CURRICULUM VITAE

Sylvain Moreno

Present Position: Director Digital Health Hub, School of Engineering, Simon Fraser University
Assistant Professor Adjunct, Department of Neuroscience at York Universty

Non-academic Positions:

Advisor	Ontario Ministry of Education (2013-present)
	TFO, French-Language Television Network of Ontario (2013-present)
Advisor/Consultant	
Advisor	NSERC-Create Industry Training program, 2011 – present
Consultant	Interaxon Inc.
Co-Founder	MusiqKids Corp.
Chairman/Co-Founder	Brain Power Initiative (2011-Present)
Advisor	Grand Challenges Canada (2012)
Adjunct Scientist	Holland-Bloorview Kids Rehabilitation Hospital (2007-2009)
Board Member	Technology Transfer Committee Baycrest hospital (2010-2014)

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Citizenship: French citizenship and Canadian permanent resident (no U.S. visa)
Language: French, English & Spanish.

Degrees

2007	PhD in Cognitive Neuroscience (with the highest grade)	University of Aix-Marseille I
2004	Certificate class (medical formation) on physics of fMRI	University of Aix-Marseille II
2004	Engineering, intellectual property, and business degree	École des mines d'Alès
2003	Masters in Cognitive Sciences – Computer sciences (with honors),	University of Aix-Marseille I
2001	French degree in Sciences and Techniques (with honors) (BS)	University of Aix-Marseille II

Dissertation / Thesis

- ***PhD in Cognitive Neuroscience*:**

Title: "*Influence of musical training on language processing*"
Supervisor: Mireille Besson, Research Director at the C.N.R.S, Institut de Neurosciences Cognitives de la Méditerranée (INCM), Marseille, France.

- ***Master in Cognitive Sciences - Computer sciences:***

Title: "*Neuro-dynamics and modelling of strategic choice*"
Supervisors: Gregor Schoener, Professor at the University of Bochum (Neuroinformatic Laboratory), Germany and Patrick Lemaire, Professor at the University of Provence, Marseille, France (Laboratoire de Psychologie Cognitive).

Prizes

2014	Early Researcher Award	Ministry of Economic Development and Innovation of Ontario
2012	Excellence in teaching and learning Award	Center for Education and Knowledge Exchange, Baycrest hospital
2011	Nominated for the Educational Technology Award	TELUS awards for software technology
2006	Pre-doctoral Research Award	Society for Psychophysiological Research
	Best Poster Award	Society for Psychophysiological Research, 46th Annual Meeting, Vancouver, BC, Canada
	ESCOM Young Researchers Award	9th International Conference on Music perception and cognition, Bologna, Italy

Awards

Current

- $15 000 Mitacs (July 2014): Development of neurofeedback algorithms supporting concentration and subjective well-being
- $125 000 NSERC Discovery (May 2014): *Working memory as a mechanism underlying transfer and maintenance of skills acquired through music training.*

- $140 000 Ministry of Economic Development and Innovation, Early Researcher Award (May 2014): *SmarterKids Music Based Training for Children with Specific Language Impairment.*
- $74 800 Ontario Centres of Excellence: Market Readiness Program (2013): *Smart Aging Brain Training.*
- $111 116 Canada Foundation for Innovation (2014): *Augmentation of neurorehablitation training using targeted brain stimulation*. (PI: J. Meltzer, Collaborator: S. Moreno).
- $76 025 Centre for Stroke Recovery (2013): *Examining the benefits of the spacing effect to memory rehabilitation and neural organization in stroke patients.* (PI: S. Rosenbaum, Trainee: A. Kim, Collaborator: S. Moreno).
- $238 640 National Institute of Health (NIH), (2013): *Cognitive and Language Development in Bilingual Children: Mechanisms, Limitations*. (PI: E. Bialystok, Collaborator: S. Moreno).

Past

- $1 800 000 The Federal Economic Development Agency for Southern Ontario (FedDev Ontario) (2012-2014): *Cognitively positive games for kids.*
- $23 951 NSERC Engage (2013): *Enhancing productivity in the workplace: Optimizing learning and retention using principles from memory research*. (PI: S. Rosenbaum, Trainee: A. Kim, Collaborator: S. Moreno).
- $17 250 The GRAMMY Foundation (2012): *Effects of musical training on the behavioral and neurophysiological speech processing in older adults.* (PI: G. Bidelman, Collaborator: S. Moreno).
- $24 300 Natural Sciences and Engineering Research Council of Canada (NSERC) Engage Grant (2012): *Cognitive correlates of EEG signals recorded by the InteraXon brain-computer interface.*
- $49 900 Canadian Institute of Health Research (CIHR) Catalyst Grant (2011): *Effects of normal aging on brain networks over the time course of working memory processing: a simultaneous EEG/fMRI study.* (PI: E. Bialystok, Collaborator: S. Moreno).
- $114 000 Ontario Centres of Excellence: Market Readiness Program (2010): *MusIQkids - Commercial development of the SmarterKids training game with integrated analytical tool* (Rank 1):
  - $57 000 Ontario Centres of Excellence
  - $57 000 MusIQkids Corporation (industry partner)
- $115 000 Precarn Industrial Technology-Gap (T-GAP) Assistance Program (2009): *Educational software game for brain development.*
- $173 800 Ontario Centres of Excellence: Market Readiness Program (2009): *MusIQkids – Beta prototype development of the SmarterKids training software*:
  - $42 500 Ontario Centres of Excellence
  - $42 500 MusIQkids Corporation (industry partner)
  - $88 800 George Brown College Research Division
- $10 000 College Ontario Network for Industry Innovation (CONII), Institutional Proof of Principle (IPoP) Grant (2009): *SmarterKids training*.
- $10 000 MaRS Business Mentorship and Entrepreneurship Program (BMEP), Business Advisory Services Program (2009): *Intellectual property strategy for SmarterKids training*.
- $50 000 Technology Transfer Toronto (TTT) – Ontario Research Commercialization Grant, Ministry of Research and Innovations (2008): *Combining musical training through VMI and MusIQkids learning software (Rank 1)*.

