

ALEXANDER P. DEMOS

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CURRENT POSITION

2015 - Present **University of Illinois at Chicago**, Department of Psychology
Visiting Assistant Professor

EDUCATION

Post-Doc **McGill University**, Montreal, Canada
2013-2015 NSERC-CREATE Post-Doctoral fellowship in Auditory Cognitive Neuroscience

PhD **University of Connecticut**, Storrs, CT
August 2013 Perception, Action, and Cognition

MA **New York University**, New York, NY
September 2006 Cognitive Psychology

BA **New York University**, New York, NY
September 2003 Major: Psychology, Minors: Chemistry and Biology

PROFESSIONAL WORK EXPERIENCE

2004 – 2008 Research Associate - *Psychometrics*
Professional Examination Service, New York, NY.
Department of Research and Development

TEACHING EXPERIENCE

GRADUATE

Courses Titles	University	# of Classes	Year(s)
<i>Research Design and Analysis I</i> [ANOVA]	University of Illinois at Chicago	2	2015-2016
<i>R-programming</i>	University of Illinois at Chicago	2	2016, 2017
<i>Research Design and Analysis II</i> [Regression]	University of Illinois at Chicago	1	2017

UNDERGRADUATE

Courses Titles	University	# of Classes	Year(s)
<i>Statistics</i>	University of Illinois at Chicago	3	2015-2017
<i>Research Methods</i>	University of Illinois at Chicago	1	2016
<i>Statistics/Research Methods</i>	University of Connecticut	7	2009-2013
<i>Cognitive Psychology</i>	University of Connecticut	1	2011
<i>Music Cognition</i>	University of Connecticut	1	2011
<i>Introduction to Psychology</i>	University of Connecticut	1	2012
<i>Statistics</i>	Barnard College, Columbia University	2	2007-2008

FUNDED GRANTS

2014: *NSERC Create - Auditory Cognitive Neuroscience*: Post-doctoral Grant
Project: The Dynamics of Sensorimotor Synchronization of Expressive Ensemble Performance

2013: *NSERC Create - Auditory Cognitive Neuroscience*: Post-doctoral Grant
Project: Sensorimotor Synchronization of Ensemble Performance: A Perturbation Approach

NOT FUNDED GRANTS

2017: *National Science Foundation*. Improving power estimation in real data. (Co-PI: Matt Motyl).
2017: *Berkeley Initiative for Transparency in the Social Sciences*. A new tool to improve power analysis:
Correcting for publication bias. (Co-PI: Matt Motyl)

MANUSCRIPTS UNDER REVIEW/REVISE AND RESUBMIT

Demos, A.P., & Chaffin, C. How Music Moves Us: Entraining to Musicians' Movements. *Music Perception*

PEER REVIEWED PUBLICATIONS (*denotes student co-author)

Zamm, A. *, Palmer, C., Bauerb, A-K.R, Bleichner, M.G., **Demos, A.P.**, & Debener, D. (2017). Synchronizing MIDI and wireless EEG measurements during natural piano performance. *Brain Research, advanced online*.

Motyl, M., **Demos, A. P.**, Carsel, T. S. *, Hanson, B. E., Melton, Z. J. *, Mueller, A. B*., Prims, J. P., Sun, J. *, Washburn, A. N. *, Wong, K. *, Yantis, C. A. *, & Skitka, L. J. (2017). The state of social and personality science: Rotten to the core, not so bad, getting better, or getting worse? *Journal of Personality and Social Psychology*, 113 (1), 34

Demos, A.P., Carter, D.J.*, Wanderley, M.M., & Palmer, C (2017). The unresponsive partner: Roles of social status, auditory feedback, and animacy in coordination of joint music performance. *Frontiers in Psychology*, 149(8). doi:10.3389/fpsyg.2017.00149.

Demos A.P., Chaffin, C., & Logan, T. (2017). Musician's body movements embody musical structure and expression: A dynamical systems approach. *Musicae Scientiae, advanced online*.

Demos, A.P., Lisboa, T, & Chaffin, R. (2016). Flexibility of Expressive Timing in Repeated Musical Performances. *Frontiers in Psychology*, 1490(7).

