

Matthias K. Franken

e-mail: matthias.franken@mcgill.ca

ORCID : <https://orcid.org/0000-0002-6133-8756>

Website: <https://frankenmatthias.github.io/>

Education & Academic experience

- Since 2021 **Post-doctoral researcher**
McGill University, Montreal, Canada
PI: prof. dr. David J. Ostry (Motor neuroscience lab)
- 2017 – 2020 **Post-doctoral researcher**
Ghent University, Belgium
PI: prof. dr. Robert J. Hartsuiker
Main topic: “Sense of agency in speech”
- 2013 – 2018 **PhD in Cognitive Neuroscience**
Donders Institute for Brain, Cognition and Behaviour, Radboud University, Nijmegen, The Netherlands
Defense date: 5 February 2018
Promotors: prof. dr. Peter Hagoort & prof. dr. James M. McQueen
Thesis: “Listening for Speaking. Investigations of the relationship between speech perception production” (<https://repository.ubn.ru.nl/handle/2066/180052>)
- 2011 – 2013 **Master of Science in Cognitive Neuroscience**
Donders Institute for Brain, Cognition and Behaviour, Radboud University, Nijmegen, The Netherlands
Research internship at Max Planck Institute for Psycholinguistics, Nijmegen, NL
Research project supervisor: dr. Daniel J. Acheson
Thesis: “Modulation of speaking-induced suppression in speech imitation”
- 2008 – 2011 **Bachelor of Arts in Linguistics**
Leiden University, Leiden, The Netherlands
Minors in “Brain & Cognition” and “Linguistic Structures of the Amerindian languages”
Research project supervisor: prof. dr. Niels O. Schiller
Thesis: “When single-word spelling breaks down: a case study of acquired dysgraphia”

Teaching & Supervision

- Since 2021 Supervision of undergraduate research projects at McGill University
- 2017 – 2020 Supervision of master’s research projects / internships at Ghent University
- 2018 - 2019 Co-lecturer in the module “Language Psychology” of the master’s programme in psychology at Ghent University, 2018, 2019
- 2017 - 2018 Guest lecture in the module “Cognitive psychology” of the master’s programme in psychology at Ghent University, 2017, 2018
- 2016 – 2017 Teaching assistant in the Donders Toolkit in Advanced EEG/MEG analyses (2016, 2017).
- 2014 - 2017 Organizing and teaching the two-day workshop “Programming in Presentation” at the Donders institute for Brain, Cognition and Behaviour (7 workshops over the period 2014-2017)

Funding & Awards

- 2015 “Gösta Bruce scholarship” by the Gösta Bruce Memorial Fund and the International Phonetic Association (2015)
- 2014 “Research Talent” grant for PhD research, project 406-13-014 (Dutch Research Council, NOW, 2014-2017)

Public Outreach

- 2018 Contribution to the online Q&A website www.ikhebeenvraag.be [in Dutch], where public questions are answered by scientists associated with a Flemish research institution
- 2016 Participation and demo at the 2016 edition of the DRONGO language festival in Utrecht, the Netherlands
- 2015 Contribution “How do we form the sounds of speech” to the online Q&A of the Max Planck Institute for Psycholinguistics (<https://www.mpi.nl/news-events/questions-and-answers>).
- 2013 – 2017 Contributions to the blog of the Neurobiology of Language department [Dutch] (Donders Institute for Brain, Cognition and Behaviour & Max Planck Institute for Psycholinguistics): www.hettaligebrein.nl

Other skills and experience

- **Reviews** for The Journal of the Acoustical Society of America, Psychonomic Bulletin and Review, Journal of Experimental Psychology: Learning, Memory, and Cognition, Brain and Language, Frontiers in Human Neuroscience, Timing & Time perception
- **Programming skills:** MATLAB, R, Praat Software, Presentation (Neurobehavioral Systems), Fieldtrip Toolbox for MEG/EEG analyses, PureData, Python (+ PsychoPy)
- **Other software skills:** LaTeX, Adobe Photoshop/Illustrator/InDesign, SPSS
- Board Member of the student-run journal "Proceedings of the Master's programme Cognitive Neuroscience" (Nijmegen, 2011-2013)

