

# Andrew Goldman – Curriculum Vitae

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Center for Science and Society  
Columbia University

## Positions

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**Presidential Scholar in Society and Neuroscience** 2015-present  
**Center for Science and Society**  
**Columbia University**

## Education

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**PhD** University of Cambridge 2015  
Supervisor: Prof. Ian Cross  
Dissertation: *The cognition of musical improvisation: The value and experimental implementation of a new scientific approach*  
Funding: Cambridge International Student Scholarship

**MPhil** University of Cambridge, Musicology 2011  
Graduated with distinction  
Thesis: *What does one know when one knows how to improvise? An empirical investigation into cognitive models of improvisation*  
Supervisors: Prof. Ian Cross, Prof. Sarah Hawkins

**BA** University of Southern California, Neurosciences 2008  
Graduated *summa cum laude*

**BM** University of Southern California, Piano Performance 2008  
Graduated *summa cum laude*

## Teaching Experience

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**University of Cambridge** 2011-2014  
**Supervisor**

As a supervisor, I meet with students in small groups and lead seminars, assign reading and coursework, mark coursework, set up and mark mock exams, and otherwise assist students with preparing for course exams and supplementing the main lectures for the course given by faculty members. Also, I supervise undergraduate dissertations by assigning reading, offering guidance, and marking drafts.

### Undergraduate course, Part IA: Music and Musicology Today

This course is a survey of the various disciplines comprising modern musicology (including sociology, history, psychology, performance studies, analysis, ethnomusicology, and others).

### Undergraduate course, Part IB: Introduction to Music and Science

This course covers scientific approaches to music including acoustics, psychoacoustics, psychology, cognitive science, and neuroscience.

### Undergraduate course, Part IB: Introduction to Performance Studies

This course surveys the various disciplines that comprise performance studies including sociology, history, and psychology.

Undergraduate course, Part II: Perception and Performance (dissertation)

Students complete a scientific experiment on a musical topic. I help design the experiment and guide students through the proper analyses and interpretations of results.

Undergraduate course, Part II: Analysis Portfolio (dissertation)

Students write a dissertation on a topic of their choice employing various methods of music analysis.

**Outreach Lectures**

2011-2014

I give occasional lectures for schoolchildren and residents in Cambridge, UK for various outreach events that invite visitors to learn about the activities in the music department at the University.

**Wolfson College, Cambridge**

2011-2014

**Music Theory Instructor**

I designed and launched a music theory class for members of Wolfson College. I teach an introductory course about music theory and aural skills and have also taught an intermediate version of the class.

**Brevard Music Center**

2010

**Faculty Member**

The Brevard Music Center is a six-week summer music festival and educational institute for high school students and university students. I designed and taught an introduction to musicology course for high school students, delivered pre-concert lectures for the orchestral performances at the center, and wrote program notes.

**University of Southern California**

2007-2008

**Teaching Assistant**

I assisted in teaching a class piano course for non-piano majors.

**Private Music Teacher**

2004-present

I have experience teaching private piano, composition, and music theory lessons.

**Research Experience**

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**Centre for Music and Science**

2010-2015

University of Cambridge  
Graduate student researcher (MPhil, PhD)  
Research topic: Music cognition  
Supervisor: Prof. Ian Cross

**Brain and Creativity Institute**

2009-2010

University of Southern California  
Research assistant  
Research topic: Neuroscience of social emotions  
Supervisors: Prof. Mary Helen Immordino-Yang, Prof. Antonio Damasio

**Institute of Cognitive Neuroscience**

2008

University College London  
Undergraduate research assistant  
Research topic: Neuroscience of face recognition  
Supervisor: Dr. Bradley Duchaine

**Other research experience**

2007-2008

University of Southern California  
As an undergraduate, I worked with Prof. Irving Biederman (visual cognition) and Prof. Elsi Kaiser (linguistics)

## Publications

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### Peer Reviewed Journal Publications

Goldman, A. (accepted). Improvisation as a way of knowing. *Music Theory Online*.

Goldman, A., & Sajda, P. (submitted). Comparing perception-action coupling between improvisers and classical musicians with a novel EEG Stroop task.

Goldman, A. (2013). Towards a cognitive–scientific research program for improvisation: Theory and an experiment. *Psychomusicology: Music, Mind, and Brain*, 23(4), 210-221.

Kim, J. G., Goldman, A. J., & Biederman, I. (2008). Blind or deaf? A matter of aesthetics. *Perception*, 37(6), 949.

### Other Journal Publications

Goldman, A., Hannaford, M. (2016). The Challenge of Comparing Improvisation across Domains. *American Music Review*, Vol. XLV, No. 2.

### Book Reviews

Goldman, A. (2015). Alexandra Hui, *The Psychophysical Ear: Musical Experiments, Experimental Sounds, 1840-1910*. *Psychology of Music*.

