinctive Chord Loops in Two Popular Music Corpora." Music Theory Midwest Annual Meeting, Winnipeg, MB, Canada.
2022. Chander, Aditya. "Repetition priming and dynamic expectation of cadences." SysMus22 (International Conference of Students of Systematic Musicology), Ghent, Belgium. **declined*
2022. **Chander, Aditya**, and Richard Aslin. "Repetition priming and dynamic expectation of cadences." Society for Music Perception and Cognition Conference, Portland, OR.
2022. Fram, Noah, **Aditya Chander**, Kunwoo Kim, Barbara Nerness, Cara Turnbull, Elena Georgieva, Sebastian James, Matthew Wright and Takako Fujioka. "The exchange of musical ideas in duet turn-taking improvisation is related to empathy and its between-partner difference." Society for Music Perception and Cognition Conference, Portland, OR.
2022. **Chander, Aditya**, and Richard Aslin. "Rapid expectation adaptation for rare cadences in music." International Conference on Interdisciplinary Advances in Statistical Learning, Donostia-San Sebastián, Basque Country, Spain.
2022. Chander, Aditya. "Repetition priming and dynamic expectation of cadences." University of Connecticut Graduate Music Conference, Storrs, CT.
2021. Chander, Aditya. "Analyzing Hemiolas using the Discrete Fourier Transform." SysMus21 (International Conference of Students of Systematic Musicology), Aarhus, Denmark.
2021. Chander, Aditya. "Analyzing Hemiolas using the Discrete Fourier Transform." Society for Music Theory Annual Meeting, Jacksonville, FL.
2020. Nerness, Barbara, Noah Fram, Kunwoo Kim, **Aditya Chander**, Cara Turnbull, Elena Georgieva, Sebastian James, Matthew Wright, and Takako Fujioka. "Neural alpha oscillations during turn-taking piano duet index creative thinking and engagement to the partner's action". Auditory Perception, Cognition, and Action Meeting, online conference.
2020. Nerness, Barbara, Noah Fram, Kunwoo Kim, **Aditya Chander**, Cara Turnbull, Elena Georgieva, Sebastian James, Matthew Wright, and Takako Fujioka. "Neural alpha oscillations during turn-taking piano duet index creative thinking and engagement to the partner's action". Cognitive Neuroscience Society, online conference.
2019. **Chander, Aditya**, Madeline Huberth, Stacey Davis, Samantha Silverstein, and Takako Fujioka. "Violinists employ more expressive gesture around musical resolutions: a motion capture study." Society for Music Perception and Cognition Conference, New York, NY.

INVITED TALKS

September 2022. “Rapid expectation adaptation for rare cadences”, Music Cognition Lab, Queen Mary University of London.

October 2023. “Dynamic expectation adaptation”, MIND Lab, Northeastern University.

TEACHING EXPERIENCE

Part-Time Acting Instructor, MUSI 210 (Counterpoint, Harmony and Form: 1500-1800), Yale University, January-May 2023. Sole instructor for a concentrated introduction to the principles and techniques of period musical composition through study of strict polyphonic voice leading, figuration, harmonic progression, phrase rhythm, and musical forms.

Teaching Fellow, MUSI 110 (Elements of Musical Pitch and Time), Yale University, September-December 2022. Ran singing assessments, designed/graded assignments and occasionally lectured for an introduction to the fundamentals of musical language (notation, rhythm, scales, keys, melodies, and chords). Taught by Prof. Ian Quinn.

Teaching Fellow, MUSI 131 (Introduction to the History of Western Music: 1800 to the Present), Yale University, January-May 2022. Discussion section leader and assignment/exam grader for an introductory class on the history of Western music. Taught by Prof. Gundula Kreuzer.

Teaching Fellow, MUSI 216 (Meter, Rhythm, Musical Time), Yale University, September-December 2021. Led office hours, designed/graded assignments, and occasionally lectured for a class on rhythm and meter. Taught by Prof. Richard Cohn.

Teaching Fellow, CPSC 477/577 (Natural Language Processing), Yale University, January-May 2021. Led office hours and designed/graded assignments and exams for Yale’s introductory Natural Language Processing class (taught by Prof. Dragomir Radev). This class surveyed classic statistical and modern machine learning methods for a wide range of NLP tasks including part-of-speech tagging, sentiment classification, machine translation and dependency parsing. Taught in Python.