Publications

- **Franken, M. K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (in press). Drifting pitch awareness after exposure to altered auditory feedback. *Attention, Perception & Psychophysics*. <https://doi.org/10.31234/osf.io/nwkt6>
- **Franken, M. K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2022). Don't blame yourself: Conscious source monitoring modulates feedback control during speech production. *Psychonomic Bulletin and Review*. <https://doi.org/10.1177/17470218221075632>
- **Franken, M. K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2021). Speaking with an alien voice: Flexible sense of agency during vocal production, *Journal of Experimental Psychology: Human Perception & Performance*, 47 (4), 479-494. <https://doi.org/10.1037/xhp0000799>
- **Franken, M. K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2019). Does passive sound attenuation affect responses to pitch-shifted auditory feedback? *The Journal of the Acoustical Society of America*, 146(6): 4108-4121. <https://doi.org/10.1121/1.5134449>
- **Franken, M. K.**, Acheson, D. J., McQueen, J. M., Hagoort, P., & Eisner, F. (2019). Consistency influences altered auditory feedback processing. *Quarterly Journal of Experimental Psychology*, 72(10):2371-2379. <https://doi.org/10.1177/1747021819838939>
- **Franken, M. K.**, Acheson, D. J., McQueen, J. M., Hagoort, P., & Eisner, F. (2018). Opposing and following responses in sensorimotor speech control: Why responses go both ways. *Psychonomic Bulletin & Review*, 25(4), 1458–1467. <https://doi.org/10.3758/s13423-018-1494-x>
- **Franken, M. K.**, Eisner, F., Acheson, D. J., McQueen, J. M., Hagoort, P., & Schoffelen, J. (2018). Self-monitoring in the cerebral cortex: Neural responses to small pitch shifts in auditory feedback during speech production. *NeuroImage*, 179(June), 326–336. <https://doi.org/10.1016/j.neuroimage.2018.06.061>
- **Franken, M. K.**, Acheson, D. J., McQueen, J. M., Eisner, F., & Hagoort, P. (2017). Individual variability as a window on production-perception interactions in speech motor control. *The Journal of the Acoustical Society of America*, 142(4), 2007–2018. <https://doi.org/10.1121/1.5006899>
- **Franken, M. K.**, Eisner, F., Schoffelen, J.-M., Acheson, D. J., Hagoort, P., & McQueen, J. M. (2017). Audiovisual recalibration of vowel categories. In *Proceedings of InterSpeech*. Stockholm, Sweden.

- Franken, M. K., McQueen, J. M., Hagoort, P., & Acheson, D. J. (2015). Assessing the link between speech perception and production through individual differences. In Proceedings of the 18th Congress of Phonetic Sciences. Glasgow, UK: Glasgow University.
- Franken, M. K., Hagoort, P., & Acheson, D. J. (2015). Modulations of the auditory M100 in an imitation task. *Brain and Language*, 142, 18–23. <https://doi.org/10.1016/j.bandl.2015.01.001>
- Franken, M. K., Huizinga, C. S. M., & Schiller, N. O. (2012). De Grafemische Buffer: Aspecten van een Spellingstoornis. *Stem-, Spraak- En Taalpathologie*, 17(3), 17–36.

Invited Talks

- **Franken, M. K.** (2019). On auditory feedback during speech production. Talk presented at the speech motor neuroscience lab, McGill University, Montreal, Canada. 2019-11-29.
- **Franken, M. K.** (2017). What auditory feedback can teach us about the perception-production link in speech. Talk presented at the Center for Research in Cognition & Neurosciences (CRCN), Université Libre de Bruxelles. Brussels, Belgium. 2017-06-26.
- **Franken, M. K.** (2014). Prediction, feedback and adaptation in speech production. Talk presented at the Leiden University. Leiden, the Netherlands. 2014-11-06.

Conference activity

Talks

- **Franken, M.K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2020). Drifting pitch awareness after exposure to pitch-shifted auditory feedback. Poster to be presented at the twelfth annual meeting of the Society for the Neurobiology of Language, [virtual conference], 21-24 October 2020.
- **Franken, M.K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2020). Who is to blame? Source monitoring during speech production. Poster to be presented at the twelfth annual meeting of the Society for the Neurobiology of Language, [virtual conference], 21-24 October 2020.
- **Franken, M. K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2020). Sense of agency is flexible during speech production. Talk to be presented at the 12th International Seminar on Speech Production, Providence, RI, USA, 14-17 December 2020. [Postponed due to the coronavirus]
- Mock, C., **Franken, M. K.**, & Hartsuiker, R. J. (2020). Audiovisual recalibration of vowel categories and their temporal stability. Talk to be presented at Psycholinguistics in Flanders, Kaiserslautern, Germany. [Postponed due to the coronavirus]
- **Franken, M. K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2020). Drifting pitch awareness after exposure to altered auditory feedback. Talk to be presented at Psycholinguistics in Flanders, Kaiserslautern, Germany. [Postponed due to the coronavirus]
- **Franken, M. K.**, Acheson, D. J., McQueen, J. M., Hagoort, P., & Eisner, F. (2018). Opposing and following responses in sensorimotor speech control: Why responses go both ways. Talk presented at Psycholinguistics in Flanders 2018. Ghent, Belgium. 2018-06-04 - 2018-06-05.