### Conference Proceedings

Goldman, A. (2012). What does one know when one knows how to improvise. In *Proceedings of the 12th International Conference on Music Perception and Cognition* (pp. 360-368).  
(*finalist for SEMPRES young researcher award, full travel bursary awarded*)

## Conference Presentations and Invited Lectures

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| <b>American Musicological Society and Society for Music Theory Joint Conference<br/>Vancouver, Canada</b><br>Conference paper: Linking formal structures to improvisatory process with cognitive science.  | 2016 |
| <b>Performance Studies Network Fourth International Conference<br/>Bath, UK</b><br>Conference paper: “Do experienced improvisers perceive music differently from non-improvisers?”   | 2016 |
| <b>International Conference for Music Perception and Cognition<br/>San Francisco, CA</b><br>Conference paper: “Improvisation as a way of knowing”  | 2016 |
| <b>Dalcroze Society of America Symposium and Conference<br/>Princeton, NJ</b><br>Conference paper: “Using Neuroscience to Characterize an Improvisatory Way of Knowing”<br>Invited response to keynote   | 2016 |
| <b>International Society for Improvised Music Conference<br/>Waterloo, Guelph, and Toronto</b><br>Conference paper: “Improvisation as a way of knowing”  | 2016 |
| <b>Seminar in Society and Neuroscience: Neuroscience &amp; Education<br/>Columbia University</b><br>Moderator and co-organizer   | 2016 |
| <b>Embodied Cognition Workshop: Music and Movement<br/>Columbia University</b><br>Invited response: “Embodiment and improvisation: The case of live coding”  | 2016 |
| <b>Seminar in Society and Neuroscience<br/>What does neuroscience have to offer the study of creativity?<br/>Columbia University</b><br>Moderator and co-organizer   | 2016 |
| <b>The Improvising Brain II: Multiple Perspectives<br/>Georgia State University</b><br>Conference paper: “Towards a cognitive-scientific definition of improvisation”  | 2015 |
| <b>Auditory Perception Group, University of Cambridge</b><br>Invited Lecture: The cognition of musical improvisation   | 2014 |
| <b>Pedagogy and the Academy Today (conference sponsored by the British Academy)<br/>Oxford, UK</b><br>Invited Lecture: Musical Improvisation, Cognition, and Pedagogy  | 2014 |
| <b>International Conference on Music Perception and Cognition and<br/>Asian-Pacific Society for the Cognitive Sciences of Music joint conference<br/>Seoul, South Korea</b><br>Conference Paper: Delayed auditory feedback disrupts improvised piano playing more than memorized playing:<br>Towards a cognitive characterization of improvisation | 2014 |

- Performance Studies Network Third International Conference** 2014  
**University of Cambridge**  
 Conference Paper: What could be universal about musical improvisation? Situating the cognitive approach
- Wolfson College Research Event** 2014  
**Wolfson College, Cambridge**  
 Conference Paper: Delayed auditory feedback disrupts improvisation more than memorized performance in piano playing
- Birmingham Conservatoire, UK** 2013  
 Invited Lecture: The cognition of musical improvisation (and other scholarly approaches to improvisation)
- Danby Society, University of Cambridge** 2013  
 Invited Lecture: Why is it difficult (but not impossible) to study music scientifically?
- Language Sciences in the 21<sup>st</sup> Century: The Interdisciplinary Challenge,**  
**University of Cambridge** 2013  
 Poster Presentation: Syntax at the interface between a musical performer and instrument
- SysMus13 (Systematic Musicology Graduate Student Conference)** 2013  
**CasaPaganini-InfoMus Research Centre, Genoa, Italy**  
 Conference Paper: How to ask questions about the cognition of musical improvisation
- Wolfson College Lunchtime Seminar Series** 2013  
 Invited lecture: Scientific Approaches to Musical Improvisation
- Wolfson College Research Event** 2013  
**Wolfson College, Cambridge**  
 Poster: But can they really hear it? Perceptual-motor mappings in jazz pianists  
 Awarded 2<sup>nd</sup> Prize for Best Poster
- The Improvising Brain** 2013  
**Georgia State University**  
 Conference paper: “But can they really hear it? Perceptual-motor mappings in jazz pianists”
- International Conference for Music Perception and Cognition and  
 European Society for the Cognitive Sciences joint conference** 2012  
**Thessaloniki, Greece**  
 Conference paper: “What does one know when one knows how to improvise?”
- Perspectives on Musical Improvisation, University of Oxford** 2012  
 Conference paper: “What does one know when one knows how to improvise?”
- Graduate Research Forum** 2011  
**University of Cambridge**  
 Invited Lecture: A presentation of my MPhil research
- University of Southern California Trustee’s Retreat** 2010  
 I represented the Brain and Creativity Institute with two other graduate students and presented my research interests to the trustees of the university.
- KUSC Website Feature** 2007  
 Together with the other members of the Thornton School of Music Outreach Ensemble at the University of Southern California, I recorded a feature for an educational website built by KUSC.