- $24 000 Medical Technologies Research and Commercialization Collaborative - Intellectual Property Mobilization Program (2008):
  - Natural Sciences and Engineering Research Council of Canada (NSERC), Canadian Institutes of Health Research (CIHR), and Social Sciences and Humanities Research Council (SSHRC), *Pre-commercialization of the VMI^{TM} Virtual Music Instrument and SmarterKids training*. (PI: T. Chau, Collaborator: S. Moreno).
- $5 000 Fellowship Award Institute Point Carré in Mathematics (2005): *Signal processing tools in brain imaging*.
- 54 000 euros ($84 500) PhD Fellowship Award French Ministry of Research Grant (2003): *Advanced musical technology.*

Published and in press (34)

2015 & In press

1. Dhami, P., DeSouza, J., **Moreno, S.,** (In press) New Framework for Rehab - Fusion Cognitive and Physical Rehab: the Hope for Dancing. *Frontiers in Cognitive Science*.

2. **Moreno**, S., Lee, Y., Janus, M., & Bialystok, E. (2015) Short-term second language and music training induces lasting functional brain changes in early childhood. *Child Development*. 86 (2), 394-406

3. Kovačević, N., **Moreno, S.,** Ritter, P., McIntosh, A., R. (2015) My Virtual Dream: Collective Neurofeedback Inside Immersive Art Environment. *Plos One.*

4. Hutka, S., Bidelman, G., M., **Moreno, S.** (2015) Pitch expertise is not created equal: Cross-domain effects of musicianship and tone language experience on neural and behavioural discrimination of speech and music. *Neuropsychologia*. 71: 52-63.

5. **Moreno, S.** & Farzan, F. (2015). Music Training and Inhibitory Control: a Multidimensional Model. *Annals of New York Academy of Science*. 1337 (1), 147-152.

6. Hutchins, S., Hutka, S., **Moreno**, S., (2015) Symbolic and Motor Contributions to Vocal Imitation in Absolute Pitch. *Music Perception: An Interdisciplinary Journal* 32 (3), 254-265

7. Feng, J., Craik, F.I.M., Levine, B., **Moreno**, S., Naglie, G., Choi, H.S., Medina, A. (2015) Drive Aware Task: Measuring Target Detection in a Visual Clutter in the Driving Context. *Transportation Research Board 94th Annual Meeting.*

2014

8. Sullivan, M.D., Janus, M.K., **Moreno, S.**, Astheimer, L., & Bialystok, E. (2014) Early stage second-language learning improves executive control. *Brain and Language*. 139, 84-98.

9. Bidelman, G. M., Weiss, M. W., **Moreno, S.**, & Alain, C. (2014). Coordinated plasticity in brainstem and auditory cortex contributes to enhanced categorical speech perception in musicians. *European Journal of Neuroscience.* doi: 10.1111/ejn.12627

10. Kielar, A., Meltzer, J.A., **Moreno, S.**, Alain, C., & Bialystok, E. (2014). Oscillatory responses to semantic and syntactic violations. *Journal of Cognitive Neuroscience*. doi: 10.1162/jocn_a_00670

11. Bidelman, G. M., Villafuerte, J. W., **Moreno, S.**, & Alain, C. (2014). Age-related changes in the subcortical-cortical encoding and categorical perception of speech. *Neurobiology of Aging.* doi: 10.1016/j.neurobiolaging.2014.05.006

12. **Moreno, S.**, Wodniecka, Z., Tays, W., Alain, C., & Bialystok, E. (2014). Inhibitory control in bilinguals and musicians: Event Related Potential (ERP) evidence for experience-specific effects. *PLOS ONE* 9(4): e94169. doi: 10.1371/journal.pone.0094169

13. Bialystok, E., Peets, K., & **Moreno, S.** (2014). Producing bilinguals through immersion education: Development of metalinguistic awareness. *Applied Psycholinguistics*, 35(1): 177-191. doi 10.1017/S0142716412000288

14. Astheimer, L., Janus, M., **Moreno, S.** & Bialystok, E. (2014). Electrophysiological measures of attention during speech perception predict metalinguistic skills in children. *Developmental Cognitive Neuroscience*, 7:1-12.