Instructor and Curriculum Developer, Inspirit AI, May 2020-July 2022. Inspirit AI is a high-school intensive camp in machine learning. Taught sessions on various machine learning methods (including linear regression, logistic regression, decision trees, neural networks and transformers among others) for tasks across many domains, and mentored projects on building AI models for use in pneumonia detection, distracted driver detection, disaster relief, the criminal justice system and more. Developed a music hit prediction and recommender system project using Spotify data (in Python). Gave regular spotlight talks on AI and music, as well as talks for the AI Ambassadors program on my journey with AI.

Senior Section Leader, CS106A/AP/B/X, Stanford University, September 2018-August 2019. The CS106 series covers the fundamentals of programming methodologies, algorithms and data structures. Taught weekly sections for groups of 6-12 students, held office hours, ran training workshops for new section leader hires, and ran teaching workshops for prospective section leading candidates. Taught in Java, Python and C++.

MENTORSHIP EXPERIENCE

Giacomo Glotzer (Yale BS, Neuroscience, 2023), advised senior thesis with Prof. Robb Rutledge.
Now: PhD student, Neuroscience, Rockefeller University.

REVIEWING

Ad-hoc for *Language Learning*.

SERVICE WORK

Grant Hagan Society, Co-chair (2021-2023), Webmaster (2019-2021). The Grant Hagan Society is a graduate-student led affinity group to support people of colour in the Yale Department of Music. We are deeply invested in the racial and ethnic diversity of the students and faculty of the department, as well as diversity broadly construed (gender, sexuality, [dis]ability, class, religion, etc.). The Grant Hagan Society strives to help foster a sense of camaraderie among people of colour within the field of music studies, as we believe that belonging to an inclusive community contributes in important ways to a successful career path after graduate school, whether in the academy or beyond.

Events organised: Navigating the (Music) Academic Job Market as a Person of Colour (2020) – communications officer; Underrepresented in the Archives (2020) – event scribe; Critical Perspectives on Diversity Committees (2021) – moderator; Anti-Racist Pedagogy Inside and Outside the University Music Classroom (2023) – co-ordinator, hospitality and general support.

Grad-Fac committee, first and second-year representative (2020-2021). Grad-Fac is the information bridge between the faculty and the graduate students.

Regular responsibilities: The committee met with the chair of the department once a month (more frequently during the height of the pandemic). I spearheaded weekly Zoom coffee hours during the pandemic and regular Town Halls.

Other actions: In 2020-21, we revised the language of the Graduate Student Handbook to be more inclusive, and co-convened the Anti-Racist Reading Group in the Department of Music.

MEMBERSHIPS / AFFILIATIONS

Society for Music Perception and Cognition, Society for Music Theory, Music Theory Midwest

OTHER EXPERIENCE

Data Science Intern, Eventellect, June-August 2023. Building time series models of ticket price fluctuations for NFL games.

Yale Symphony Orchestra, September 2019-present. Yale Symphony Orchestra is Yale's premier undergraduate orchestra. Principal violinist (including concertmaster 2020-2021 and again in 2023) and a

member of the programming committee in 2022-2023. Actively involved in running sectional and full rehearsals, occasionally directing the orchestra from the violin as a soloist.

Writer, BBC Publications, March 2021-Present. Freelance writer of program notes for concerts presented by BBC choirs and orchestras, including the BBC Proms, BBC National Orchestra of Wales, and BBC Scottish Symphony Orchestra.

Cambridge University Chamber Orchestra, October 2014-June 2017. Principal 2nd violinist (2014-2015), co-concertmaster (2015-2016) and concertmaster (2016-2017) of Cambridge University's flagship orchestra. Publicity officer in 2015-2016, managing the orchestra's social media presence and coordinating poster and flyer distribution for concerts.

OTHER SKILLS

Notation software: Sibelius (advanced proficiency), MuseScore (intermediate proficiency)

Audio editing software: Audacity (intermediate proficiency), Reaper (basic proficiency)

Video editing software: Adobe Premiere Rush (basic proficiency)

Programming/markup languages:

- Most commonly used: Python
 - Machine learning frameworks: sklearn, keras
 - Other packages: numpy, pandas, matplotlib
- Semi-regularly used: R, LaTeX, MATLAB, Common Lisp (IDyOM)
- Previous experience: Java, C++
- Elementary proficiency: ChuckK, MaxMSP, JavaScript, HTML/CSS