

**CAROLINE PALMER  
VITA**

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Sequence Production Lab: [www.mcgill.ca/spl/](http://www.mcgill.ca/spl/)  
Complex Dynamics Network: [www.cd-create.org/](http://www.cd-create.org/)

**CITIZENSHIP:** Canada and USA

**EDUCATION:**

Doctor of Philosophy in Cognitive Psychology, August 1988, Cornell University, Ithaca, NY.  
Master of Science in Clinical Psychology, October 1984, Rutgers University, NJ.  
Bachelor of Science with honors, majors in statistics and psychology, minor in music, May 1981,  
University of Michigan, MI.

**PROFESSIONAL POSITIONS OF PAST 5 YEARS:**

Canada Research Chair (Tier 1), McGill University, 2003-present.  
Professor, Dept. of Psychology, McGill University, 2003-present.  
Associate Member, Faculty of Music, McGill University, 2003 – present.  
Director, NSERC-CREATE Training program in Complex Dynamics, 2017-2024.  
Director, Undergraduate Program, Department of Psychology, McGill University, 2015-2017.  
Member, Integrated Program in Neuroscience, McGill University, 2011-present.  
Member, Centre for Interdisc Res in Music Media & Technology, McGill University, 2005-present.  
Member, Centre for Research on Brain, Language and Music, McGill University, 2003 – present.

**SCHOLARSHIPS AND FELLOWSHIPS:**

Visiting Scholar, University of Illinois at Chicago, 2022.  
Visiting Scholar, University of Chicago, 2022.  
Fellow, Royal Society of Canada, 2017.  
Fellow, Canadian Society for Brain, Behaviour, and Cognitive Sciences, 2017.  
Visiting Scholar, University of Montpellier, France, Spring 2015.  
Visiting Scholar, University of Birmingham, England, Fall 2014.  
Fellow, Association for Psychological Science, Washington, DC, 2011.  
Fellow, Psychonomic Society, US, 2010.  
Visiting Scholar, Max Planck Institute, Leipzig, Germany, 2008.  
Fellow, Macquarie University, Sydney, Australia, 2007.  
Fellow, American Psychological Association, Washington, DC, 2005.  
Scholar in Residence, Nijmegen Institute for Cognition and Information, The Netherlands, 1998.  
Fellow, Center for Advanced Study in the Behavioral Sciences, Stanford, CA, 1993 – 1994.  
Fellow, Summer Program in Cognitive Neuroscience, Dartmouth College, 1992.  
Scholar in Residence, Queen's University, Kingston, Ontario, 1992.

**EXTERNAL GRANTS AND AWARDS:**

RBLM Research Incubator award (PI), “Agency in human-machine trios”, 2023 (co-PI Wanderley, M)  
RITPART Short Term Scientific Mission Grant, RITMO Centre for Interdisciplinary Studies in  
Rhythm, Time and Motion, University of Oslo, 2022.  
Senior Mentorship Award, Society of Music Perception and Cognition (US), 2022.

Estes Fund Award, Assoc for Psychological Sciences US (PI), “Nonlinear dynamics in the life sciences”, 2021.

Canada Foundation for Innovation (co-PI; S Dalla Bella, PI), “Auditory-motor skill learning”, 2021-2026.

NSERC Discovery Grant (PI), “Group dynamics and temporal coordination”, 2020-2025.

Canada Research Chair (Tier 1), “Cognitive neuroscience of performance,” 2017 – 2024.

NSERC-CREATE Grant (PI), “Complex Dynamics in Brain and Behaviour”, 2017 – 2024.

GRAMMY Museum Grant (PI), "Autobiographical memory enhancements with musical training", 2019-2022 (co-PI: S Sheldon).

CRBLM Research Incubator Award (PI), “Timing deficits in ADHD”, 2020 – 2021.

FRQSC (co-PI; I Cossette, PI), “CIRMMT – Groupe stratégique”, 2020 – 2026.

FQRNT (co-PI; D Klein, PI), “Regroupement stratégique CRBLM”, 2017 – 2023.

Quebec Brain-Imaging Network (co-PI with S Sheldon), "Neural mechanisms of retrieving the sights and sounds from a memory", 2019-2020.

Estes Fund, Assoc for Psychol Sciences, US (PI), “Nonlinear Dynamics for the Life Sciences”, 2018.

CRBLM Research Incubator Award (co-PI with S Sheldon), “Auditory imagery and memory: impact of musical training”, 2017-2018.

NSERC-Discovery Grant (PI), "Temporal coordination in performance," 2015 – 2020.

NSERC-Equipment Grant (PI), "High-density EEG for auditory cognitive neuroscience," 2015.

Canada Foundation for Innovation (co-PI; M. Wanderley, PI), “Live expression in situ: Musical and audiovisual performance and reception,” 2015-2020.

FRQNT (co-PI; M Wanderley, PI), "Regroupement stratégique CIRMMT," 2014 – 2020.

Erasmus-Mundus Student Exchange Grant, EU (co-PI; M Schoenwiesner, PI), “Auditory cognitive neuroscience,” 2014 – 2017.

FRQNT (co-PI; V Gracco, PI), “Regroupement stratégique CRBLM,” 2011 – 2017.

Canada Research Chair (Tier 1), “Cognitive neuroscience of performance,” 2010 – 2017.