Demos, A.P., & Chaffin, R., & Kant, V. (2014). Towards a dynamical systems theory of music performance. *Frontiers in Psychology*, 477(5).

Lisboa, T., Chaffin, R. & **Demos, A.P.** (2014). Recording thoughts while memorizing music: a case study. *Frontiers in Psychology*, 1561(5).

Demos, A.P., Chaffin, R., Begosh, K. T., Daniels, J. R., & Marsh, K. L. (2012). Rocking to the beat: Effects of music and partner's movements on spontaneous interpersonal coordination. *Journal of Experimental Psychology: General*, 141(1), 49-53.

Ginsborg, J., Chaffin, R., & **Demos, A.P.** (2012). Different roles for prepared and spontaneous thoughts: A practice-based study of musical performance from memory. *Journal of International Music Studies*, 6, 201-231.

BOOK CHAPTERS

Demos, A.P., & Chaffin, R. (2017). Removing obstacles to the analysis of movement in musical performance: Recurrence, mixed models, and surrogates. In M. Lesaffre, P-J. Maes & M. Leman (Eds). *The Routledge Companion to Embodied Music Interaction*. Routledge, New York, NY.

Chaffin, R., **Demos, A.P.**, & Logan, T. (2016). Performing from memory. In S. Hallam, I. Cross, & M. Thaut (Eds.), *The Oxford Handbook of Music Psychology*, 2nd Ed., (pp. 359-371). Oxford: Oxford University Press.

Demos, A.P., & Chaffin, R. (2014). Body movements. In W. Thompson (Ed.), *Music in the social and behavioral sciences: An encyclopedia*. (Vol. 2, pp. 145-148). Thousand Oaks, CA: SAGE Publications, Inc.

MANUSCRIPTS IN PREPARATION

Demos, A.P., Lisboa, T., Begosh, K., Logan, T., & Chaffin, C. A longitudinal study of the development of expressive timing.

Demos, A.P., Layeghi, H., Wanderley, M.M., & Palmer, C. How We Stay Together: A Dynamical System Mutual Anticipation and Adaption Model for Joint Action

Demos, A.P., & Motyl, M. Popping the publication biased bubble: Correcting inflated effect sizes.

Demos, A.P., Del Tufo, S.N., Marsh, K.L., Theodore, R. & Chaffin, R. Spontaneous interpersonal synchronization in dyslexia.

Chaffin, R., Ginsborg, J., & **Demos, A.P.**, & Dixon, J. Musical structure as a hierarchical retrieval organization: Serial position effects in memory for performed music.

Zamm, A., Palmer, C., Bauer, A.K., Bleichner, M.G., **Demos, A.P.**, Debener, S. Electrophysiological signatures of interpersonal synchrony captured with mobile EEG.

TECHNICAL REPORTS & REVIEWS

Chaffin, R., & **Demos, A.P.** (2012). Review of 'Psychology of music: From sound to significance'. *Psychomusicology: Music, Mind, and Brain*, 22(1), 55-56.

Roth, J., Somma, R., Greenberg, S. & **Demos, A.P.** (2006). Developing and Implementing a Certification Program to Drive Change in the Pharmaceutical Industry. *Pharmaceutical Engineering*, May/June 2006.

CONFERENCE PROCEEDINGS & PRESENTATIONS

Zamm, A.*, Palmer, C., Bauer, A.K., Bleichner, M.G., **Demos, A.P.**, Debener, S. (2017, August). *Behavioural and neural factors that facilitate interpersonal synchrony during joint music performance*. Mariani Foundation Music Neuroscience Conference, Boston Massachusetts, USA

Zamm, A.*, Palmer, C., Bauer, A.K., Bleichner, M.G., **Demos, A.P.**, Debener, S. (2017, June). *Neural correlates of interpersonal synchrony during duet piano performance*. Neuromusic Conference, Boston, MA, USA.

Demos, A.P., Layeghi, H.*, & Palmer, C. (2016, November). A mutual adaptation model of joint action in music performance. 14th Auditory, Perception, Cognition, and Action Meeting (APCAM), Boston, MA.