2013

15. Hutka, S.A., Bidelman, G.M., & **Moreno, S.** (2013). Brain signal variability as a window into the bidirectionality between music and language processing: Moving from a linear to a nonlinear model. *Frontiers in Psychology*, 4:984. doi: 10.3389/fpsyg.2013.00984

16. Hutchins, S. & **Moreno, S.** (2013). The Linked Dual Representation model of vocal perception and performance. *Frontiers in Psychology*, 4:825. doi:10.3389/fpsyg.2013.00825

17. White, E.J., Hutka, S.A., Williams, L.J., & **Moreno, S.** (2013). Learning, neural plasticity and sensitive periods: Implications for language acquisition, music training, and transfer across the lifespan. *Frontiers in Systems Neuroscience,* 7(90):1-18. doi: 10.3389/fnsys.2013.00090

18. **Moreno, S.** & Bidelman, G.M. (2013). Examining neural plasticity and cognitive benefit through the unique lens of musical training. *Hearing Research,* 308:84-97. doi: 10.1016/j.heares.2013.09.012

19. Bidelman, G. M., Hutka, S., & **Moreno, S.** (2013). Tone language speakers and musicians share enhanced perceptual and cognitive abilities for musical pitch: Evidence for bidirectionality between the domains of language and music. *PLOS ONE* 8(4): e60676. doi:10.1371/journal.pone.0060676

20. Bidelman, G. M., **Moreno, S.**, & Alain, C. (2013). Tracing the emergence of categorical speech perception in the human auditory system. *NeuroImage*, 79: 201-212.

21. Luo, L., Craik, F., **Moreno, S.**, & Bialystok, E. (2013). Bilingualism interacts with domain in a working memory task: Evidence from aging. *Psychology and Aging* 28(1):28-34. doi: 10.1037/a0030875

2012

22. Hermanto, N., **Moreno, S.**, & Bialystok, E. (2012). Linguistic and metalinguistic outcomes of intense immersion education: How bilingual? *International Journal of Bilingual Education and Bilingualism,* 15(2): 131-45.

2011

23. **Moreno, S.**, Bialystok, E., Barac, R., Schellenberg, G., Cepeda, N., & Chau, T. (2011). Short-term music training enhances verbal intelligence and executive function. *Psychological Science,* 22: 1425-33.

24. **Moreno, S.**, Friesen, D., & Bialystok, E. (2011). Effect of music training on promoting preliteracy skills: Preliminary causal evidence. *Music Perception,* 29(2): 165-72.

2010

25. **Moreno, S.**, Bialystok, E., Wodniecka, Z., & Alain, C. (2010). Conflict resolution in sentence processing by bilinguals. *Journal of Neurolinguistics,* 23(6):564-79.

26. Schellenberg, G. & **Moreno, S.** (2010). Music lessons, pitch processing, and g. *Psychology of Music,* 38(2):209-221.

2009

27. **Moreno, S.** (2009). Can music influence language and cognition? *Contemporary Music Review*, 28: 3, 329-345.

28. **Moreno, S.**, Marques, C., Santos, A., Santos, M., Castro, S.L., & Besson, M. (2009). Musical training improves verbal memory, reading abilities and pitch perception: behavioural and electrophysiological evidence in 8 year-old non-musicians children. *Cerebral Cortex*, 19(3):712-23.

2008

29. Schön, D., Boyer, M., **Moreno, S.**, Besson, M., Peretz, I. & Kolinsky, R. (2008). Songs as an aid for language acquisition. *Cognition,* 106(2):975-83.

2007

30. Besson, M., Schön, D., **Moreno, S.**, Santos, A., Magne, C. (2007). Influence of musical expertise and musical training on pitch processing in music and language. *Restorative Neurology and Neuroscience*, 25(3-4):399-410.

31. Marques, C., **Moreno, S.**, Castro, S. L. & Besson, M. (2007). Musicians detect pitch violation in a foreign language better than nonmusicians: Behavioral and electrophysiological evidence. *Journal of Cognitive Neuroscience*, 19(9):1453-63.

32. Santos A., Joly-Pottuz B., **Moreno, S.**, Habib M. & Besson M. (2007). Behavioural and Event-Related Potentials evidence for pitch discrimination deficits in dyslexic children: Improvement after intensive phonic intervention. *Neuropsychologia*, 45(5): 1080-90.

2006

33. **Moreno, S.** & Besson, M. (2006). Musical training and language-related brain electrical activity in children. *Psychophysiology*, 43(3), 287-91.

34. **Moreno, S.** & Besson, M. (2006). Influence of musical training on pitch processing: Event-Related brain Potential studies of adults and children. *Annals of New York Academy of Science*, 1060: 93–97.

