

Curriculum Vitæ

Steven R. Livingstone, Ph.D.

Personal Information

Address: Department of Computer Science
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Education

2008 Ph.D. in Computer Science. The University of Queensland. Thesis: Changing musical emotions through score and performance with a computational rule system. Advisors: Dr Ralf Muhlberger, Dr Andrew R. Brown.

2003 B.Inf.Tech in Information Technology, first class honours. The University of Queensland. Thesis: Service Discovery in Pervasive Systems. Advisor: Dr Jadwiga Indulska.

2000 B.Sc. in Physics. The University of Queensland.

Academic Positions

Current Position

2022 – present Associate professor, Ontario Tech University, Department of Computer Science.
Director: Affective Data Science Lab

Previous positions

2019 – 2022 Senior Lecturer (Associate professor, North American equivalent), University of Otago, Department of Computer Science.

- 2016 – 2019 Assistant professor, University of Wisconsin, River Falls, Department of Computer Science and Information Systems.
- 2015 – 2016 Postdoctoral Fellow, McMaster University, Large Interactive Virtual Environment Lab (LIVELab), supervisor Professor Laurel Trainor.
- 2011 – 2015 Postdoctoral Fellow, Ryerson University, Department of Psychology, SMART Lab, supervisor Professor Frank Russo, and Toronto Rehabilitation Institute, supervisor: Professor Frank Rudzicz.
- 2008 – 2011 Postdoctoral Fellow, McGill University, Department of Psychology, Sequence Production Lab, supervisor: Professor Caroline Palmer, and the Centre for Interdisciplinary Research in Music Media and Technology, Input Devices and Music Interaction Lab, supervisor: Professor Marcelo Wanderley.
- 2008 Research Fellow, Macquarie University, Department of Psychology, Music Sound and Performance lab, supervisor: Professor William F. Thompson.
- 2007 – 2008 Research Assistant, Macquarie University, Department of Psychology, Music Sound and Performance lab.
- 2006 Research Assistant, Queensland University of Technology, Australian CRC for Interaction Design.

Grants

External (currently held)

- 2024 – 2029 Livingstone, S. R. (PI), Russo, F. A. (CI), Pell, M. D. (CI), Rudzicz, F. (CI), Morningstar, M. (CI), Tracy, J. L. (CI). “Reducing the impacts of emotion recognition bias on Canadians”, SSHRC: Social Sciences and Humanities Research Council (\$391,972)
- 2023 – 2028 Livingstone, S. R. (PI). “Affective breath recognition” (RGPIN-2023-03786), NSERC: Natural Sciences and Engineering Research Council (\$242,500).
- 2023 – 2024 Livingstone, S. R. (PI). “Affective joint action”, SSHRC: Social Sciences and Humanities Research Council (\$7,000).
- 2021 – 2028 Russo, F. A. (PI), Livingstone, S. R., Kreutz, G., Thompson, W. F., Trainor, L., Gosine, J., Zendel, B., Choma, R., Fiocco, A., Zeller, F., Dupuis, K., Falk, S., Peretz, I., Fancourt, D., Cohen, A., Rochon, E. (CA). “Group singing to support social wellbeing and communication in adults with communication disorders: A knowledge generation and mobilization partnership”, SSHRC: Social Sciences and Humanities Research Council (C\$2,497,887).

External (completed)

- 2020 – 2021 Russo, F. A., (PI). Livingstone, S. R., Kreutz, G., Thompson, W. F., Trainor, L., Gosine, J., Zendel, B., Choma, R., Fiocco, A., Zeller, F., Dupuis, K., Falk, S., Peretz, I., Fancourt, D., Cohen, A., Rochon, E. (CA). “Group singing to support social wellbeing and communication in adults with communication disorders: A

knowledge generation and mobilization partnership”, SSHRC: Social Sciences and Humanities Research Council (\$19,865).

2012 – 2013 1-51-53659, Russo, F. A. (PI), van Lieshout, P. (CI), and Livingstone, S. R. (CI). “A novel singing therapy to improve communication of facial and vocal emotion”, Parkinson’s Canada (\$44,956).

Internal

2022 – 2025 Livingstone, S. R., Ontario Tech University, Start-up Grant (\$45,000)

2020 – 2022 Livingstone, S. R. (PI), Holland, M. (Co-PI), Russo, F. A. (Co-PI), Paringatai, K. (Co-PI). “Does the sound of our breath convey emotion?”, University of Otago Research Grant (\$34,281).

2019 Livingstone, S. R., University of Otago, Establishment Grant (\$15,000)

2016 – 2017 Livingstone, S. R., Faculty Development Grant, University of Wisconsin, River Falls (\$5,000).

2006 – 2007 Livingstone, S. R., Graduate School Research Travel Grant, The University of Queensland (\$3,500).

Scholarships and Awards

2013 Best presentation award, Toronto Rehab Institute, 9th annual research day.

2011 – 2012 Postdoctoral Scholarship, SSHRC-AIRS fellowship (\$40,000).

2009 – 2010 Postdoctoral Scholarship, NSERC-CREATE Auditory Cognitive Neuroscience (\$44,000).

2004 – 2007 ITEE Research Scholarship, The University of Queensland (\$54,000).

2003 DSTC Industry Award, Outstanding Honours Thesis (\$500).

2000 – 2003 Dean’s Commendation (x4), The University of Queensland, 2000 – 2003.