- **Franken, M. K.**, Eisner, F., Schoffelen, J.-M., Acheson, D. J., Hagoort, P., & McQueen, J. M. (2017). Audiovisual recalibration of vowel categories. Talk presented at Psycholinguistics in Flanders 2017. Leuven, Belgium. 2017-05-29 - 2017-05-30.
- **Franken, M. K.**, Eisner, F., Acheson, D. J., McQueen, J. M., Hagoort, P., & Schoffelen, J.-M. (2016). Neural mechanisms underlying auditory feedback processing during speech production. Talk presented at the Donders Discussions 2016. Nijmegen, the Netherlands. 2016-11-23 - 2016-11-24.
- **Franken, M. K.**, McQueen, J. M., Hagoort, P., & Acheson, D. J. (2015). Assessing speech production-perception interactions through individual differences. Talk presented at Psycholinguistics in Flanders. Marche-en-Famenne. 2015-05-21 - 2015-05-22.
- **Franken, M. K.**, Hagoort, P., & Acheson, D. J. (2014). Prediction, feedback and adaptation in speech imitation. Talk presented at the Donders Discussions 2014. Nijmegen, Netherlands. 2014-10-30 - 2014-10-31.

Posters

- **Franken, M. K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2019). Sense of agency is flexible during speech production with altered auditory feedback. Poster to be presented at the 25th Architectures and Mechanisms of Language Processing Conference (AMLAP), Moscow, Russia. 2019-09-06 - 2019-09-08.
- **Franken, M. K.**, Hartsuiker, R. J., Johansson, P., Hall, L., & Lind, A. (2019). The effect of passive sound attenuation in an altered auditory feedback paradigm. Poster presented at the 26th annual meeting of the Cognitive Neuroscience Society (CNS 2019), San Francisco, CA, USA. 2019-03-23 - 2019-03-26.
- **Franken, M. K.**, Acheson, D. J., McQueen, J. M., Hagoort, P., & Eisner, F. (2018). Opposing and following responses in sensorimotor speech control: Why responses go both ways. Poster presented at the International Workshop on Language Production (IWLP 2018), Nijmegen, The Netherlands.
- Dubinkina, N., Sijenyiyo, E., Broos, W., **Franken, M. K.**, Foucart, A., & Hartsuiker, R. J., Mind-wandering states during bilingual reading. Poster presented at Psycholinguistics in Flanders 2018. Ghent, Belgium. 2018-06-04 - 2018-06-05.
- **Franken, M. K.**, Schoffelen, J.-M., McQueen, J. M., Acheson, D. J., Hagoort, P., & Eisner, F. (2016). Neural correlates of auditory feedback processing during speech production. Poster presented at New Sounds 2016: 8th International Conference on Second-Language Speech, Aarhus, Denmark.
- **Franken, M. K.**, Eisner, F., Acheson, D. J., McQueen, J. M., Hagoort, P., & Schoffelen, J.-M. (2016). Neural mechanisms underlying auditory feedback processing during speech production. Poster presented at the Eighth Annual Meeting of the Society for the Neurobiology of Language (SNL 2016), London, UK.
- **Franken, M. K.**, Eisner, F., McQueen, J. M., Hagoort, P., & Acheson, D. J. (2015). Following and Opposing Responses to Perturbed Auditory Feedback. Poster presented at Society for the Neurobiology of Language Annual Meeting 2015, Chicago, IL.
- **Franken, M. K.**, McQueen, J. M., Hagoort, P., & Acheson, D. J. (2015). Assessing the link between speech perception and production through individual differences. Poster presented at International Congress of Phonetic Sciences, Glasgow, UK.

- **Franken, M. K.**, McQueen, J. M., Hagoort, P., & Acheson, D. J. (2015). Effects of auditory feedback consistency on vowel production. Poster presented at Psycholinguistics in Flanders, Marche-en-Famenne.
- **Franken, M. K.**, Hagoort, P., & Acheson, D. J. (2014). Prediction, feedback and adaptation in speech imitation: An MEG investigation. Poster presented at the International Workshop on Language Production, Université de Genève, Geneva, Switzerland.
- **Franken, M. K.**, McQueen, J. M., Hagoort, P., & Acheson, D. J. (2014). Assessing the link between speech perception and production through individual differences. Poster presented at the 6th Annual Meeting of the Society for the Neurobiology of Language, Amsterdam.
- **Franken, M. K.**, Acheson, D. J., & Hagoort, P. (2013). Modulations of speaking-induced suppression in speech imitation. Poster presented at the 5th Annual Meeting of the Society for Neurobiology of Language (SNL 2013), San Diego, CA, USA.