Submitted and in preparation (8)

1. **Moreno**, **S.,** Lee, Y., Moussard, A., Alain, C., Bidelman, G., M., Arts training in older adults boost inhibitory control and working memory performance. [Submitted]

2. Barac, R., **Moreno, S.**, & Bialystok, E. Bilingualism children and EF. (Developmental Science). [Under review]

3. Carpentier, S.M., Kovacevic, N., Bialystok, E., McIntosh, A.R., & **Moreno, S.** Short-term musical training enhances brain signal complexity during music and language tasks. (Nature Neuroscience). [Submitted]

4. **Moreno, S.**, Smith, C.R., John, M.S., & Moreno, L. Innovation in neuroscience: A new way of approaching training-based neuroscience. (Journal of Applied Research in Memory and Cognition). [Under review]

5. Moussard, A., Tays, W., Alain, C., & **Moreno, S.** The influence of life-long music training on executive control in older adults: An event-related potential study. (Cerebral Cortex). [Under review]

6. Hutka, S., Bidelman, G., M., & **Moreno, S.** A nonlinear approach to understanding the music-language association: Different neural networks support sound discrimination of music and

speech in musicians and tone-language speakers. [Submitted]

7. Hutchins, S., Hutka, S., **Moreno, S.,** The electrophysiological correlates of vocal imitationand discrimination abilities. [In preparation]

8. Vanroom P. and **Moreno**, S., Music training and executive functions: a transfer of skills hypothesis. [In preparation/Invited paper]

Published Book Chapters

Moreno, S. & Besson, M. (2007). Langage et musique: études comportementale et électrophysiologique du transfert d'apprentissage. In M. Kail, M. Fayol & M. Hickmann (Eds.), Apprentissage des langues premières et secondes. (pp. 101-115). Paris, France: CNRS Press.

Patents and intellectual property rights

Moreno, S. (2013). *U.S. Patent Application No. 14/017,493*. U.S. Patent and Trademark Office. "Cognitive Training System and Method."

Moreno, S. (2012*). U.S. Patent No. 2012/0090446*. U.S. Patent and Trademark Office. "System and method for providing music based cognitive skills development."

Moreno, S. (2012). *WO Patent No. 2012/142691*. World Intellectual Property Organization. "System and method for providing music based cognitive skills development."

Moreno, S. (Under Review) *U.S. Patent Application*. U.S. Patent and Trademark Office. "System and apparatus for a Tracker progress module through internet."

Invited Presentations (29)

International

1. **Moreno, S.,** (November 2014) Computerized solutions for rehabilitation. Beth Israel Deaconess Medical Center/ Harvard Medical School. Keynote Speaker. Boston, United States.

2. **Moreno, S.,** (November 2014) Computerized solutions for rehabilitation. Reading, Literacy and learning: 65th annual IDA conference. San Diego, United States.

3. **Moreno, S.,** (October 2014) Health technology research and applications: Brain recording devices and video games. Simon Frazier University, Dept. Engineering. Vancouver, Canada.

4. **Moreno, S.,** (October 2014) Neurotraining and Neuroeducation: new insight for teaching. Annual conference of Canadian Association of Immersion Teachers. Keynote Speaker. Hallifax, Canada.

5. **Moreno, S.,** (September 2014) Arts training boost executive functions and induce brain plasticity. CAMH. Toronto, Canada.

6. **Moreno, S.,** (August 2015) New frontiers in Developmental and Education research. EdCog McMaster. Hamilton

7. **Moreno, S.** (2014). Video games and inhibitory control mechanism: a domain general transfer hypothesis. *University of Geneva*, Geneva, Switzerland, May 2014.

8. **Moreno, S.** (2014). Music training and brain plasticity during the lifespan: a multidimensional model. *The Neurosciences and Music – V*, Dijon, France, May 29-June 1, 2014. [Chaiman]

9. **Moreno, S.** (2014). Brain plasticity from perception to cognition: The role of video games in altering brain function. *Rotman Research Institute at Baycrest hospital,* Toronto, Ontario, Canada, March 2014.

10. **Moreno S.** (2014) Neuroimaging methods to capture brain plasticity in developmental impaired population. *Massachusetts Institute of Technology*, Boston, Massachusetts, USA, February 2014.

11. **Moreno S.** (2014) Music based video games can induce behaviour improvements and positive brain plasticity. *York University- Neuroscience Department*, Toronto, Ontario, Canada, February 2014.

12. **Moreno, S.** (2013). Brain plasticity from perception to cognition: The role of video games in altering brain function. *McMaster University- Linguistics Department*, Hamilton, Ontario, Canada, December 2013.

13. **Moreno, S.** (2013). Music, rehabilitation, and brain plasticity. *University of Toronto- Music Department*, Toronto, Ontario, Canada, November 2013.

14. **Moreno, S.** (2013) Brain plasticity and what it means for the rehabilitation process. *Nurses annual conference CHICA*, Ottawa, Ontario, Canada, October 2013.