Research impact

Citation indices (Google Scholar, accessed 09/2024)

- Total Citation Count – 3,735
- h-index – 23

Publication Metrics

- 18 Peer-reviewed journal papers
- 3 journal papers under review
- 3 Book chapters

- 1 Invited conference paper
- 9 Peer-reviewed conference papers
- 1 Conference Symposia
- 32 Conference presentations
- 11 Poster presentations
- 20 Invited talks and presentations

Download Metrics (accessed 06/2024)

- RAVDESS ([Zenodo](#)) – 225,000 (unique downloads)
- RAVDESS Landmark tracking ([Zenodo](#)) – 6,000 (unique downloads)
- RAVDESS Speech emotion, gold medal ([Kaggle](#)) – 51,300 (unique downloads)
- EMGFlow ([Github](#)) – 15,000 (since 04/2024)

Publications

Livingstone indicated with boldface, supervised with +underlined, mentored with underlined, and grant Co-Investigators with dotted underline.

Peer-Reviewed Journal Articles

1. +Conley, W. W., & **Livingstone, S. R.** (under review). EMGFlow: A Python package for pre-processing and feature extraction of electromyographic signals. *Journal of Open Source Software*. doi: <https://raw.githubusercontent.com/openjournals/joss-papers/joss.07054/joss.07054/10.21105.joss.07054.pdf>
2. **Livingstone, S. R.**, Thompson, W. F., Palmer, C., & Russo, F. A. (under review). Emotional intensity and category determine phrase-final lengthening. *Cognition and Emotion*.
3. Kovaceka, K., Shatzera, H., **Livingstone, S. R.**, Singh, G., & Russo, F. A. (under review). Dimensional validation of the Ryerson audio-visual database of emotional speech and song (RAVDESS). *Cognition and Emotion*.
4. Good, A., Earle, E., +Vezer, E., Gilmore, S., **Livingstone, S. R.**, & Russo, F. A. (2023). Community Choir Improves Vocal Production Measures in Individuals Living with Parkinson's Disease. *Journal of Voice*. doi: <https://doi.org/10.1016/j.jvoice.2022.12.001>
5. Chang, A., Kragness, H., **Livingstone, S. R.**, Bosnyak, D. J., & Trainor, L. J. (2019). Body sway reflects joint emotional expression in music ensemble performance. *Scientific Reports*, 9(1), 205. doi: <https://doi.org/10.1038/s41598-018-36358-4>
6. Swarbrick, D., Bosnyak, D. J., **Livingstone, S. R.**, Bansal, J., Woolhouse, M. H., Marsh-Rollo, S., & Trainor, L. J. (2019). How Live Music Moves Us: Head Movement Differences in Audiences to Live Versus Recorded Music. *Frontiers in Psychology*, 9(2682). doi: <https://doi.org/10.3389/fpsyg.2018.02682>

7. **Livingstone, S. R., & Russo, F. A.** (2018). The Ryerson Audio-Visual Database of Emotional Speech and Song (RAVDESS): A dynamic, multimodal set of facial and vocal expressions in North American English. *PLoS ONE*, 13(5), e0196391. <http://doi.org/10.1371/journal.pone.0196391>
8. Chang, A., **Livingstone, S. R.**, Bosnyak, D. J., & Trainor, L. J. (2017). Body sway reflects leadership in joint music performance. *Proceedings of the National Academy of Sciences*, 201617657. <http://dx.doi.org/10.1073/pnas.1617657114>
9. **Livingstone, S. R.**, +Vezer, E., McGarry, L. M., Lang, A. E., & Russo, F. A. (2016). Deficits in the mimicry of facial expressions in Parkinson's Disease. *Frontiers in Psychology*, 7. <http://dx.doi.org/10.3389/fpsyg.2016.00780>
10. **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>. Profiled in The Atlantic and NBC Today.
11. **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. *The Quarterly Journal of Experimental Psychology*, 68, 952-970. <http://dx.doi.org/10.1080/17470218.2014.971034>
12. **Livingstone, S. R.**, +Choi, D. H., & Russo, F. A. (2014). The influence of vocal training and acting experience on measures of voice quality and emotional genuineness in male singers. *Frontiers in Psychology*, 5. <http://dx.doi.org/10.3389/fpsyg.2014.00156>
13. **Livingstone, S. R.** (2013). The kinematics of musical expression in the spatiotemporal dimension. *Empirical Musicology Review*, 8, 124-127. <http://dx.doi.org/10.18061/emr.v8i2.3931>
14. Chan, L. P., **Livingstone, S. R.**, & Russo, F. A. (2013). Facial mimicry in response to song. *Music Perception*, 30, 361-367. <http://dx.doi.org/10.1525/mp.2013.30.4.361>
15. **Livingstone, S. R.**, Palmer, C., & Schubert, E. (2012). Emotional response to musical repetition. *Emotion*, 12, 552-567. <http://dx.doi.org/10.1037/a0023747>
16. **Livingstone, S. R.**, Muhlberger, R., Brown, A. R., & Thompson, W.F. (2010). Changing musical emotion: A computational rule system for modifying score and performance. *Computer Music Journal*, 34, 41-64. <http://dx.doi.org/10.1162/comj.2010.34.1.41>
17. Thompson, W.F., Russo, F.A., & **Livingstone, S. R.** (2010). Facial expressions of singers influence perceived pitch relations. *Psychonomic Bulletin & Review*, 17, 317-322. <http://dx.doi.org/10.3758/PBR.17.3.317>
18. **Livingstone, S.R.**, Thompson, W.F., & Russo, F.A. (2009). Facial expressions and emotional singing: A study of perception and production with motion capture and electromyography. *Music Perception*, 26, 475-488. <http://dx.doi.org/10.1525/mp.2009.26.5.475>