NSERC Accelerator Award (PI), “Auditory sequence production,” 2010 – 2014.

Erasmus-Mundus Student Exchange Grant, EU (co-PI; M Schoenwiesner, PI), “Auditory cognitive neuroscience,” 2010 – 2014.

NSERC-CREATE Grant (PI), “Auditory cognitive neuroscience,” 2009 – 2015.

NSERC Discovery Grant (PI), “Memory and motor control in production,” 2009 – 2015.

Australian Research Council (co-PI; W Thompson, PI), “Vocal emotional communication,” 2009 – 2013.

Canada Foundation for Innovation (co-PI; I Peretz, PI), “Lab in Music Neuroscience,” 2008 – 2014.

NSERC Major Resource Support Grant (S McAdams, PI), “CIRMMT,” 2007 – 2009.

NSERC Equipment Grant (PI), “Motion capture of fine finger movements,” 2006 – 2007.

CIHR Operating Grant (co-PI; K Steinhauer, PI), “Electrophysiological investigations of prosodic processing,” 2004 – 2008.

NSERC Discovery Grant (PI), “Memory processes in sequence production,” 2004 – 2009.

Canada Foundation for Innovation (PI), “Sequence Production,” 2003 – 2007.

Canada Research Chair, “Cognitive neuropsychology of performance,” 2003 – 2010.

Ohio State University Academic Enrichment Grant, “Music cognition,” 1996 – 2003.

Distinguished Scientific Award for Early Career Contribution in perception and motor performance, American Psychological Association, 1996.

National Institute of Mental Health (PI), R01, “Constraints on cognitive theories of sequence production,” 1998 – 2003.

NIH Institutional National Service Award (Consultant): Multidisciplinary Research Training Program in Speech and Hearing Science, 1996 – 2001.

National Science Foundation, Grant toward Fellowship at Center for Advanced Study in the Behavioral Sciences, SES-9022192, 1993 – 1994.

FIRST Award, National Institute of Mental Health (PI), "Constraints on cognitive theories of

performance," 1990 – 1996.

## EDITORIAL CONSULTING OF PAST 5 YEARS:

Editorial Boards:

*Canadian Journal of Experimental Psychology*, 2019 - 2022.

Ad-hoc Reviewer:

*Attention, Perception & Psychophysics; Experimental Brain Research; Frontiers in Psychology; Journal of Cognitive Neuroscience; Journal of Experimental Psychology: Human Perc & Performance; PLoS One; Psychological Science; Psychonomic Bulletin & Review; Scientific Reports.*

Ad-Hoc Grants Reviewer:

*National Science Foundation (US); Natural Sciences and Engineering Research Council; Canada Foundation for Innovation; Canada Research Chairs; Australian Research Council.*

## PEER-REVIEWED PUBLICATIONS (\* = trainee):

Demos, A.P., & Palmer, C. (2023) Musical synchrony, dynamical systems, information-processing: Merger or redundancy? In press, *Trends in Cognitive Sciences*.

Demos, A.P., & Palmer, C. (2023) Social and nonlinear dynamics unite: Musical group synchrony. *Trends in Cognitive Sciences*, doi: <https://doi.org/10.1016/j.tics.2023.05.005>.

\*Tranchant, P., \*Scholler, E., & Palmer, C. (2022). Endogenous rhythms influence musicians' and non-musicians' interpersonal synchrony. *Scientific Reports*, 12, doi: 10.1038/s41598-022-16686-2.

\*Bégel, V., Demos, A.P., \*Wang, M., & Palmer, C. (2022). Social interaction and rate effects in models of musical synchronization. *Frontiers in Psychology*, doi: 10.3389/fpsyg.2022.865536.

\*Slater, J., Joober, R., \*Koborsy, B.L., \*Mitchell, S., \*Sahlas, E., & Palmer, C. (2022). Can electroencephalography (EEG) identify ADHD subtypes? A systematic review. *Neuroscience & Biobehavioral Reviews*, 139, 104752.

Palmer, C., & Demos, A.P. (2022). Are we in time? How predictive coding and dynamical systems explain musical synchrony. *Current Directions in Psychological Science*, 31, 147-153.

\*Wright, S.E., & Palmer, C. (2021) Does chronotype explain daily timing of musical behaviors? *Chronobiology International*, 39, 186-197 [online Oct 2021].

\*Wright, S.E., \*Bégel, V., & Palmer, C. (2022). Physiological influences of music in perception and action. *Elements in Perception*, Cambridge: doi:10.1017/9781009043359.

\*Zamm, A., Palmer, C., Bauer, A.K., Bleichner, M.G., \*Demos, A.P., & Debener, S. (2021). Behavioral and neural dynamics of interpersonal synchrony between performing musicians: A wireless EEG hyperscanning study. *Frontiers in Human Neuroscience*, 15, 717810. doi: 10.3389/fnhum.2021.717810

Pfordresher, P. Q., Greenspon, E.B., \*Friedman, A.L. & Palmer, C. (2021). Spontaneous production rates in music and speech. *Frontiers in Psychology*, 12, 611867. doi: 10.3389/fpsyg.2021.611867

\*Scheurich, R., Palmer, C., Kaya, B., Agostino, C., & Sheldon, S. (2021) Evidence for a visual bias when recalling complex narratives. *PLoS One*, 16(4): e0249950. doi:10.1371/journal.pone.0249950

\*Wright, S.E., & Palmer, C. (2020). Physiological and behavioural factors in musicians' performance tempo. *Frontiers in Human Neuroscience*. doi: 10.3389/fnhum.2020.00311

\*Mathias, B.M., \*Zamm, A., \*Gianferrara, P.G., Ross, B., & Palmer, C. (2020) Rhythm complexity modulates behavioural and neural dynamics during auditory-motor synchronization. *Journal of Cognitive Neuroscience*, 32, 1864-1880.