15. **Moreno, S.** (2013). Technology in education. *Presentation to Ontario's Ministry of Research and Innovation, Baycrest Centre,* Toronto, Ontario, Canada, April 2013.

16. **Moreno, S.** (2012). Neuroeducation: the future of education. *Canadian Parliament,* Ottawa, Ontario, Canada, November 2012.

17. **Moreno, S.** (2012). Cognitive benefits of music and art training. *Carleton University,* Ottawa, Ontario, Canada, November 2012.

18. **Moreno, S.** (2012). The future of clinical care. *Presentation to Ontario's Ministry of Health, Baycrest Centre,* Toronto, Ontario, Canada, June 2012.

19. **Moreno, S.** (2012). Software training education solution. *Brain Health Summit, Canadian Parliament,* Ottawa, Ontario, Canada, May 2012.

20. **Moreno, S.** (2012). Music and brain plasticity. *Stanford University,* San Francisco, California, USA, March 2012.

21. **Moreno, S.** (2011). Working memory and expertise. *Rijksuniversiteit Groningen,* Groningen, Holland, July 2011.

22. **Moreno, S.** (2011). Music training and brain plasticity. *Université de Provence,* Marseille, France, June 2011.

23. **Moreno, S.** (2010). Music and Language. *McGill University & University of Montreal,* Montreal, Quebec, Canada, November 2010.

24. **Moreno, S.** (2010). From brain plasticity to rehabilitation. *University of California, Berkeley,* Berkeley, California, USA, June 11th, 2010.

25. **Moreno, S.** (2010). From brain plasticity to rehabilitation: a lifespan perspective. *Trent University,* Peterborough, Ontario, Canada, April 15, 2010.

26. **Moreno, S.** (2008). Music Training and the Brain. *Rotman Research Institute at Baycrest hospital,* Toronto, Ontario, Canada, April 2008.

27. **Moreno, S.** (2005). Longitudinal ERPs study: how musical training can modify language neural network? *University of Bangkok,* Bangkok, Thailand, August 9, 2005.

28. **Moreno, S.** (2004). Marcadores cerebrais da aprendizagem - Learning brain mechanisms in children. *Laboratorio de Fala FPCE-UP, University of Porto,* Portugal, December 9, 2004.

29. **Moreno, S.**, & Besson, M. (2004). "Musical garden", new learning technology helps to understand learning brain mechanisms in children. *Ecole des Mines,* Ales, France, October 11, 2004.

Conference Proceedings and Posters (43)

Moreno, S. (2014). Music training and brain plasticity during the lifespan: a multidimensional model. *The Neurosciences and Music – V*, Dijon, France, May 29-June 1, 2014.

Hutka, S., Bidelman, G., M., & **Moreno, S.** A nonlinear approach to understanding the music-language association: Different neural networks support sound discrimination of music and speech in musicians and tone-language speakers. *The Neurosciences and Music – V*, Dijon, France, May 29-June 1, 2014.

Hutchins, S., Hutka, S., **Moreno, S.,** The electrophysiological correlates of vocal imitationand discrimination abilities *The Neurosciences and Music – V*, Dijon, France, May 29-June 1, 2014.

Kielar, A., Meltzer, J.A., **Moreno, S.**, & Bialystok, E. (2014). Oscillatory responses to sentence embedded semantic and syntactic violations: Effect of bilingualism. *2014 Canadian Neuroscience Meeting*, Montreal, Quebec, Canada, May 25-28, 2014.

Bidelman, G. M., Villafuerte, J. W., **Moreno, S.**, & Alain, C. (2014). Age-related changes in subcortical-cortical encoding and categorical perception of speech. *37th Annual meeting of the Association for Research in Otolaryngology*, San Diego, California, USA, February 22–26, 2014.

Moreno, S. (2013). Data worth discussing: What does the research say? *Les Tablettistes, Glendon College, York University,* Toronto, Ontario, Canada, December 9, 2013. [Conference Chair]

Moreno, S., Lee, Y., Bidelman, G., Moussard, A., & Alain, C. (2013). Cognitive benefits of music and art training in healthy older adults. *Society for Music Perception and Cognition,* Toronto, Ontario, Canada, August 8-11, 2013.

Moreno, S., Lee, Y., Janus, M., & Bialystok, E. (2013). Music and language short-term training reveal brain plasticity in early childhood: one year follow-up. *Society for Music Perception and Cognition,* Toronto, Ontario, Canada, August 8-11, 2013.

Astheimer, L., Janus, M., Poarch, G., **Moreno, S.**, & Bialystok, E. (2013). Electrophysiological measures of attention during speech perception predict metalinguistic skills in children. *Society for Research in Child Development,* Seattle, Washington, USA, April 18-20, 2013.

Moreno, S., Lee, Y., Bidelman, G., Moussard, A., & Alain, C. (2013). Cognitive benefits of music and art training in healthy older adults: behavioural and ERP studies. Poster presented at *Cognitive Neuroscience Society Conference,* San Francisco, California, USA, April 13-16, 2013.