19. **Livingstone, S. R.** & Thompson, W. F. (2009). The emergence of music from the Theory of Mind. *Musicae Scientiae*, Special Issue 2009/10 "Music and Evolution", 83-115. <http://dx.doi.org/10.1177/1029864909013002061>
20. **Livingstone, S. R.**, Muhlberger, R., Brown, A. R., Loch, A. (2007). Controlling Musical Emotionality: An Affective Computational Architecture for Influencing Musical Emotion. *Digital Creativity*, 18, 43-54. <http://dx.doi.org/10.1080/14626260701253606>
21. **Livingstone, S. R.** & Thompson, W. F. (2006). Multimodal affective interaction: A comment on musical origins. *Music Perception*, 24, 89-94. <http://dx.doi.org/10.1525/mp.2006.24.1.89>

Book Chapters

1. **Livingstone, S. R.** (2021). Why is music emotional? Theories of music and emotion. In William F. Thompson & Kirk N. Olsen, *The science and psychology of music: From Mozart in the office to Metallica at the gym*. Santa Barbara, CA: ABC-CLIO, LLC.
2. **Livingstone, S. R.** (2014). Facial expressions. In William F. Thompson & Geoffrey Golson (Eds.). *Music in the social and behavioural sciences*. Thousand Oaks, CA: Sage Publications.
3. **Livingstone, S. R.**, & Thompson, W. F. (2009). L'apparition de la musique de la théorie d'esprit. In Marc Richelle & Xavier Seron (Eds.). *Musique et Evolution*. Belgium: Pierre MARDAGA Press.

Invited Papers

1. **Livingstone, S. R.**, Peck, K., & Russo, F. A. (2013). The language of emotion: Acoustic differences in the speaking and singing voice. Invited lay-language paper for Press Room of the 165th Meeting of the Acoustical Society of America.

Peer-Reviewed Conference Proceedings

1. Zhao, S., Rudzicz, F., Carvalho, L. G., Márquez-Chin, C., & **Livingstone, S. R.** (2014). Automatic detection of expressed emotion in Parkinson's Disease. *Proceedings of the 2014 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*.
2. **Livingstone, S. R.**, Peck, K., & Russo, F. A. (2013). Acoustic differences in the speaking and singing voice. *The Journal of the Acoustical Society of America*, 133, 3591-3595.
3. **Livingstone, S. R.**, Palmer, C., Wanderley, M. M., Thompson, W. F., & Lissemore, J. (2011). Facial expressions in vocal performance. In A. Williamon, D. Edwards, & L. Bartel (Eds.), *Proceedings of the Third International Symposium on Performance Science* (pp. 545-550). Utrecht: European Association of Conservatoires (AEC).
4. **Livingstone, S. R.**, Palmer, C., Thompson, W. F., & Wanderley, M. (2010). *Facial expressions in speech and singing*. In M. M. Wanderley, J. Wild, & S. X. Wei (Eds.), *Proceedings of the Third International Conference on Music and Gesture* (pp. 9-10). Montreal: Schulich School of Music.

5. **Livingstone, S. R.**, 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 Second International Symposium on Performance Science* (pp. 445–450). Utrecht: European Association of Conservatoires (AEC).
6. **Livingstone, S. R.**, & Brown, A. R. (2005). Dynamic response: Real-time adaptation for music emotion. *Proceedings of the Second Australasian conference on Interactive Entertainment* (pp. 105–111). Sydney: Creativity and Cognition Studios Press.
7. **Livingstone, S. R.**, Brown, A. R., & Muhlberger, R. (2005). Influencing the Perceived Emotions of Music with Intent. In T. Innocent (Ed.), *Proceedings of the Third International Conference on Generative Systems in the Electronic Arts* (pp. 119-128). Victoria: Centre for Electronic Media Art.
8. **Livingstone, S. R.**, Muhlberger, R., & Brown, A. R. (2005). Playing with Affect: Music Performance with Awareness of Score and Audience. In T. Opie and A. R. Brown (Eds.), *Proceedings of the Australasian Computer Music Conference* (pp. 89-95). Brisbane: ACMA.
9. Henricksen, K., **Livingstone, S. R.**, & Indulska, J. (2004). Towards a hybrid approach to context modelling, reasoning and interoperation. *Proceedings of the First International Workshop on Advanced Context Modelling, Reasoning and Management*, (pp. 54–61). Nottingham: England.

Conference Symposia

1. Chang, A., Kragness, H., **Livingstone, S. R.**, Bosnyak, D. J., Baraku, E., Dotov, D., Henry, M., Cameron, D., Swarbrick, Grahn, Taylor, L. A., Sonnadara, R., & Trainor, L. J. Coordination during music making among musicians and audiences: Studies in realistic settings using the LIVELab. Symposium session at the Society for Music Perception and Cognition conference (SMPC), New York, NY.