Kant, V. & **Demos, AP.** (2016, November). The engineered dimension of sociotechnical systems. 6th STS Italia Conference Sociotechnical Environments. Trento, Italy.

Zamm, A.*, Palmer, C., Bauer, A.K., Bleichner, M.G., **Demos, A.P.**, Debener, S. (2016, November). Behavioral and electrophysiological bases of interpersonal synchrony during joint music performance. Meeting of the Psychonomic Society. Boston, Massachusetts, USA.

Demos, A.P., Chaffin, R., & Logan, T. (2016, July). *Bobbing, Weaving, and Gyration: Musician's Sway Reflects Musical Structure*. The 14th International Conference on Music Perception and Cognition (ICMPC). San Francisco, CA.

Chaffin, R., & **Demos, A.P.** (2016, July). *Effects of performance cues on expressive timing*. The 14th International Conference on Music Perception and Cognition (ICMPC). San Francisco, CA.

Lisboa, T., **Demos, A.P.**, Begosh, K., & Chaffin, R., (2016, July). How Music Moves Us: Entraining to Musicians' Movements. The 14th International Conference on Music Perception and Cognition (ICMPC). San Francisco, CA.

- Ginsborg, J., Chaffin, R., **Demos, A.P.**, & Dixon, J., (2016, July). *Musical structure as a hierarchical retrieval organization: Serial position effects in memory for performed music*. The 14th International Conference on Music Perception and Cognition (ICMPC). San Francisco, CA.
- Schultz, B.G., **Demos, A.P.**, & Schutz, M. (2016, July). *The Wave Transformation: A method for analyzing spontaneous coordination from discretely generated data*. The 14th International Conference on Music Perception and Cognition (ICMPC). San Francisco, CA.
- Zamm, A., Palmer, C., Bauer, A-K R., Bleichner, M. G., **Demos, A.P.**, & Stefan, D. (2016, April). Neural correlates of endogenous rhythms in performing musicians. 23st Cognitive Neuroscience Society (CNS), New York, NY.
- Demos, A.P.**, Del Tufo, S., Marsh, K.L., & Theodore, R. & Chaffin, R. (2015, November). *Intentional and Spontaneous Interpersonal Synchronization in Dyslexia*. 13th Auditory, Perception, Cognition, and Action Meeting (APCAM), Chicago, IL.
- Demos, A.P.**, Wanderley, M.M., & Palmer, C. (2015, November). *Auditory Feedback Perturbations Disrupt Synchrony in Ensemble Music Performance*. The Psychonomic Society Annual Meeting, Chicago, IL.
- Zamm, A., Palmer, C, Bauer, A-K.R, Bleichner, M. G., **Demos A.P.**, & Debener, S. (2015, October). *Neural correlates of endogenous rhythms during music performance*. Tenth anniversary symposium of the international laboratory for Brain, Music, and Sound Research. Montreal, Canada.
- Lisboa, L., **Demos, A.P.** & Chaffin, R. (2015, August). *Spontaneity in performance: Effects of thinking on expressive variation in tempo*. International Symposium on Performance Science 2015. Kyoto, Japan.
- Demos, A.P.**, Spidle, F., Koopmans, E. & Palmer, C. (2015, August). *Postural coordination between duet vocalists*. Society of Music Perception and Cognition. Nashville, TN.
- Demos, A.P.**, Wanderley, M.M., & Palmer, C. (2015, August). *Comparisons of action simulation and motor synergies in duet performance*. Society of Music Perception and Cognition. Nashville, TN.
- Demos, A.P.**, Wanderley, M.M., & Palmer, C. (2015, March). *Auditory Feedback Perturbations Disrupt Solo and Joint Piano Performance*. New England Sequencing and Timing (NEST). Amherst, MA.
- Marsh, K.L, **Demos, A.P.**, & Chaffin, R. (2015, July). *Coordination of movement through music*. 6th Joint Action Meeting. Duna Palota, Budapest.
- Demos, A.P.**, Palmer, C., Wanderley, M.M., & Dixon, R. (2014, July). *Auditory Feedback Perturbations Affect Duet Music Performance*. 24th Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS). Toronto, CA.
- Demos, A.P.**, Spidle, F., Koopmans, E., & Palmer, C. (2015, February). *Singers' postural sway during solo and duet performance*. Workshop on Sensorimotor Integration, CIRMMT, McGill, Montreal.
- Demos, A.P.** (2014). *Postural sway and musical structure: A dynamical systems approach to expressive trombone performance*. Workshop on Dance, Movement, Cognition, and the Brain, BRAMS/CRBLM, University of Montreal, Montreal, December.
- Demos, A.P.**, Del Tufo, S., Chaffin, C., Marsh, K.L., & Theodore, R. (2014, April). *Spontaneous Interpersonal Synchronization in Dyslexia*. 21st Cognitive Neuroscience Society (CNS), Boston, MA.
- Alfred, K, **Demos, A.P.**, Chaffin, C., Marsh, K.L., (2014, March). *Individual Differences in Intentional Rhythmic Synchrony*. Eastern Psychological Association (EPA), Boston, MA.
- Demos. A.P.**, & Chaffin, R. (2013, November). *The Perception of Trombonist Movement through Musical Sound*. 12th Auditory, Perception, Cognition, and Action Meeting (APCAM), Toronto, CA.