Bidelman, G., **Moreno, S.**, Lee, Y., Moussard, A., & Alain, C. (2013) Short-term musical training enhances pre-attentive auditory processing in older adults. Poster presented at *Cognitive Neuroscience Society Conference,* San Francisco, California, USA, April 13-16, 2013.

Moreno, S., Lee, Y., Janus, M., & Bialystok, E. (2013). Music and language short-term training reveal brain plasticity in early childhood. Poster presented at *Entertainment Software and Cognitive Neurotherapeutics Society,* Los Angeles, California, USA, March 15-17, 2013.

Bidelman, G., **Moreno, S.**, Lee, Y., Moussard, A., & Alain, C. (2013). "Enhanced pre-attentive auditory processing following short-term musical training in older adults. Poster presented at *Entertainment Software and Cognitive Neurotherapeutics Society,* Los Angeles, California, USA, March 15-17, 2013.

Moreno, S., Lee, Y., Bidelman, G., Moussard, A., & Alain, C. (2013). Cognitive benefits of music and art training in healthy older adults. Poster presented at *Entertainment Software and Cognitive Neurotherapeutics Society,* Los Angeles, California, USA, March 15-17, 2013.

Moreno, S. (2013). Cognitive benefits of music and art training. *Baycrest Rotman Research Institute 23rd Annual Neuroscience Conference,* Toronto, Ontario, Canada, March 6, 2013.

Kim, A.S. N., Le, B.T., Rosenbaum, R.S., & **Moreno, S.** (2013). An investigation into the cognitive basis of the spacing effect. Poster presented at the *Baycrest Rotman Research Institute 23rd Annual Neuroscience Conference,* Toronto, Ontario, Canada, March 5, 2013.

Moreno, S., Lee, Y., Janus, M., & Bialystok, E. (2013). Music and language short-term training reveal brain plasticity in early childhood. Poster presented at *International Neuropsychological Society Conference,* Waikoloa, Hawaii, USA, February 6-9, 2013.

Moreno, S., Lee, Y., Bidelman, G., Moussard, A., & Alain, C. (2013). Cognitive benefits of music and art training in healthy older adults. *International Neuropsychological Society Conference,* Waikoloa, Hawaii, USA, February 6-9, 2013.

Bidelman, G., **Moreno, S.**, Lee, Y., Moussard, A., & Alain, C. (2013). Enhanced pre-attentive auditory processing following short-term musical training in older adults. Poster presented at *International Neuropsychological Society Conference,* Waikoloa, Hawaii, USA, February 6-9, 2013.

Lee, Y., Janus, M., Bialystok, E., & **Moreno, S.** (2012). Near and Far transfer: MMN as a biomarker of transfer. *6th Conference on Mismatch Negativity and its Clinical and Scientific Applications,* New York City, New York, USA, May 1-4, 2012.

Lee, Y., Janus, M., Bialystok, E., & **Moreno, S.** (2012). Music and language short-term training reveal brain plasticity in early childhood. *Cognitive Neuroscience Society Conference,* Chicago, Illinois, USA, March 31-April 3, 2012.

Moreno, S., Leung, A., Bialystok, E., & Alain, C. (2011). "What" and "Where" auditory pathways influenced by bilingualism and music experiences. *Cognitive Neuroscience Society Conference,* San Francisco, California, USA, April 2-5, 2011.

Luo, L., **Moreno, S.**, & Bialystok, E. (2010). Bilingualism and interference control in working memory: the role of English proficiency, *Psychonomic Society Conference,* St. Louis, Missouri, USA, November 18th, 2010.

Moreno, S., Case, T., Schellenberg, E. G. & Bialystok, E., (2010). Influence of life experiences on the lifespan. *Development 2010 Conference,* Ottawa, Ontario, Canada, May 5-6, 2010.

Moreno, S., Barac, R., Schellenberg, G., Cepeda, N., Chau, T. & Bialystok, E., (2010). Short-term training leads to increases in verbal intelligence. *Cognitive Neuroscience Society Conference,* Montreal, Quebec, Canada, March 17-21, 2010.

Barac, R., **Moreno, S.**, & Bialystok, E., (2010). Bilingual processing in an executive function task. *Cognitive Neuroscience Society Conference,* Montreal, Quebec, Canada, March 17-21, 2010.

Wodniecka, Z., **Moreno, S.**, Bialystok, E. & Alain C. (2009). Conflict monitoring and response inhibition in bilinguals and musicians: Evidence from ERP. *ESCOP Conference,* Krakow, Poland, September 2-5, 2009.

Moreno, S., Bialystok, E., Wodniecka, Z. & Alain C. (2009). Resolution of conflict in musicians, bilinguals and monolinguals. *Cognitive Neuroscience Society Conference,* San Francisco, California, USA, March 21-25, 2009.

Moreno, S., Bialystok, E., Wodniecka, Z. & Alain C. (2008). Resolution of conflict in Sentence Processing by bilinguals. *Models of Interaction in Bilinguals,* Bangor, United Kingdom, October24-26, 2008.