Conference and Workshop Presentations

1. Chang, A., Kragness, H., **Livingstone, S. R.**, Bosnyak, D. J., Baraku, E., & Trainor, L. J. (2019). *Body sway reflects interpersonal coordination among musicians*. Paper presented at the Society for Music Perception and Cognition conference (SMPC), New York, United States, August.
2. Chang, A., Kragness, H., **Livingstone, S. R.**, Bosnyak, D. J., & Trainor, L. J. (2018). *Coupled body sway reflects coordination, leadership, and emotional expression in joint music performance*. Paper presented at the 15th International Conference on Music Perception and Cognition (ICMPC), and 10th triennial conference of the European Society for the Cognitive Sciences of Music (ESCOM), Graz, Austria, July.
3. Oudyk, K., **Livingstone, S. R.**, & Rensink-Hoff, R. (2017). *The role of experience in conducting gestures*. Paper presented at the 25th European Society for the Cognitive Sciences of Music (ESCOM), Ghent, Belgium, July.
4. Bansal, J., Barone, M., Swarbrick, D., **Livingstone, S. R.**, Bosnyak, D., Trainor, L., & Woolhouse, M. (2017). *Artists or audio? Contrasting psychological and physiological*

responses to audio recordings versus live musical performance. Paper presented at the Society for Music Perception and Cognition conference, San Diego, United States, July.

5. Oudyk, K., **Livingstone, S. R.**, & Rensink-Hoff, R. (2016). *Experience-related differences in conducting gestures*. Paper presented at 1st annual retreat for McMaster Institute for Music and the Mind (MIMM), Hamilton, Canada, August.
6. Russo, F. A., & **Livingstone, S. R.** (2015). *The Ryerson Audio-Visual Database of Emotional Speech and Song*. Paper presented at the Acoustics Week in Canada (AWC15), Halifax, Canada.
7. **Livingstone, S. R.**, McGarry, L., Stinson, L. & Russo, F. A. (2014). *Preliminary report on a novel singing therapy to support emotional communication in Parkinson's Disease*. Paper presented at the Third International Conference for the International Association for Music and Medicine (IAMM), Toronto, Canada.
8. +Vezer, E., **Livingstone, S. R.**, McGarry, L., & Russo, F. A. (2014). *Deficits in spontaneous facial mimicry in patients with Parkinson's disease*. Paper presented at the 24th Annual Meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), Toronto, Canada.
9. **Livingstone, S. R.**, McGarry, L., van Lieshout, P., Lang, A. E., & Russo, F. A. (2013). *A novel singing therapy for rehabilitating facial and vocal expressive deficits in Parkinson's disease*. Paper presented at the Toronto Rehabilitation Institute 9th Annual Research Day, Toronto, Canada. – Recipient of best presentation award
10. Russo, F. A., & **Livingstone, S. R.** (2013). Invited presentation. *A novel singing therapy to improve the communication of facial and vocal emotion deficits in Parkinson's disease*. Paper presented at Music and Neurological Rehabilitation Symposium, Toronto, Canada.
11. **Livingstone, S. R.** & Russo, F. A. (2013). *Emotional meaning across cultures*. Paper presented at the 5th Annual Meeting of Advancing Interdisciplinary Research in Singing (AIRS), Toronto, Canada.
12. **Livingstone, S. R.** (2013). Invited presentation. *A beginner's guide to pitch analysis in Praat*. Paper presented at the 5th Annual Meeting of Advancing Interdisciplinary Research in Singing (AIRS), Toronto, Canada.
13. **Livingstone, S. R.**, +Peck, K., & Russo, F. A. (2013). *RAVDESS: The Ryerson audio-visual database of emotional speech and song*. Paper presented at the Society for Music Perception and Cognition conference, Toronto, Canada.
14. McGarry, L., **Livingstone, S. R.**, Russo, F. A. (2013). *Imitation training to enhance emotion perception skills*. Paper presented at the Society for Music Perception and Cognition conference, Toronto, Canada.

15. **Livingstone, S. R., +Peck, K., & Russo, F. A. (2012).** *RAVDESS: The Ryerson audio-visual database of emotional speech and song*. Paper presented at the 8th Toronto Rehab annual research day. Toronto, Canada.
16. **Livingstone, S. R. (2012).** Invited presentation. *Changing musical emotion with a computational rule system*. Paper presented at the Second Annual seminar on Cognitively Based Music Informatics Research (CogMIR), Toronto, Canada.
17. **Livingstone, S. R. (2012).** Invited presentation. *A beginner's guide to Praat Scripting*. Paper presented at the 4th Annual Meeting of Advancing Interdisciplinary Research in Singing (AIRS), Charlottetown, Canada.
18. **Russo, F. A., & Livingstone, S. R. (2012).** *A novel singing therapy to improve communication of facial and vocal emotion in Parkinson's Disease*. Paper presented at the 4th Annual Meeting of Advancing Interdisciplinary Research in Singing (AIRS), Charlottetown, Canada.
19. **Livingstone, S. R., +Peck, K., & Russo, F. A. (2012).** *Introducing RAVDESS: The Ryerson Audio-Visual Database of Emotional Speech and Song*. Paper presented at the 4th Annual Meeting of Advancing Interdisciplinary Research in Singing (AIRS), Charlottetown, Canada.
20. **Livingstone, S. R., +Peck, K., & Russo, F. A. (2012).** *RAVDESS: The Ryerson Audio-Visual Database of Emotional Speech and Song*. Paper presented at the 22nd Annual Meeting of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), Kingston, Canada.
21. **Livingstone, S. R., Palmer, C., Wanderley, M., & Thompson, W. F. (2011).** *Production and perception of facial expressions during vocal performance*. Paper presented at the Society for Music Perception and Cognition conference, Rochester, United States.
22. **Livingstone, S. R., Palmer, C., Wanderley, M., & Thompson, W. F. (2010).** *Facial expressions in song and speech*. Paper presented at the 9th Annual Auditory Perception, Cognition and Action Meeting, St Louis, United States.
23. **Livingstone, S. R., Schubert, E., Loehr, J. D., & Palmer, C. (2010).** *Effects of repetition and phrase structure on emotional arousal*. Paper presented at the 11th International Conference on Music Perception and Cognition, Seattle, United States.
24. **Livingstone, S. R., Loehr, J. D., Palmer, C., & Schubert, E. (2009).** *Emotional arousal corresponds with musical phrase structure*. BRAMS Annual Scientific Day, Montreal, Canada.
25. **Livingstone, S. R., Thompson, W.F., Chan, L., & Russo, F.A. (2009).** *Facial expressions in emotional song*. Paper presented at the Society for Music Perception and Cognition conference, Indianapolis, United States.
26. **Livingstone, S. R. (2009).** *Changing musical emotion*. Workshop on Expressive Performance, Montreal, Canada.