- Chaffin, R., **Demos, A.P.**, Alfred, K. & Marsh, K.L. (2013, November). *Predicting Auditory Interpersonal Synchrony through Synchrony to Music*. 12th Auditory, Perception, Cognition, and Action Meeting (APCAM), Toronto, CA.
- Ginsborg, J., Chaffin, R., **Demos, A. P.**, & Nicholson, G. (2013, April). *Different roles for prepared and spontaneous thoughts: A practice-based study of performance from memory*. 2nd Performance Studies Network Conference (CMPCP), Cambridge, UK.
- Ginsborg, J., Chaffin, R., **Demos, A. P.**, & Nicholson, G. (2013, March). *Practice-based research in and on practice: The development of performance cues*. CARPA 3: The Impact of Practice as Research. Theatre Academy, Helsinki, Finland.
- Chaffin, C., Gerling, C., **Demos, A.P.**, & Melms, A.* (2013). Theory and practice: A case study of how Schenkerian analysis shaped the learning of Chopin's Barcarolle. In by A. Williamon, D. Edwards, & W. Goebel (Eds.), *Proceedings of the International Symposium on Performance Science 2013*. Brussels, Belgium. European Association of Conservatoires.
- Ginsborg, J., Chaffin, C., **Demos, A. P.**, & Nicholson, G. (2013). Reconstructing Schoenberg: Rehearsing and performing together. In by A. Williamon, D. Edwards, & W. Goebel (Eds.), *Proceedings of the International Symposium on Performance Science 2013*. Brussels, Belgium. European Association of Conservatoires.
- Lisboa, T., Chaffin, C., **Demos, A.P.**, & Gerling, C. (2013). Flexibility in the use of shared and individual performance cues in duo performance. In by A. Williamon, D. Edwards, & W. Goebel (Eds.), *Proceedings of the International Symposium on Performance Science 2013*. Brussels, Belgium. European Association of Conservatoires.
- Lisboa, T., Chaffin, C., & **Demos, A.P.** (2013). Recording thoughts as an aid to memorization: A case study. In by A. Williamon, D. Edwards, & W. Goebel (Eds.), *Proceedings of the International Symposium on Performance Science 2013*. Brussels, Belgium. European Association of Conservatoires.
- Lisboa, T., Chaffin, R., **Demos, A.P.**, & Aufegger, L*. (2012). Preparing memorised performance: The transition between childhood and expertise. In by J. Weller, *Proceedings of the 19th International Seminar of the Commission for the Education of the Professional Musician (CEPROM)*. Athens, Greece.
- Demos, A.P.**, Chaffin, R., & Marsh, K.L. (2012, November). *Self-Organization of Spontaneous Synchronization while "Maraca-ing"*. The Psychonomic Society Annual Meeting, Minneapolis, MN.
- Chaffin, R., **Demos, A.P.**, Kant, V., & Lisboa, T. (2012, November). *"It's Different Every Time": Stability of Expressive Timing in Repeated Music Performance*. The Psychonomic Society Annual Meeting, Minneapolis, MN.
- Shaw, A., **Demos, A.P.**, Arthur, D., & Magnuson, J.S. (2012, November). *Individual Differences in Lexical Quality of Newly Learned Words*. Poster presented at the Psychonomic Society Annual Meeting, Minneapolis, MN.
- Marsh, K.L., **Demos, A.P.**, Chaffin, R. (2012, June). *Moving to the Beat: Spontaneous and Intentional Coordination while Maraca-ing*. European Workshop on Ecological Psychology (EWEP), Madrid, Spain.
- Demos, A.P.**, Frank, T., & Chaffin, R. (2011). Understanding movement during performance: A recurrence quantization approach. In by A. Williamon, D. Edwards, & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science 2011*. Utrecht, The Netherlands. European Association of Conservatoires.