- \*Scheurich, R., Pfordresher, P.Q., & Palmer, C. (2020). Musical training enhances temporal adaptation of auditory-motor synchronization. *Experimental Brain Research*, *1*, 81-92.
- \*Demos, A.P., \*Layeghi, H., Wanderley, M.M., & Palmer, C. (2019). Staying together: A bidirectional delay-coupled approach to joint action. *Cognitive Science*, *43*. doi: 10.1111/cogs.12766
- \*Scheurich, R., \*Demos, A., \*Zamm, A., \*Mathias, B., & Palmer, C. (2019). Capturing intra- and inter-brain dynamics with recurrence quantification analysis. In AK Goel, CM Seifert, & C Freksa (Eds), *Proceedings of the 41<sup>st</sup> Annual Meeting of the Cognitive Science Society* (pp. 2748-2754). Montreal, QC: Cognitive Science Society.
- Lagrois, M.-E., Palmer, C., & Peretz, I. (2019). Poor synchronization to musical beat generalizes to speech. *Brain Sciences*, *9*(157), 1-20. doi:10.3390/brainsci9070157.
- Palmer, C., \*Spidle, F., \*Koopmans, E., & Schubert, P. (2019). Ears, head and eyes: When singers synchronize. *Quarterly Journal of Experimental Psychology*. doi:/10.1177/1747021819833968
- \*Zamm, A., Palmer, C., Bauer, A.-K.R., Bleichner, M.G., \*Demos, A.P., & Debener, S. (2019). Synchronizing MIDI and wireless EEG measurements during natural piano performance. *Brain Research*, *1716*, 27-38.
- \*Schultz, B.G., & Palmer, C. (2019). The roles of musical expertise and sensory feedback in beat keeping and joint action. *Psychological Research*, *83*(3), 419–431. doi:10.1007/s00426-019-01156-8.
- \*Mathias, B., Gehring, W.J., & Palmer, C. (2019). Electrical brain responses reveal sequential constraints on planning during music performance. *Brain Sciences*, *9*(25). doi:10.3390/brainsci9020025
- \*Zamm, A., \*Wang, Y., & Palmer, C. (2018). Musicians' natural frequencies of performance display optimal temporal stability. *Journal of Biological Rhythms*, *33*, 432-440.
- \*Scheurich, B., \*Zamm, A., & Palmer, C. (2018). Tapping into rate flexibility: Musical training facilitates synchronization around spontaneous production rates. *Frontiers in Psychology*. doi:10.3389/fpsyg.2018.00458.
- \*Zamm, A., Debener, D., Bauer, A.-K.R., Bleichner, M.G., \*Demos, A.P., & Palmer, C. (2018). Amplitude envelope correlations measure synchronous cortical oscillations in performing musicians. *Annals of the New York Academy of Sciences*. doi:10.1111/nyas.13728.
- \*Caramiaux, B., Bevilacqua, F., Wanderley, M., & Palmer, C. (2018). Dissociable effects of practice variability on learning motor and timing skills. *PLoS One*, *13*(3): e0193580.
- \*Caramiaux, B., Bevilacqua, F., Palmer, C., & Wanderley, M. (2017). Individuality in piano performance depends on skill learning. *Proceedings of the 4<sup>th</sup> International Conference on Movement Computing*, London UK; [https://doi.org/10.475/123\\_4](https://doi.org/10.475/123_4).
- \*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*, *10.3389/fpsyg.2017.00149*.
- \*Mathias, B., Gehring, W. J., & Palmer, C. (2017). Auditory N1 reveals planning and monitoring processes during music performance. *Psychophysiology*, *54*, 235-247.
- \*Schultz, B.G., \*O'Brien, I., Phillips, N., McFarland, D.H., Titone, D., & Palmer, C. (2016). Speech rates converge in turn-taking conversations between a confederate and naive participants. *Applied Psycholinguistics*, *37*, 1201-1220. <http://dx.doi.org/10.1017/S0142716415000545>
- \*Mathias, B., Tillman, B., & Palmer, C. (2016). Sensory, cognitive, and sensorimotor learning effects in recognition memory for music. *Journal of Cognitive Neuroscience*, *28*, 1111-1126. doi:10.1162/jocn\_a\_00958