Moreno, S. & Schellenberg, E., G., (2008). Executive functions and Music, *Neuroscience and Music III,* Montreal, Quebec, Canada, June 26-29, 2008.

Schellenberg, E., G. & **Moreno, S.**, (2008). Music, pitch and g. *Neuroscience and Music III,* Montreal, Quebec, Canada, June 26-29, 2008.

Moreno, S., & Besson, M. (2006). Musical training improves verbal memory, reading abilities and pitch perception: behavioural and electrophysiological evidence in 8 year-old non-musicians children. *46th Annual Meeting of the Society for Psychophysiological Research,* Vancouver, British Columbia, Canada, October 25 - 29, 2006.

Moreno, S., Marques, C., Santos, A., Castro, S.L., & Besson, M. (2006). Short and long term musical training influences on fundamental frequency and pitch processing: Event-related brain potentials studies of children. *9th International Conference on Music Perception and Cognition,* Bologna, Italy, August 22-26, 2006.

Moreno, S., & Besson, M. (2006). Neuroscience, Language and Music. *International Conference on Linguistics and Languages Didactic,* Grenoble, France, July 4-7, 2006.

Besson M. & **Moreno S.** (2006). Electric brain imaging studies of prosody. *First and Second Language Acquisition Conference, French Ministry of Research,* Paris, France, January 23-25, 2006.

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Moreno, S., & Besson, M. (2004). Short musical training modifies language processing: Longitudinal ERPs study. *Journées de Printemps de la Société de Neuropsychologie de Langue Française*, Grenoble, France, May 14, 2004.

Teaching experience

2011-2014: Neuroimaging analysis methods: ERPs and FMRI at Massachusetts Institute of Technology and Glendon college
2013-2015: Learning and Brain plasticity mechanisms, University of Toronto
2008-2010: Adolescence, Adulthood and Aging at York University

2008-2009: Child Development at York University
2003-2005: Scientific & Experimental Methods at the University of Provence (U1), Marseille

Research Supervision

Undergraduate Research Supervision:
Vanessa Chan – Summer student, Rotman Research Institute (2014)
Tammy Lou – Co-op student, Rotman Research Institute (2014)
Jennifer Stephen – Co-op student, Rotman Research Institute (2013)
Amanda Chan – Summer student, Rotman Research Institute (2013)
Current position: Masters student, OISE, University of Toronto
Cara Gordon – Summer student, Rotman Research Institute (2012-2013)
Current position: Masters student, University of Windsor
Alessandro Trimarchi – Summer student, Rotman Research Institute (2013)
Akiva Stern – Summer student, Rotman Research Institute (2013)
Current position: Masters student, University of Toronto
Bruce Sheng – Summer student, Rotman Research Institute (2012)
Current position: B.Sc. student, McMaster University
Kate Moon – Summer student, Rotman Research Institute (2012)
Current position: Masters student, Western University
Buddhika Bellana – Bachelor's thesis student, York University (2011-2012)
Current position: Masters/PhD student, University of Toronto
Gaya Balasubramaniam – Summer student, Rotman Research Institute (2011-2012)
Current position: B. Sc. student, University of Toronto
Janet Kim – Summer student, Rotman Research Institute (2011)
Current position: Masters student, Western University

Graduate Research Supervision:
Prabhjot Dhami – Master's student, York University (2013-present) [Co-supervisor]
Stefanie Hutka – PhD student, University of Toronto (2012-present)
Joshua Villafuerte – PhD student, University of Toronto (2012-present)
Bregtje Seton – PhD exchange student, University of Gronigen (2011-2013) [Co-supervisor]
Raluca Barac – PhD student, York University (2009-2011) [Co-supervisor]
Current position: Lecturer at York University
Carlos Marques – Master's student, University of Porto (2004-2005)
Current position: Art school Headmaster, Portugal
Barbara Joly-Pottuz – Master's student, University de la Mediterranee Marseille (2004-2005)
Current Position: Post Doctoral Fellow, Clinical Psychology, University de la Mediterranee Marseille

Post-doctoral Supervision:
Alice Kim – Post-doctoral fellow, Rotman Research Institute (2012-present) [Co-supervisor]

Aline Moussard – Post-doctoral fellow, Rotman Research Institute (2012-2014)
Sean Hutchins – Post-doctoral fellow, Rotman Research Institute (2012-2014)
Current position: Director of Research, Royal Conservatory of Music/Assistant Professor at McMaster University
Erin White – Post-doctoral fellow, Rotman Research Institute (2012-2013)
Current position: Professor, Department of Psychology, Seneca College of Applied Arts and Technologies
William Tays – Post-doctoral fellow, Rotman Research Institute (2011-2013)
Gavin Bidelman – Post-doctoral fellow, Rotman Research Institute (2011-2012)
Current position: Assistant Professor, Institute for Intelligent Systems, University of Memphis
Jing Feng – Post-doctoral fellow, Rotman Research Institute (2011-2012)
Current position: Assistant Professor, Department of Psychology, North Carolina State University

Peer review committees and membership

Evaluation of articles for scientific journals

NeuroImage
PLoS ONE
Cerebral Cortex
Cortex
Cognition
Journal of Cognitive Neuroscience
Journal of Neuroscience
Psychology of Music
Journal Applied Development Psychology
Frontiers
JEP: HPP
Acta Psychologica
Cognitive Development
Brain and Cognition
Perceptual and Motor skills
Music Perception
Journal of Speech, Language, and Hearing Research (JSLHR)
Journal of neurolinguistic
Development Cog. Neuro.