- Shaw, A., **Demos, A.P.**, Arthur, D., & Magnuson, J.S. (2011). Individual differences and lexical learning: Links to memory for faces, things and words. In L. Carlson, C. Hoelscher, & T.F. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 3343-3348). Austin, TX: Cognitive Science Society.
- Ginsborg, J., Chaffin, R., & **Demos, A. P.** (2011, September). *Preparation and spontaneity in performance: Effects on subsequent recall*. Conference on Interdisciplinary Musicology (CIM11), Glasgow, Scotland.
- Demos, A.P.**, Frank, T., & Logan, T. (2011, August). *Movement during Performance: A Hunt for Musical Structure in Postural Sway*. Poster presented at the Society for Music Perception and Cognition (SMPC), Rochester, NY.
- Lisboa, T, **Demos, A.P.**, Chaffin, R., Begosh, K.T. (2011, August). *The development of interpretation during practice and public performance: A case study*. Paper presented at the Society for Music Perception and Cognition (SMPC), Rochester, NY.
- Demos, A.P.**, Chaffin, R. & Marsh, K.L. (2010, May). *Differences between spontaneous and intentional entrainment to a musical beat*. Poster presented at the Association for Psychological Science, Boston MA.
- Demos, A.P.**, Chaffin, R. & Marsh, K.L. (2010). Spontaneous vs intentional entrainment to a musical beat. In *Proceedings of the 11th International Society for Music Perception and Cognition*. Adelaide, Australia: Casual Productions.
- Demos, A.P.**, Chaffin, R., Lewis, A., Begosh, K.T., Daniels, J. (2009, August). *Rocking in Synch: Effects of music on interpersonal coordination*. Poster presented at the Society for Music Perception and Cognition (SMPC), Indianapolis.
- Demos, A.P.**, Chaffin, R. (2009, August). *A Software Tool for Studying Music Practice: SYMP (Study Your Music Practice)*. Poster presented at the European Society for the Cognitive Sciences of Music (ESCOM), University of Jyväskylä, Finland.
- Chaffin, R., **Demos, A.P.**, & Crawford, M. (2009). The PC-survey: How does the use of performance cues vary across musicians, instruments, musical styles, and performances? In *Proceedings of the International Symposium on Performance Science 2009* (pp. 57-62). Utrecht, The Netherlands: European Association of Conservatoires.
- Chaffin, R., **Demos, A.P.**, & Crawford, M. (2009). Sources of variation in musicians' use of performance cues. In *Proceedings of the 2nd International Conference on Music Communication Science* (pp. 109 – 112). University of Western Sydney: HCSNet
- Demos, A.P.**, Aaronson, D. & Aiello, R. (2008, July). *Musicians' cognitive processing strategies*. Paper presented at the 2nd International Conference on Psychology, Athens, Greece, July 13, 2008.
- Aaronson, D., **Demos, A.P.**, & Aiello, R. (2007, March) *Cognitive Processing Strategies for Music and Language: Some Individual Differences*. Poster session at the Eastern Psychological Association, March 2007.
- Aiello, R., Aaronson, D., & **Demos, A.P.** (2006). Individual Differences in Music Perception. In: M. Baroni, A. R. Addressi, R. Caterina, M. Costa (Eds.), *Proceedings of the 9th International Conference on Music Perception & Cognition* (pp.1226-1232). Bologna, Italy.
- Demos, A.P.** (2005, April). *Transitioning from Paper- to Web-Based Surveys*. Poster presented at the NYU Graduate School of Arts and Sciences Research Conference, New York, NY.
- Aiello, R., Aaronson, D., & **Demos, A.P.** (2004). Musicians' Perceptions of Musical Boundaries. In S.D. Lipscomb, R. Ashley, R.O. Gjerdingen, & Webser (Eds.), *Proceedings of the 8th International Society for Music Perception and Cognition* (pp.681-685). Adelaide, Australia: Casual Productions.