- \*Gingras, B., Palmer, C., Schubert, P.N., & McAdams, S. (2016). Influence of melodic emphasis, texture, salience, and performer individuality on performance errors. *Psychology of Music*, *44*, 847-863.
- \*Zamm, A., \*Wellman, C., & Palmer, C. (2016). Endogenous rhythms influence interpersonal synchrony. *Journal of Experimental Psychology: Human Perception & Performance*. *42*, 161-166. <http://dx.doi.org/10.1037/xhp0000201>.
- \*Livingstone, S.R., & Palmer, C. (2016). Head movements encode emotions during speech and song. *Emotion*, *16*, 365-380. <http://dx.doi.org/10.1037/emo0000106>.
- \*Mathias, B., \*Lidji, P., Honing, H., Palmer, C., & Peretz, I. (2016). Electrical brain responses to beat irregularities in two cases of beat deafness. *Frontiers in Neuroscience*. doi: 10.3389/fnins.2016.00040.
- \*Van Hedger, S.C., Hogstrom, A., Palmer, C., & Nusbaum, H.C. (2015). Sleep consolidation of musical competence. *Music Perception*, *33*, 163-178.
- \*Livingstone, S.R., Thompson, W.F., Wanderley, M.M., & Palmer, C. (2015). Common cues to emotion in the dynamic facial expressions of speech and song. *Quarterly Journal of Experimental Psychology*, *68*, 952-970.
- \*Maes, P.-J., Wanderley, M., & Palmer, C. (2015). The role of working memory in the temporal control of discrete and continuous movements. *Experimental Brain Research*, *233*, 263-273. doi: 10.1007/s00221-014-4108-5.
- \*Mathias, B., Pfordresher, P.Q., & Palmer, C. (2015). Context and meter enhance long-range planning in music performance. *Frontiers in Human Neuroscience*, *8*, 1040. doi: 10.3389/fnhum.2014.01040.
- Palmer, C. (2015). Listening, imagining, performing: Melody as a life cycle of musical thought. *Music Perception*, *33*, 3-11.
- \*Zamm, A., Pfordresher, P.Q., & Palmer, C. (2015). Temporal coordination in joint music performance: Effects of endogenous rhythms and auditory feedback. *Experimental Brain Research*, *233*, 607-615. doi: 10.1007/s00221-014-4140-5.
- \*Mathias, B., Palmer, C., Perrin, F., & Tillmann, B. (2014). Sensorimotor learning enhances expectations during auditory perception. *Cerebral Cortex*. doi: 10.1093/cercor/bhu030.
- \*Maes, P.-J., Leman, M., Palmer, C., & Wanderley, M. (2014). Action-based effects on music perception. *Frontiers in Psychology*. *4*, 1008. doi: 10.3389/fpsyg.2013.01008.
- Palmer, C., \*Lidji, P., & Peretz, I. (2014). Losing the beat: Deficits in temporal coordination. *Philosophical Transactions of the Royal Society: Biological Sciences*, *369*. doi: 10.1098/rstb.2013.0405.
- Quinto, L.R., Thompson, W.F., Kroos, C., & Palmer, C. (2014). Singing emotionally: A study of pre-production, production, and post-production facial expressions. *Frontiers in Psychology*, *5*. doi: 10.3389/fpsyg.2014.00262.
- \*Brown, R.M., & Palmer, C. (2013). Auditory and motor imagery modulate learning in music performance. *Frontiers in Human Neuroscience*, *7*:320. doi: 10.3389/fnhum.2013.00320.
- \*Brown, R.M., Chen, J., Hollinger, A., Penhune, V., Palmer, C., & Zatorre, R. (2013). Repetition suppression in auditory-motor regions to pitch and temporal structure in music. *Journal of Cognitive Neuroscience*, *25*, 313-328.
- \*Goebel, W., & Palmer, C. (2013). Temporal control and hand movement efficiency in skilled music performance. *PLoS One* *8*: e50901. doi:10.1371/journal.pone.0050901.
- Altenmüller, E., Demorest, S.M., Fujioka, T., Halpern, A.R., Hannon, E.E., Loui, P., Majno, M., Oechslin, M.S., Osborne, N., Overy, K., Palmer, C., Peretz, I., Pfordresher, P.Q., Särkämö, T., Wan,