Review Committees

Economic and Social Research Council (ESRC, Europe)
Natural Sciences and Engineering Research Council of Canada (NSERC, Canada)
Alzheimer's Research Foundation – Canada
Alzheimer's Research Foundation – Europe
Mitacs Not-for-profit Research Organization
Fonds de recherche du Québec (FRQNT)

Membership

Cognitive Neuroscience Society
American Psychological Association
Entertainment Software and Cognitive Neurotherapeutics Society
Society for Music Perception and Cognition
Collaborative Program in Neuroscience at the University of Toronto

Associate Member to the Heart and Stroke Foundation Centre for Stroke Recovery
University of Toronto School of Graduate Studies, Full Member
International Association for Music & Medicine

Media coverage

Print (90)

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2. "A New Way of Thinking: Staying Sharp As We Age" ***Reader's Diggest***, August 12, 2014
3. "Does music make you smarter?" ***Die Zeit***, June 18, 2014.
4. "Cognitive advantages of second language immersion education", ***Psychology Today***, January 8, 2014.
5. "Music education no 'frill'", ***The Wholenote Magazine***, October 30, 2013.
6. "Axonify Inc. Teams Up With Brain Science Leaders to Advance Corporate Learning", ***Yahoo! Finance***, October 24, 2013.
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8. "Tonal Languages, Music Ability Linked in New Study of Cantonese Speakers", ***The Huffington Post***, April 5, 2013.
9. "Really? Musical Training and Language Skills Enhance One Another", ***The New York Times***, April 8, 2013
10. "Speakers of tonal languages are better able to hear music, study finds", ***The Globe and Mail***, April 2, 2013.
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14. "Tonal Languages Help with Learning Music", ***Counsel & Heal***, April 3, 2013.
15. "Speaking a Tonal Language (Such as Cantonese) Primes the Brain for Musical Training", ***Science Daily***, April 2, 2013.
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18. Cheryl Jackson, "Brain Power", ***TVOparents.tvo.org***, May 2012.
19. Doug Thompson, "Brain power: Five ways neuroscience will change education", ***OurKids.net***, May 2012.
20. Karin Ewart, "Brain Power conference: Enhancing childhood development", ***TodaysParent.com***, May 2012.
21. Kelly Farrell, "What the neuroeducation revolution means for private schools", ***Dialogue for Independent Educators***, May 2012.
22. Marilyn Linton, "Training kids' brains", **The St. Albert Leader**, May 2012.

23. Marilyn Linton, “Training young brains pays off: Expert”, ***24 Hours Newspaper eEdition***, May 2012.
24. Marilyn Linton, “Training young brains pays off: Expert”, ***Calgary 24 Hours***, May 2012.
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26. Marilyn Linton, “Training young brains pays off: Expert”, ***Ottawa 24 Hours***, May 2012.
27. Marilyn Linton, “Training young brains pays off: Expert”, ***Toronto 24 Hours***, May 2012.
28. Marilyn Linton, “Training young brains pays off: Neuroscientist”, ***Vancouver 24 Hours***, May 2012.
29. Marilyn Linton, “Train the brain: Kids can learn better if ‘executive function’ is prepared early, say neuroscientists”, ***Fort McMurray Today***, May 2012.
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31. Marilyn Linton, “Train the brain: Kids can learn better if ‘executive function’ is prepared early, say neuroscientists”, ***Sarnia and Lambton County This Week***, May 2012.
32. Marilyn Linton, “Train the brain: Kids can learn better if ‘executive function’ is prepared early, say neuroscientists”, ***The Barrie Examiner***, May 2012.
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Television and Radio (7)

1. “Business card: Dr. Sylvain Moreno” Television French Ontario, November 2014.
2. “Raise your voice, why singing is so powerful?” Definitely Not The Opera (DNTO), CBC, October 2014.
3. “Interview with Dr. Sylvain Moreno: learning music and languages” CHOQ FM, October 2014
4. “Can music slow down the aging process?” *Yahoo! Canada*, September 2012.
5. “How to raise a smarter kid” *CTV News*, August 2012.
6. “Smarter Kids Training” *Fair Child Television*, July 2009.
7. “Bilingualism and society” *Welch Channel*, June 2009.
8. “Virtual music instrument: A Canadian innovation”, *CTV Canada AM*, December 18, 2007.
9. “La musique nous influence”, *E=M6*, November 2007.