Aiello, R., Aaronson, D., & **Demos, A.P.** (2003). What is Salient When You Listen? An evaluation of Musicians' Responses. In *Proceedings of Society for Music Perception & Cognition 2003*. Nevada.

PHD & MA COMMITTEES

Brittany Hanson, 2017, University of Illinois at Chicago (Social Psychology, PhD)
 Teresa Browoski, 2017, University of Illinois at Chicago (Community Psychology, MA)
 Joshua Buffington, 2017, University of Illinois at Chicago (Cognitive Psychology, MA)

UNDERGRADUATE MENTORING

Name	# Sem	Start	Project
Alexandra Lewis	2	Spring 2008	Spontaneous interpersonal synchronization
Jared Marinuzzi	2	Fall 2009	Spontaneous entrainment to music
Alexander Stackpole	2	Fall 2009	Spontaneous entrainment to music
Caitlin Cuskley	2	Fall 2009	Memory landmarks for memorized landmarks
Andrea Melms	4	Fall 2010	Expert memory in performance
Katherine Alfred	6	Fall 2010	Spontaneous interpersonal synchronization
Kayleigh Kangas	6	Fall 2010	Intentional interpersonal synchronization
Jasmine Caban	2	Spring 2013	Spontaneous interpersonal synchronization in dyslexia
Ruby Dixon	1	Winter 2014	Sensorimotor synchronization of ensemble performance
Daniel Carter	3	Summer 2014	Dynamics of Sensorimotor Synchronization

STATISTICS CONSULTING

Statistics Consultant 2012 – 2013 **Dr. Frank Musiek's Neuroaudiology Lab**, Storrs, CT, Department of Communication Disorders

Psychometrics Consultant 2008 – 2015 **Professional Examination Service**, New York, NY. Department of Research and Development

Statistics Consultant 2016 – Present **Dr. Diana Santiago**, Universidade Federal da Bahia, Escola de Musica, Brazil. Grant: N.308743/2015-6

RESEARCH EXPERIENCE

Research Assistant 2003 – 2004 **Albert Einstein College of Medicine**, Bronx, NY. Department of Epidemiology and Population Health, The Women's Health Initiative National Study, Sponsored by National Institutes of Health.

METHODS WORKSHOPS CREATED

Mixed Models – A Crash Course. McGill University, Canada, April 2015.
 Analyzing coordination in human behavior: a dynamical system's approach. Ghent University, Belgium, April 2017 with Moreno Coco, PhD.

ADVANCED R GROUP [Demos & Motyl Leading] –Fall 2016

Workshops two times a month with faculty and graduate students to work together on advanced R coding.

ADVANCED SKILLS

Data Analysis: Mixed Effects Models, Circular Statistics, Dyadic Data Analysis, Non-Linear Methods (e.g., RQA, fractals), Time-Series Analysis, and Signal Processing.
Software and Languages: MATLAB, R, SPSS, E-Prime, Markdown

SPECIAL METHODS TRAINING

APA's Advanced Training Institute: *Nonlinear Methods for Psychological Science*, University of Cincinnati, Summer 2010

AD HOC REVIEWER

Behavioral Research Methods, Journal of Experimental Psychology: General, Journal of Experimental Social Psychology, Frontiers in Neuroscience, Physica A, Scientific Reports