Other Professional Activities

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- Columbia Embodied Cognition Reading Group** 2016-present  
**Co-organizer**  
 I co-organize a discussion group that brings together scholars in many domains to discuss various theories and practices associated with embodied cognition. We organize regular meetings and special seminars.
- Comparing Domains of Improvisation Discussion Group** 2015-present  
**Co-organizer**  
 I co-organize a discussion group that brings together improvisers and scholars in many domains to discuss differences and commonalities in our understanding of improvisation and related concepts.
- Ad hoc reviewing** 2014-present  
 I have served as a peer reviewer for *Musicae Scientiae* and *Psychomusicology: Music, Mind, and Brain*
- The Improvising Brain II: Multiple Perspectives** 2014  
 Conference steering committee member (including responsibilities to review abstracts and make practical preparations for the conference). Conference in Atlanta in 2015.
- SysMus14** 2014  
 Conference steering committee member (including responsibilities to review abstracts and make practical preparations for the conference). Conference in London in 2015.
- King's Junior Voices** 2012-2015  
 I am the accompanist for the King's Junior Voices, a children's choir led by Lynette Alcántara. This also involves occasionally teaching groups of young choristers. We have several performances per year.
- Faculty of Music** 2012-2013  
**Graduate Research Forum Co-Organizer**  
 Together with another graduate student, I invited four graduate speakers per term to present papers and works-in-progress for the graduate students at the faculty.
- Centre for Music and Science** 2011-2013  
**Seminar Organizer**  
 I organized the graduate seminars by choosing topics and reading for a series of discussions and by inviting fellow graduate students to choose topics and reading.

Community Service

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- Top Honors** 2016-present  
**Volunteer Math Tutor**  
 I volunteer to tutor middle school math on weekends.
- Wolfson College Music Society** 2012-2015  
**President**  
 I served as the president of the Wolfson College Music Society. I organized the Saturday Lunchtime Concert Series at Wolfson College, served as the choir accompanist, performed to raise funds for the college's fund for a new piano, organized a fundraiser that raised over £7,000 for that piano fund, provided and helped people find various musical resources in Cambridge, and helped organize various other activities in the society including co-organizing a Sunday "Jam Session" for musicians in my college.

**Cambridge Music Education Outreach (CaMEO)** 2012-2014**Volunteer**

I participated in events for CaMEO including

-“The mind behind the music: A day of Music and Science discovery for teenagers” – annual presentation on acoustics for visiting schoolchildren.

-“Play me I’m yours” – when the international art project came to Cambridge, I performed and gave free lessons on an organized day of celebration for the pianos.

**Faculty of Music, University of Cambridge** 2012**Graduate Representative**

I was elected to represent the interests of graduate students in the music faculty by sitting on the faculty board committee, student-staff committee, and by organizing various other meetings with graduate students.

**Wolfson College, Cambridge** 2011-2012**Welcome Committee Member**

I assisted students with moving into Wolfson College, gave college tours, distributed information, and assisted with various other aspects of settling into Cambridge.

**University of Southern California** 2007**Thornton Outreach Ensemble Pianist**

Together with two other music students, I performed and gave educational presentations for students in local elementary schools in Los Angeles.

**California Association of Professional Music Teachers** 2006-2007**University of Southern California Chapter Vice President, Director of Outreach**

I helped organize outreach events with this organization for music students to perform in the Los Angeles area.

**Other Activities**

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**Science! The Musical.** 2014

I wrote the music, lyrics, and book for this new musical about life in the lab. I worked as co-producer, musical director, pianist, and as a member of the acting cast for the premier production which was staged for a run of five performances in Cambridge, UK, 18-22 February 2014. The show is available for production.

**Wolfson College Chess Club** 2011-2012**Founder**

I started a casual chess club for students in Wolfson College. We met weekly during term time to play games and discuss tactics and strategy.

**Cambridge University Chess Club** 2011-2015**Member****Cambridge University Musical Society Chorus** 2010-2014**Bass 1**

I sing bass in this chorus. We perform each term in Cambridge (3-4 performances per year) and go on tour each year. I have toured with this group in Tallinn, Estonia and Paris, France.

**Wolfson College Choir and Chamber Singers** 2010-2015**Bass 1**

I am a member of both the choir and the chamber singers. I also serve as the accompanist for both groups. We perform at college events and give several concerts per year. I have toured with the choir to Thessaloniki, Greece and southern France.