27. **Livingstone, S. R.** (2009). *Changing musical emotion through score and performance with a computational rule system*. Second Music Perception and Cognition Student Colloquium, Montreal, Canada.
28. **Livingstone, S. R.**, Thompson, W.F., & Russo, F.A. (2009). *Facial expressions in emotional singing*. Workshop on Music, Motion and Emotion, Montreal, Canada.
29. Thompson, W. F., **Livingstone, S. R.**, Palmer, C. (2008). *Using motion capture to investigate vocal emotional communication*, Leipzig, Germany.
30. **Livingstone, S. R.**, Muhlberger, R., Brown, A. R. (2006). *Influencing perceived musical emotions: The importance of performative and structural aspects in a rule system*. Music as Human Communication: An HCSNet Workshop on the Science of Music Perception, Performance and Cognition, Sydney, Australia.
31. **Livingstone, S. R.**, Muhlberger, R., Brown, A. R. (2006). *Music, speech and a Theory of Mind: Investigations with a computational model of musical emotions*. HCSNet Workshop on Human and Machine Speech, Sydney, Australia.
32. **Livingstone, S. R.**, Muhlberger, R., Brown, A. R. (2006). *The music-emotion lifecycle*. HCSNet Workshop on Perception and Action, Sydney, Australia.

Poster Presentations

1. Wright, S. E., Palmer, C., +Greene, N., & **Livingstone, S. R.** (2022). *Musical tempo influences listeners' cardiac dynamics*. Society for Psychophysiological Research, Vancouver, Canada, March.
2. Kovacek, C., **Livingstone, S. R.**, Singh, G., & Russo, F. A. (2020). *Ryerson Audio-Visual Database of Emotional Speech and Song (RAVD ESS): Arousal and Valence Validation*. 16th annual NeuroMusic conference, Hamilton, Canada, November.
3. +Swanson, R. & **Livingstone, S. R.** (2018). *Facial expressions meet Big Data*. URSCA Fall Gala, River Falls, USA, December.
4. +Divertie, M. & **Livingstone, S. R.** (2017). *Developing a low-cost computer-based intervention for patients with Parkinson's disease*. URSCA Fall Gala, River Falls, USA, December.
5. **Livingstone, S. R.**, +Vezer, E., McGarry, L. M., Lang, A. E., & Russo, F. A. (2015). *Deficits in the automatic mimicry of facial expressions in Parkinson's disease*. 11th Annual NeuroMusic conference. Hamilton, Canada, November.
6. **Livingstone, S. R.**, McGarry, L., van Lieshout, P., Lang, A. E., & Russo, F. A. (2014). Invited poster. *A novel singing therapy for rehabilitating facial and vocal expressive deficits in Parkinson's disease*. Innovations Gallery, TRI. Toronto, ON.

7. **Livingstone, S. R.**, McGarry, L., van Lieshout, P., Lang, A. E., & Russo, F. A. (2013). *A novel singing therapy for rehabilitating facial and vocal expressive deficits in Parkinson's disease*. Toronto Rehabilitation Institute 9th Annual Research Day, Toronto, ON.
8. **Livingstone, S. R.**, +Peck, K., & Russo, F. A. (2012). *RAVDESS: The Ryerson audio-visual database of emotional speech and song*. 8th Toronto Rehab annual research day. Toronto, ON.
9. **Livingstone, S. R.**, Palmer, C., Wanderley, M., & Thompson, W. F. (2011). *Rapid identification of emotional expression in faces*. Psychonomics, Seattle, WA.
10. **Livingstone, S. R.**, Palmer, C., Wanderley, M., & Thompson, W. F. (2011). *The temporal coordination of facial motion and vocal affect*. 10th Annual Auditory Perception, Cognition and Action Meeting, Seattle, WA.
11. **Livingstone, S. R.** (2008). *Changing musical emotion with a computational rule system*. Workshop on Music and Machine Learning, Montreal, QC.