- C.Y., & Zatorre, R.J. (2012). Introduction to The Neurosciences and music IV: Learning and memory. *Annals of the New York Academy of Sciences*, 1252, 1-16.
- \*Brown, R.M., & Palmer, C. (2012). Auditory-motor learning influences auditory memory for music. *Memory & Cognition*, 40, 567-578.
- \*Livingstone, S.R., Palmer, C., & Schubert, E. (2012). Emotional response to musical repetition. *Emotion*, 12, 552-567.
- Palmer, C., \*Mathias, B., & \*Anderson, M. (2012). Sensorimotor mechanisms in music performance: Actions that go partially wrong. *Annals of the New York Academy of Sciences*, 1252, 181-191.
- Pivneva, I., Palmer, C., & Titone, D. (2012). Inhibitory control and L2 proficiency modulate bilingual language production: Evidence from spontaneous monologue and dialogue speech. *Frontiers in Cognition*, 3, 57.
- \*Dalla Bella, S., & Palmer, C. (2011). Rate effects on timing, key velocity, and finger kinematics in piano performance. *PLoS One*, 6:6; e20518. doi: 10.1371.
- \*Lidji, P., Palmer, C., Peretz, I., & \*Morningstar, M. (2011). Entrainment to speech and song. In A. Williamon, D. Edwards, & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science* (pp. 123-128). EAC: Utrecht, The Netherlands.
- \*Lidji, P., Palmer, C., Peretz, I., & \*Morningstar, M. (2011). Listeners feel the beat: Entrainment to English and French speech rhythms. *Psychonomic Bulletin & Review*, 18, 1035-1041.
- \*Livingstone, S., Palmer, C., Wanderley, M.M., Thompson, W.F., & \*Lissemore, J. (2011). Facial expressions in vocal performance: Visual communication of emotion. In A. Williamon, D. Edwards, & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science* (pp. 545-550). EAC: Utrecht, The Netherlands.
- \*Loehr, J.D., & Palmer, C. (2011). Temporal coordination between performing musicians. *The Quarterly Journal of Experimental Psychology*, 64, 2153-2167.
- \*Loehr, J.D., Large, E.W., & Palmer, C. (2011). Temporal coordination and adaptation to rate change in music performance. *Journal of Experimental Psychology: Human Perception and Performance*, 37, 1292-1309.
- \*Mathias, B., Palmer, C., Pfordresher, P., & \*Anderson, M. (2011). Effects of meter and serial position on memory retrieval during music performance. In A. Williamon, D. Edwards, & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science* (pp. 405-410). EAC: Utrecht, The Netherlands.
- Pfordresher, P.Q., Keller, P.E., Koch, I., Palmer, C., & Yildirim, E. (2011). Activation of learned action sequences by auditory feedback. *Psychonomic Bulletin & Review*, 18, 544-549.
- Phillips-Silver, J., Toiviainen, P., Gosselin, N., Piché, O., Nozaradan, S., Palmer, C., & Peretz, I. (2011). Born to dance but beat deaf: A new form of congenital amusia. *Neuropsychologia*, 49, 961-969.
- \*Goebel, W., & Palmer, C. (2009). Synchronization of timing and motion among performing musicians. *Music Perception*, 26, 427-438.
- \*Goebel, W., & Palmer, C. (2009). Finger motion in piano performance: Touch and tempo. In A. Williamon, S. Pretty, & R. Buck (Eds.), *Proceedings of the International Symposium on Performance Science* (pp. 65-70). EAC: Utrecht, The Netherlands.
- \*Livingstone, S., Schubert, E., \*Loehr, J.D., & Palmer, C. (2009). Emotional arousal and the automatic detection of musical phrase boundaries. In A. Williamon, S. Pretty, & R. Buck (Eds.), *Proceedings of the International Symposium on Performance Science* (pp. 445-450). EAC: Utrecht,

The Netherlands.

\*Loehr, J.D., & Palmer, C. (2009). Sequential and biomechanical factors constrain timing and motion in tapping. *Journal of Motor Behavior*, *41*, 128-136.

\*Loehr, J.D., & Palmer, C. (2009). Subdividing the beat: Auditory and motor contributions to synchronization. *Music Perception*, *26*, 415-425.

Palmer, C., \*Koopmans, E., \*Carter, C., \*Loehr, J.D., & Wanderley, M. (2009). Synchronization of motion and timing in clarinet performance. In A. Williamon, S. Pretty, & R. Buck (Eds.), *Proceedings of the International Symposium on Performance Science* (pp. 159-164). EAC: Utrecht, The Netherlands.

Palmer, C., \*Jewett, L.R., & Steinhauer, K. (2009). Effects of context on electrophysiological response to musical accents. *Annals of the New York Academy of Sciences*, *1169*, 470-480.

Palmer, C., \*Koopmans, E., \*Loehr, J.D., & \*Carter, C. (2009). Movement-related feedback and temporal accuracy in clarinet performance. *Music Perception*, *26*, 439-449.

\*Goebl, W. & Palmer, C. (2008). Tactile feedback and timing accuracy in piano performance. *Experimental Brain Research*, *186*, 471-479.

\*Hutchins, S., & Palmer, C. (2008). Repetition priming in music. *Journal of Experimental Psychology: Human Perception and Performance*, *34*, 693-707.

Palmer, C. (2008). Music and the pursuit of truth. *Music Perception*, *25*, 487.

Palmer, C., \*Carter, C., \*Koopmans, E., & \*Loehr, J.D. (2007). Movement, planning and music: Motion coordinates of skilled performance. In E. Schubert, K. Buckley, R. Elliott, B. Koboroff, J. Chen, C. Stevens (Eds.), *Proceedings of the International Conference on Music Communication Science* (pp.119-122). Sydney: University of Western Sydney.

\*Schendel, Z.A., & Palmer, C. (2007). Suppression effects in musical and verbal memory. *Memory & Cognition*, *35*, 640-650.

\*Loehr, J.D., & Palmer, C. (2007). Cognitive and biomechanical influences in pianists' finger tapping. *Experimental Brain Research*, *178*, 518-528.

Pfordresher, P.Q., Palmer, C., & \*Jungers, M.K. (2007). Speed, accuracy, and serial order in sequence production. *Cognitive Science*, *31*, 63-98.

Pfordresher, P.Q. & Palmer, C. (2006). Effects of hearing the past, present, or future during music performance. *Perception & Psychophysics*, *68*, 362-376.

Palmer, C. (2005). Sequence memory in music performance. *Current Directions in Psychological Science*, *14*, 247-250.

Palmer, C. (2005). Timecourse of retrieval and movement preparation in music performance. *Annals of the New York Academy of Sciences*, *1060*, 360-367.

\*Highben, Z., & Palmer, C. (2004). Effects of auditory and motor mental practice in memorized piano performance. *Bulletin of the Council for Research in Music Education*, *159*, 58-65.