## Media Appearances

- Friday Afternoons Performance** November, 2013  
To celebrate Benjamin Britten's centennial, I accompanied 350 young choristers *in situ* (including the King's Junior Voices) and many more via live streaming for a performance of his work, Friday Afternoons. The performance was featured on BBC's Look East (local news program) and was also streamed live on The Guardian's music page and on a website set up for other choirs to join in around the world.
- Improvisation und Improvisieren (III) – Michael Rösenberg, host** May, 2013  
I was interviewed on Michael Rösenberg's radio show on WDR3 in Cologne, Germany.
- CamFM Classical Hour – Alan Bowman and Alice Buckley, hosts** November, 2012  
I was interviewed about my musical activities on student radio in Cambridge, UK.

## Recent Musical Performances

- University of Kentucky, Niles Gallery** December, 2014  
A concert of chamber music for cello and piano (with Andrea Kleesattel, cello)
- Cambridge Impronauts** December, 2014  
I provided improvised piano music to accompany a series of five improvised plays over five nights of performances.
- Takarazuka International Friendship Association Recital** July, 2014  
A chamber music recital with members of the Hyogo Performing Arts Center Orchestra, Takarazuka, Japan
- Music and Madeira** May, 2014  
A solo piano concert at Wolfson College.
- Music at 22 Mansfield Street (London Concert Series)** March, 2014  
A concert of chamber music for cello and piano (with Andrea Kleesattel, cello)
- Wolfson College Lunchtime Recital Series** March, 2014  
A concert of chamber music for cello and piano (with Andrea Kleesattel, cello)
- West Road Concert Hall (Cambridge, UK)** January, 2014  
A concert of works for two pianos and piano four hands (with Jiayi Liu, piano)
- Rhapsody Hall (San Diego State University)** December, 2013  
A concert of chamber music for cello and piano (with Andrea Kleesattel, cello)
- King's College Chapel (University of Cambridge)** September, 2013  
Brahms *Ein deutsches Requiem* come-and-sing event (Stephen Cleobury, conductor, Andrew Goldman and William Cole, piano 4-hands)
- Cambridge University Musical Society Symphony Orchestra  
Concerto soloist (Barber Piano Concerto)** November, 2012  
I was awarded the opportunity to perform with this group by being joint-winner of the 2012 Cambridge University Musical Society concerto competition.
- Mary Bevan Recital  
Solo piano** June, 2012  
I was invited to give the annual Mary Bevan Recital at Wolfson College Cambridge together with a harpist who played a solo program as well.



**Emmanuel College, Cambridge concert series** May, 2012  
**Solo piano recital**  
 Works by Beethoven and Brahms

**Wolfson College Lunchtime Recital Series** February, 2012  
**Solo piano**  
 This was a concert I performed to fundraise for the Wolfson College Choir's 2012 tour to Greece.

#### Honors and Awards

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<b>Cambridge International Student Scholarship</b> Full university and college fees for PhD study plus £10,750 per year stipend	2011-2014
<b>Cambridge Overseas Trust Scholarship</b> £6,000 contribution towards fees for MPhil study	2010-2011
<b>Renaissance Scholar Award, University of Southern California</b> \$10,000 prize at graduation for academic performance in disparate academic disciplines	2008
<b>Discovery Scholar Certification, University of Southern California</b> Graduation honors for excellence in artistic achievement	2008
<b>Commencement Ceremony Flag-bearer, University of Southern California</b> An honor awarded for academic accomplishments in the school of music	2008
<b>Phi Beta Kappa, Phi Kappa Phi, Pi Kappa Lambda, Psi Chi, Golden Key</b> Academic honor societies in which I have been inducted	2007-2008
<b>Dean's List, University of Southern California</b> Every semester while at USC	2007-2008
<b>Other scholarships while at the University of Southern California</b> Town and Gown Scholar, Dean's Scholarship, Charles K. Lick Scholarship, Maxwell Hazlett Memorial Scholarship, Dean Joan Schaefer Scholarship	2004-2008

#### References

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**Prof. Ian Cross**  
 Professor of Music and Science  
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 (PhD supervisor)

**Ms. Lynette Alcántara**  
 Director of Music, Wolfson College  
 University of Cambridge  
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 (Mentor and musical colleague)

**Prof. John Rink**

Professor of Musical Performance Studies  
Director of Studies, St. John's College  
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(Mentor and academic advisor)

**Prof. Antonio Damasio**

David Dornsife Professor of Neuroscience  
Director, Brain and Creativity Institute  
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**Prof. Adam Gilbert**

Director, Early Music Program  
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(Mentor and undergraduate professor)

**Prof. Mary Helen Immordino-Yang**

Assistant Professor, Rossier School of Education  
Assistant Professor, Brain and Creativity Institute  
Faculty in the Neuroscience Graduate Program  
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(Mentor and former employer)

**Prof. Jane Mitzi Kolar**

Professor of Music – Piano and Piano Pedagogy  
San Diego State University  
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(Mentor and piano teacher)