Invited Talks and Presentations

1. **Livingstone, S. R.** (2023). *Affective data science: Understanding emotion*. *Modelling and Computational Science seminar*, Ontario Tech University, CA, March.
2. **Livingstone, S. R.** (2021). *Affective data science*. *Department of Psychology seminar series*, University of Otago, NZ.
3. **Livingstone, S. R.** (2020). *Exploring emotion in music and performance with data science*. *School of Performing Arts seminar series*, University of Otago, NZ, July.
4. **Livingstone, S. R.** (2019). *Affective Data Science*. *Sony Interaction industry MBIE*, University of Auckland, NZ, November.
5. +Divertie, M. & **Livingstone, S. R.** (2017). *Developing a low-cost computer-based intervention for patients with Parkinson's disease*. *Chancellor's URSCA reception*, River Falls, USA, December.
6. **Livingstone, S. R.** (2017). *The Affective Data Science Lab*. *Kohler Coffee Concert Series*, River Falls, USA, December, November.
7. **Livingstone, S. R.** (2012). *Common mechanisms of emotional communication in speech and song*. *Communications Meeting, Toronto Rehab*, Toronto, Canada, December.
8. Russo, F. A., **Livingstone, S. R.**, & McGarry, L. (2012). *A novel singing therapy to improve communication of facial and vocal emotion*. *Movement Disorders Clinic, Toronto Western Hospital*, Toronto, Canada, November.

9. **Livingstone, S. R.**, Palmer, C., Wanderley, M., & Thompson, W. F. (2011). Temporal coordination of facial expressions in vocal performance. *Brain, Perception, and Cognition Research Group, Ryerson University, Toronto, Canada, October.*
10. **Livingstone, S. R.**, Palmer, C., Wanderley, M., & Thompson, W. F. (2011). Production and perception of facial expressions during vocal performance. *Psychology research symposium (PGSA), Ryerson University, Toronto, Canada, October.*
11. **Livingstone, S. R.**, Palmer, C., Wanderley, M., & Thompson, W. F. (2011). Temporal coordination of facial expressions in vocal performance. *CIRMMT, McGill University, Montreal, Canada, September.*
12. **Livingstone, S. R.** (2010). Facial expressions and repetition in music. *MARCS auditory labs, University of Western Sydney, Sydney, Australia, November.*
13. **Livingstone, S. R.** (2009). Changing musical emotion with a computational rule system. *CIRMMT, McGill University, Montreal, Canada, May.*
14. **Livingstone, S. R.** (2009). Functional data analysis in music cognition. *McGill University, Montreal, Canada, March.*
15. **Livingstone, S. R.** & Thompson, W. F. (2008). Amusia and Emotional prosody: Evidence of a shared deficit. *University of Würzburg, Würzburg, Germany, May.*
16. Thompson, W. F., **Livingstone, S. R.**, & Palmer, C. (2008). Using motion capture to investigate vocal emotional communication. *Max Planck Institute, Leipzig, Germany, May.*
17. **Livingstone, S. R.** (2008). Emotions to Amusia. *University of Music and Drama, Hannover, Germany, May.*
18. **Livingstone, S. R.** (2007). Influencing the emotions of music with a computational rule system. *University of Jyväskylä, Jyväskylä, Finland, February.*
19. **Livingstone, S. R.** (2007). Influencing perceived musical emotions. *Royal Institute of Technology, Stockholm, Sweden, February.*
20. **Livingstone, S. R.** (2007). The origins of music from a Theory of Mind. *Royal Institute of Technology, Stockholm, Sweden, February.*

Journal Reviewing and Advisory Boards

Editorial Boards

2024 – present	Behavior Research Methods	Associate Editor (full time)
2021 – present	Emotion Science	Review Editor

2021 – present	Artificial Intelligence Review	Associate Editor
2020 – present	AI	Associate Editor
2018 – present	PLOS One	Academic Editor
2014 – present	Frontiers in Performance Science	Associate Editor
2008 – 2009	Empirical Musicology Review	Assistant Editor

Scientific Advisory Boards

2015	11 th Annual NeuroMusic Conference
2015	Society for Music Perception and Cognition (SMPC)
2013	Third International Conference on Music and Emotion
2013	International Conference of Music Perception and Cognition (ICMPC)
2011	International Conference of Music Perception and Cognition (ICMPC)
2008	Australasian Computer-Human Interaction Conference, OZCHI

Peer Reviewer

2024 – present	IEEE Transactions on Affective Computing
2024 – present	Cognitive Science
2023 – present	Data in Brief
2020 – present	Behaviour Research Methods
2019 – present	Journal of Speech, Language, and Hearing Research
2018 – present	PLOS ONE
2018 – present	Journal of the Acoustical Society of America
2018 – present	Frontiers in Movement Science and Sport Psychology
2017 – present	Scientific Reports
2017 – present	Frontiers in Perception Science
2016 – present	Computer Music Journal
2013 – present	Psychomusicology
2015 – present	Neurocomputing
2014 – present	Journal of Experimental Psychology: General
2014 – present	Psychological Research
2014 – present	Frontiers in Cognitive Science
2013 – present	Quarterly Journal of Experimental Psychology
2013 – present	Frontiers in Emotion Science
2013 – present	Cognitive, Affective, and Behavioral Neuroscience

2012 – present IEEE Transactions on Computational Intelligence and AI in Games
2011 – present Emotion
2011 – present Music Perception
2011 – present Psychology of Music

Conference and Workshop Organization

2013/08 Program Chair Assistant, Society for Music Perception and Cognition, Ryerson University. [[link](#)]
2009/04 Chair, Music, Motion and Emotion workshop, University of Montreal.