Dalla Bella, S., & Palmer, C. (2004). Tempo and dynamics in piano performance: the role of movement amplitude. In S.D. Lipscomb, R. Ashley, R. O. Gjerdingen, & P. Webster (Eds.), *Proceedings of the International Conference on Music Perception and Cognition* (pp.256-257). Adelaide, Australia: Causal Productions.

\*Baldwin, G., & Palmer, C. (2004). The effects of meter on musical task-switching. In S.D. Lipscomb, R. Ashley, R.O. Gjerdingen, & P. Webster (Eds.), *Proceedings of the International Conference on Music Perception and Cognition* (pp.433-434). Adelaide, Australia: Causal

## Productions.

Palmer, C., & \*Pfordresher, P.Q. (2003). Incremental planning in sequence production. *Psychological Review*, *110*, 683-712.

\*Meyer, R.K., & Palmer, C. (2003). Temporal and motor transfer in music performance. *Music Perception*, *21*, 81-104.

\*Finney, S.A. & Palmer, C. (2003). Auditory feedback and memory for music performance: Sound evidence for an encoding effect. *Memory & Cognition*, *31*, 51-64.

Palmer, C., & \*Jungers, M.K. (2003). Music cognition. In L. Nadel (Ed.), *Encyclopedia of cognitive science* (pp. 155-159). London: Macmillan.

\*Jungers, M.K., Palmer, C., & Speer, S.R. (2002). Time after time: The coordinating influence of tempo in music and speech. *Cognitive Processing*, *2*, 21-35.

\*Large, E.W., & Palmer, C. (2002). Perceiving temporal regularity in music. *Cognitive Science*, *26*, 1-37.

\*Pfordresher, P.Q., & Palmer, C. (2002). Effects of delayed auditory feedback on timing of music performance. *Psychological Research*, *16*, 71-79.

Palmer, C., \*Jungers, M.K., & Jusczyk, P.W. (2001). Episodic memory for musical prosody. *Journal of Memory and Language*, *45*, 526-545.

Palmer, C., & \*Meyer, R.K. (2000). Conceptual and motor learning in music performance. *Psychological Science*, *11*, 63-68.

\*Drake, C., & Palmer, C. (2000). Skill acquisition in music performance: Relations between planning and temporal control. *Cognition*, *74*, 1-32.

Palmer, C., & \*Pfordresher, P.Q. (2000). From my hand to your ear: The faces of meter in performance and perception. In C. Woods, G. B. Luck, R. Brochard, F. Seddon, & J.A. Sloboda (Eds.), *Proceedings of the Sixth International Conference on Music Perception and Cognition* [CD-ROM]. Keele, UK: Keele University Department of Psychology.

\*Meyer, R.K., Palmer, C., & Mazo, M. (1998). Affective and coherence responses to Russian laments. *Music Perception*, *16*, 135-150.

Palmer, C. & \*Drake, C. (1997). Monitoring and planning capacities in the acquisition of music performance skills. *Canadian Journal of Experimental Psychology*, *51*, 369-384.

Palmer, C. (1997). Music performance. *Annual Review of Psychology*, *48*, 115-138.

Palmer, C. (1996). On the assignment of structure in music performance. *Music Perception*, *14*, 23-56.

Palmer, C. (1996). Anatomy of a performance: Sources of musical expression. *Music Perception*, *13*, 433-453.

Palmer, C., & \*van de Sande, C. (1995). Range of planning in music performance. *Journal of Experimental Psychology: Human Perception & Performance*, *21*, 947-962.

\*Large, E.W., Palmer, C., & Pollack, J.B. (1995). Reduced memory representations for music. *Cognitive Science*, *19*, 53-96.

Palmer, C., & \*Holleran, S. (1994). Harmonic, melodic, and frequency height influences in the perception of multivoiced music. *Perception & Psychophysics*, *56*, 301-312.

Palmer, C., & \*van de Sande, C. (1993). Units of knowledge in music performance. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *19*, 457-470.

\*Drake, C., & Palmer, C. (1993). Accent structures in music performance. *Music Perception*, *10*, 343-



378.

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Palmer, C., & Krumhansl, C.L. (1987). Pitch and temporal contributions to musical phrase perception: Effects of harmony, performance timing, and familiarity. *Perception & Psychophysics*, 41, 505-518.

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Grunhaus, L., Glover, S., Birmacher, B., Palmer, C., & Ben-David, M. (1983). Prolactin response to cold pressor test in patients with panic attacks. *Psychiatry Research*, 8, 171-177.

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### **BOOK CHAPTERS AND PUBLISHED OPINIONS:**

Chew, E., P. Loui, G. Leslie, C. Palmer, J. Berger, E. Large, N. F. Bernardi, S. Hanser, J. F. Thayer, M. Casey, & P. Lambiase (2021). How music can literally heal the heart. *Scientific American*, 18 Sept 2021. [bit.ly/sciam-muscheart](https://bit.ly/sciam-muscheart)

Palmer, C. & \*Scheurich, R. (2019). Musicians in action: Solo and ensemble performance. In J. Rentfrow, & D. Levitin (Eds), *Foundations of Music Psychology: Theory and Research* (pp.751-779). Cambridge, MA: MIT Press.