Teaching Experience and Training

Current Teaching

2024 CSCI5730G, Advanced topics in Information Science, Ontario Tech University
2023 CSCI 4210U, Information visualisation, Ontario Tech University
2023 CSCI 3230U, Web application development, Ontario Tech University
2022 CSCI 2000U, Scientific data analysis, Ontario Tech University

Previous Teaching

2024 CSCI5730G, Topics in Information Science, Ontario Tech University
2022 – present CSCI4210U, Information Visualisation, Ontario Tech University
2022 – present CSCI3230U, Web Application Development, Ontario Tech University
2022 – present CSCI2000U, Scientific Data Analysis, Ontario Tech University
2021 COSC 241, Programming and problem solving, University of Otago.
2021-2021 COMP 162, Foundations of computer science, University of Otago.
2020 COSC 326, Effective programming, University of Otago.
2020 COSC 242, Algorithms and data structures, University of Otago.
2020-2021 COSC 212, Web application development, University of Otago.
2020-2021 COMP 150, Practical programming (in Python), University of Otago.
2017-2019 CSIS 339, Advanced topics in data science, University of Wisconsin, River Falls.
2017-2019 CSIS 334, Data Visualization, University of Wisconsin, River Falls.
2017-2019 CSIS 733, Computing for Data Science and Big Data Analysis
2016-2019 CSIS 239, Introduction to Data Science, University of Wisconsin, River Falls.

2016-2018 CSIS 161, Programming I, University of Wisconsin, River Falls.

Teacher Training

2024 Universal Design for Learning, Community of Practice, Ontario Tech University

2024 ORS, Introducing the Diversity and Equity Assessment Planning (DEAP) Tool, Ontario Tech University

2020 HEDC, Providing quality feedback in postgraduate supervision, University of Otago.

2020 HEDC, Course Design, University of Otago.

2020 HEDC, Recruiting and selecting postgraduate research students, University of Otago.

2016 Teaching discussion brownbag, development lunch, University of Wisconsin, River Falls.

2010 Best Practices for Graduate Supervision, development workshop, McGill University.

2010 Supervising Graduate Student Writing, development workshop, McGill University.

2009 Learning to Teach, development workshop, McGill University.

Competition Supervision

2018 4th place, Novice division, MinneMUDAC Minnesota-Midwest Undergraduate Data Analytics Competition, Optum, Minneapolis, USA.

2017 9th place, Novice division, MinneMUDAC Minnesota-Midwest Undergraduate Data Analytics Competition, Optum, Minneapolis, USA.

2016 MinneMUDAC Minnesota-Midwest Undergraduate Data Analytics Competition, Optum, Minneapolis, USA.

Supervision of Research

Student supervision

2025 (admitted) Douglas Conley, MSc, Department of Computer Science, Ontario Tech University.

2025 (admitted) Gavin Bosman, MSc, Department of Computer Science, Ontario Tech University.

2024 – Present Tahmina Akhter, PhD, Department of Computer Science, Ontario Tech University.

2024 – Present Gorkem Vardar, PhD, Department of Computer Science, Ontario Tech University.

2024 – Present David Houle-tymeczko, Honours, Department of Computer Science, Ontario Tech University.

2024 – Present Aiju Kinoshita, Honours, Department of Computer Science, Ontario Tech University.

2024 – Present	Heisn Nithysingha, Honours, Department of Computer Science, Ontario Tech University.
2024 – Present	Dev rajivkumar Thaker, Honours, Department of Computer Science, Ontario Tech University.
2023 (withdrew)	Soudeh Ashrafipour, Masters, Department of Computer Science, Ontario Tech University.
2023 – Present	Dylan Rapanan, Masters, Department of Computer Science, Ontario Tech University.
2023 – 2024	Douglas Conley, Honours, Department of Computer Science, Ontario Tech University.
2023 – 2024	Joshua Trower, Honours, Department of Computer Science, Ontario Tech University.
2022 – 2023	Adeliz Keith, Masters, Department of Computer Science, Ontario Tech University.
2022 – 2023	Tristan Ro, Honours, Department of Computer Science, Ontario Tech University.
2021 – 2022	Nick Greene, Masters, Department of Computer Science, University of Otago.
2021	Tim Kern, Honours, Department of Computer Science, University of Otago.
2020 - Present	Esztella Vezer, PhD, Department of Psychology, Toronto Metropolitan University.
2020	Abinaya Jayanthi, Honours, Department of Computer Science, University of Otago.
2020	Nick Greene, Honours (first class), Department of Computer Science, University of Otago.
2018	Riley Swanson (USE-funded independent research project), Department of Computer Science and Information Systems, University of Wisconsin, River Falls.
2018	Adam Bergstrom (independent research project), Department of Computer Science and Information Systems, University of Wisconsin, River Falls.
2018	Peter Schaber (independent research project), Department of Computer Science and Information Systems, University of Wisconsin, River Falls.
2017	Matthew Divertie (USE-funded independent research project), Department of Computer Science and Information Systems, University of Wisconsin, River Falls.
2013 – 2015	Esztella Vezer (Honours and Masters), Department of Psychology, Ryerson University. Recipient of the Canadian Psychological Association Certificate of Academic Excellence for her honours thesis.
2013	Deanna Choi (NSERC summer), Department of Psychology, Ryerson University.
2011 – 2013	Katlyn Peck (Masters), Department of Psychology, Ryerson University.
2011	Sasha Ilnyckyj (Honours), Department of Psychology, McGill University.
2011	Jennifer Lissemore (Honours), Department of Psychology, McGill University
2007 – 2008	Amy Price (Honours), Department of Psychology, Macquarie University

Student Research Awards

- 2023 Patel, M. (PI), and Livingstone, S. R. (CI). “Affective breath recognition”, Undergraduate Research Award (URA), Ontario Tech University (\$6,000)
- 2018 – 2019 Swanson, R. (PI), and Livingstone, S. R. (CI). “Facial expressions meet Big Data.” Undergraduate Stipends and Expenses (USE), University of Wisconsin, River Falls (\$1,330).
- 2017 Divertie, M. (PI), and Livingstone, S. R. (CI). “Developing a low-cost computer-based intervention for patients with Parkinson’s disease.” Undergraduate Stipends and Expenses (USE), University of Wisconsin, River Falls (\$2,667).