Palmer, C., & \*Zamm, A. (2017). Interactions in ensemble music performance: Empirical and

- mathematical accounts. In M. Lesaffre, M. Leman, P.-J. Maes (Eds), *The Routledge Companion to Embodied Music Interaction* (pp.370-379). London: Routledge.
- Palmer, C., & \*Loehr, J.D. (2013). Meeting of two minds in duet piano performance. In L. Bernstein and A. Rozin (Eds.), *Musical Implications: Essays in Honor of Eugene Narmour* (pp. 323-338). Hillsdale, NY: Pendragon Press.
- Palmer, C. (2013). Music performance: Movement and coordination. In D. Deutsch (Ed.), *Psychology of Music* (3rd Ed; pp.405-422). Amsterdam: Elsevier.
- Palmer, C. (2006). Nature of memory for music performance skills. In E. Altenmueller, J. Kesselring & M. Wiesendanger (Eds.), *Music, motor control, and the brain* (pp. 39-53). Oxford: Oxford University Press.
- Palmer, C., & \*Hutchins, S. (2006). What is musical prosody? In B. H. Ross (Ed.), *Psychology of Learning and Motivation*, 46 (pp.245-278). Amsterdam: Elsevier Press.
- \*Large, E.W., Palmer, C., & Pollack, J.B. (1999). Reduced memory representations for music. In N. Griffith and P.M. Todd (Eds.), *Musical Networks: Parallel Distributed Perception and Performance* (pp. 279-312). Cambridge, MA: MIT Press.
- Palmer, C. (1992). The role of interpretive preferences in music performance. In M.R. Jones and S. Holleran (Eds.), *Cognitive Bases of Musical Communication* (pp.249-262). Wash., D.C.: American Psychological Association.

#### **SELECTED INVITED TALKS OF PAST 5 YEARS:**

- Palmer, C. (2023) Modeling the mind with music. Soup and Science Speaker Series, McGill University, September.
- Palmer, C., Clayton, M., Henry, M., Keller, P., Toiviainen, P. (2023). What is entrainment? Panel Discussion. Presented at Entrainment Workshop, University of Oslo, Norway, August.
- Palmer, C. (2022). Auditory-motor synchronization in speech and music. Invited talk, Symposium for Cognitive Auditory Neuroscience, Carnegie Mellon University (US), November.
- Palmer, C., & Demos, A.P. (2022). Social and nonlinear dynamics unite: Musical group synchrony. Brain and Cognitive Sciences Brownbag, University of Illinois, November.
- Palmer, C. (2022) Why do we perform ahead of the beat? Predictive coding and dynamical systems. Science of Art, Music, and Brain Activity program, Arizona State University, September.
- Palmer, C. (2022) Dynamical systems applications in psychology. Summer School in Nonlinear Dynamics in the Life Sciences. Montreal, June.
- Palmer, C. (2022). Accounting for musical synchrony: Predictive coding and dynamical systems. Invited colloquium, Center for Music in the Brain, Aarhus University, May.
- Palmer, C. (2022). Recurrence quantification analysis of complex time series. Rhythm Rising Workshop, University of Oslo, May.
- Palmer, C. (2022) Playing well together: Synchrony among performing musicians. RITMO Center for Interdisciplinary Studies in Rhythm, Time and Motion, University of Oslo, Norway, May.
- Palmer, C. (2022) Interpersonal synchrony in sound, mind, and body. Psychology Department colloquium, University of Illinois at Chicago, February.
- Palmer, C. (2022) Modeling interpersonal synchrony in auditory-motor tasks. Neuroscience Workshop, University of Chicago, February.
- Bégel\*, V., Demos, A., & Palmer, C. (2021). Do we make good partners? Delay-coupling models of auditory-motor synchronization in a turn-taking context. International Conference on Music

Perception and Cognition, UK [online], July.

Palmer, C., & Demos, A.P. (2021) Explaining entrainment and synchrony with predictive coding and dynamical systems. Rhythm Perception and Production Workshop [online], Oslo, June.

Palmer, C. (2021). Rhythms of speech and music: Accommodating despite oneself. Keynote address, Language-Music-Gesture Conference, St. Petersburg, RU [online], March.

Palmer, C. (2021). Role of cardiac rhythms and circadian rhythms in musicians' performance tempo. Invited colloquium, Brain and Mind Institute, Western University, London [online], March.

Palmer, C. (2020). What makes a training grant successful? Invited presentation, Healthy Cities Initiative, CIHR [online], September.

Palmer, C. (2020). Startups in the life sciences, panel moderator. Symposium in Nonlinear Dynamics, Montreal [online], August.

Palmer, C. (2019). Physiological markers of music performance: Cardiac rhythms and musical rhythms. Invited speaker, Radcliffe Seminar on Music and the Heart. Harvard University, Boston, November.

Palmer, C. (2019) The cognitive neuroscience of music performance. Future of Neuroscience and Music Symposium, McGill Alumni Association, Boston, November.

Palmer, C. (2019). Working well together: Interpersonal synchrony in sound, mind, and body. Keynote speaker, Rhythm Production and Perception Workshop, Michigan: June.

Palmer, C. (2019). Demystifying skill development. Invited speaker, Women in Cognitive Science-Canada meeting, Waterloo: June.

Palmer, C. (2019) Nonlinear dynamics of music-making. Mini-science series, Faculty of Science, McGill University, May.

Palmer, C. (2019). Prosodic accommodation in ensemble music and speech conversation. Keynote speaker, meeting of the Generative Linguistics in the Old World, Oslo, Norway: May.

Palmer, C. (2019). Paradigms for short- and long-term training. Workshop on music learning and neural plasticity. Invited speaker, Concordia University, May.