Research Service

Grant service

- 2024 SSHRC Explore review committee, Ontario Tech University.
- 2021 – 2024 Theme leader (Parkinson’s Disease), SingWell grant

Academic Service

Positions at the university level

- 2023 – present AI Institute planning committee, Ontario Tech University.
- 2023 – present Graduate program in computational neuroscience committee, Ontario Tech University
- 2023 Third year review committee, Ontario Tech University.
- 2021 – 2022 Co-director, Data Science Program, University of Otago.
- 2018 – 2019 Faculty Senate, Elected representative for the College of Business and Economics, University of Wisconsin, River Falls.

Positions at the department and division level

- 2024 Undergraduate Thesis Awards, creation and chair, Ontario Tech University.
- 2023 – present Faculty search and screen, Ontario Tech University.
- 2023 – present Industry relations planning committee, Ontario Tech University.
- 2021 – 2022 100-Level teaching coordinator, University of Otago.
- 2020 – 2022 CSIS seminar coordinator, University of Otago.
- 2020 Open day coordinator, University of Otago.
- 2018 – 2019 Student Affairs, University of Wisconsin, River Falls.

- 2017 – 2018 Faculty search and screen, University of Wisconsin, River Falls.
- 2016 – 2019 Master of Science in Computer Science (MScS), University of Wisconsin, River Falls.
- 2015 Technical advisory committee, McMaster Institute for Music and the Mind, McMaster University.

Public Service

- 2018 Judge, MinneMUDAC Minnesota-Midwest Undergraduate Data Analytics Competition, Optum, Minneapolis, USA.
- 2013 Presentation on Parkinson’s Disease, Revera Long Term Care facility, Toronto, Canada.
- 2013 Presentation on Parkinson’s Disease, Parkinson Society of Canada - Markham Stouffville Support Group, Toronto, Canada.
- 2013 Presentation on Parkinson’s Disease, Parkinson Society Central & Northern Ontario, Toronto, Canada.
- 2012 Science advocate, Science Rendezvous, Toronto, Canada.
- 2011 Science fair judge, Westmount High School, Montreal, Canada.
- 2010 Science fair judge, Westmount High School, Montreal, Canada.

Academic Affiliations

- 2022 – present Institute of Electrical and Electronics Engineers (IEEE).
- 2009 – present Society for Music Perception and Cognition (SMPC).

Media Coverage

- 2020 [Front cover of Informatik Spektrum](#), RAVDESS featured on journal issue dedicated to deep fakes.
- 2019 [CBC Quirks & Quarks](#), Radio segment and article on Scientific Reports paper.
- 2019 [Discover Magazine](#), [Hamilton Spectator](#), [Business Standard](#), [The Hindu](#), [Phys.org](#), and others. Over 20 articles on Scientific Reports paper.
- 2019 [The Conversation](#), article on PNAS and Scientific Reports papers.
- 2019 [Smithsonian Magazine](#), article refers to RAVDESS paper.
- 2019 [UWRF Advisor spotlight](#), interview and article on NSFP news
- 2019 [Toronto Metropolitan Innovation newsletter](#), on “RAVDESS” paper.
- 2018 [Ryerson media release](#), article on “RAVDESS” paper.

- 2017 [UWRF News](#), interview and article on “Shaping Minds”.
- 2016 [CIFAR Virtual Talk](#), interview on “Body sway reflects joint emotional expression” paper.
- 2015 [The Atlantic](#), interview and article (10/28/2015) on “Head movements encode emotions during speech and song” paper.
- 2015 [NBC/Today](#), interview and article on “Head movements” paper.
- 2015 [McGill Tribune](#), interview and article on “Head movements”.
- 2015 [Daily Mail](#), [MedicalDaily](#), [ScienceDaily](#), [PsychCentral](#), [Yahoo News](#), [India.com](#), [McGill Newsroom](#), and others. Over 20 articles on “Head movements” paper.
- 2015 [ScienceDaily](#), [Eurekalert](#), [SciGuru](#), [PsyPost](#), [McGill Newsroom](#), and others. Multiple articles on “Common cues to emotion” paper.
- 2015 Taylor & Francis’ weekly Top 5 most discussed articles, “Common cues to emotion” paper.
- 2015 Radio Canada, interview (declined due to language barrier) on “Common cues to emotion”.
- 2014 CBC Quirks and Quarks Question Show, interview on Evolution and Music.
- 2013 [Psychology Today](#), article refers to work on facial mimicry.
- 2013 University Health Network, Toronto Rehabilitation Institute, *Communications Team Film*.
- 2012 [CBC News](#), article on Music therapy for Parkinson’s disease.
- 2010 Comics and Gaming Magazine, interview and article on Dynamic music in video games.