Palmer, C. (2019). Timing and social interaction in music performance. Invited speaker, Symposium in Cross-disciplinary perspectives in timing and social coordination, Columbia University, New York: March.

Palmer, C. (2019). Ears, head and eyes: When singers synchronize. Cognitive Research at McGill symposium, Montreal, February.

Palmer, C. (2018). What's the deal with science funding? Psychology Forum, Dept of Psychology, McGill University, Montreal, December.

Palmer, C. (2018). Cognitive neuroscience of musical behavior. Humanities, Social Sciences and Arts Café Presentations, Meeting of the Royal Society of Canada, Halifax, November.

Palmer, C. (2018). Music-making, social interaction, and group synchrony. Homecoming Hebb Lecture, McGill University, October.

Palmer, C. (2018). Nonlinear dynamics of temporal coordination in group behavior. Summer School in Nonlinear Dynamics, Montreal, June.

Palmer, C. (2018). Decoding mental states in music performance. Music and the Brain Symposium, Stanford University, May.

## **TEACHING EXPERIENCE OF PAST 5 YEARS:**

Psychology 482, Research Ethics in Psychology, 2004-present (16-34 students)  
Psychology 529, Psychology of Music, 2003-present (30-60 students)  
Psychology 741, Graduate Seminar in Music Cognition, 2003-2023 (5-10 students)  
Psychology 744, Theories of Working Memory, 2006 (5-10 students).

**ADVISING:**

Advisor of Undergraduate Research; 1988-present (55 students)  
Advisor of Masters Research: 1988-present (20 students)  
Advisor of Doctoral Research: 1988-present (14 students)  
Advisor of Postdoctoral Research 1999-present (12 postdocs).

**POSTGRADUATE POSITIONS OF STUDENT TRAINEES:**

Dr. Rachel Brown, Research Scientist, Institute of Psychology, Aachen University, Germany.  
Christine Capota, Product Manager, Google Corp, Boston, US.  
Dr. Baptiste Caramiaux, CNRS Researcher, University of Paris-Saclay, FR.  
Dr. Christine Carter, Associate Professor, Music, Memorial University, St. John's, NL.  
Daniel Carter, Research Fellow, London School of Hygiene and Tropical Medicine, UK.  
Dr. Simone Dalla Bella, Professor, Psychology, University of Montreal, Canada.  
Dr. Alexander Demos, Clinical Associate Professor, Psychology, University of Illinois, Chicago, US.  
Dr. Carolyn Drake, Senior Researcher, CNRS, University of Paris, France.  
Dr. Steven Finney, Programmer, US.  
Dr. Werner Goebel, Professor, Musical Acoustics, Univ of Music and Performing Arts, Austria.  
Samuli Heilala, Software Developer, Avanade, Toronto.  
Dr. Zebulon Highben, Associate Professor, Music, Director, Chapel Music, Duke University, US.  
Dr. Sean Hutchins, Director of Research, Royal Conservatory of Music, Toronto, Canada.  
Sasha Ilyckyj, Music Diploma Student, Capilano College, Vancouver, B.C.  
Dr. Melissa Jungers, Associate Professor, Dept of Psychology, Ohio State University, US.  
Erik Koopmans, Senior Software Developer, Scotiabank Digital, Ontario.  
Dr. Edward Large, Professor, Psychology, University of Connecticut, US.  
Dr. Pascale Lidji, Neuropsychologist, Centre d'évaluation neuropsychologique et d'orientation pédagogique (CENOP), Montreal, Canada.  
Dr. Steven Livingstone, Associate Professor, Computer Science, Ontario Tech University, Toronto.  
Dr. Janeen Loehr, Associate Professor, Psychology, University of Saskatchewan, Canada.  
Dr. Pieter-Jan Maes, Professor, Department of Art, Music & Theatre sciences, Ghent Univ, Belgium.  
Dr. Brian Mathias, Lecturer, Dept of Psychology, Aberdeen University, Aberdeen, UK.  
Dr. Rosalee Meyer, Lecturer, Dept of Psychology, Ohio State University, US.  
Dr. Michele Morningstar, Assistant Professor, Psychology, Queens University, Kingston ON.  
Dr. Irena O'Brien, Founder and Director, The Neuroscience School, Montreal, Canada.  
Danielle Brink Pfeister, Manager, Human Resources, International Paper, US.  
Dr. Peter Pfordresher, Professor, Psychology, University at Buffalo, US.  
Dr. Grant Rich, Senior Contributing Faculty, Psychology, Walden University, US.  
Dr. Zachary Schendel, Head of Research, DoorDash, California, US.  
Dr. Benjamin Schultz, Research Fellow, Dept of Audiology, University of Melbourne, Australia.  
Dr. Brent Stansfield, Director of Medical Education, Wayne State University, MI, US.  
Dr. Tim Walker, Associate Professor, Computer Information Systems, Ohio Dominican, US.  
Dr. Ewa Wanat, Lecturer, Linguistics, University of Glasgow, Scotland, UK.  
Youyi Wang, Digital Solution Specialist, Wirecraft, Shanghai, CN.  
Chelsea Wellman, Child Development Facilitator, Renfrew Educational Services, Calgary.  
Dr. Anna Zamm, Assistant Professor, Dept of Cognitive Science, Aarhus University, Denmark.