

Laura Mikula

Sensorimotor Control Lab
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EDUCATION

- 2018 Ph.D. Cognitive Neurosciences, Université Claude Bernard Lyon 1, Lyon, France
- 2018 Ph.D. Vision Sciences, Université de Montréal, Montréal, Canada
- 2014 M.Sc. Neurosciences, Université Claude Bernard Lyon 1, Lyon, France
- 2012 B.Sc. Physiology, Université Claude Bernard Lyon 1, Lyon, France

PROFESSIONAL EXPERIENCE

- 2022-present Visiting researcher, Perception & Action team, Justus-Liebig-Universität Gießen, Giessen, Germany
- 2020-present Postdoctoral visitor, Sensorimotor Control Lab, York University, Toronto, Canada
- 2019-2020 Postdoctoral fellow, Visual Psychophysics and Perception Laboratory, School of Optometry, Université de Montréal, Montréal, Canada
- 2018-2019 Postdoctoral fellow, ImpAct team, Lyon Neuroscience Research Center, Bron, France

PUBLICATIONS

Peer Reviewed Journal Articles

- 2021 Patoine A, **Mikula L**, Mejía-Romero S, Chaumillon R, Michaels J, Keruzoré O, Bernardin D, Faubert J. Increased visual and cognitive demands emphasize the importance of meeting visual needs at all distances while driving. *PLoS ONE*, 16(3): e0247254. DOI: 10.1371/journal.pone.0247254
- 2021 **Mikula L**, Blohm G, Koun É, Khan AZ, Pisella L. Movement drift in optic ataxia reveals deficits in hand state estimation. *Journal of Experimental Psychology: Human Perception and Performance*, 47(5), 635-647. DOI: 10.1037/xhp0000901
- 2020 **Mikula L**, Mejía-Romero S, Chaumillon R, Patoine A, Lugo E, Bernardin D, Faubert J. Eye-head coordination and dynamic visual scanning as indicators of visuo-cognitive demands in driving simulator. *PLoS ONE*, 15(12): e0240201. DOI: 10.1371/journal.pone.0240201
- 2018 **Mikula L**, Jacob M, Tran T, Pisella L, Khan AZ. Spatial and temporal dynamics of pre-saccadic attentional facilitation before pro- and anti-saccades. *Journal of Vision*, 18(11):2, 1-16. DOI: 10.1167/18.11.2
- 2018 **Mikula L**, Sahnoun S, Blohm G, Pisella L, Khan AZ. Vibrotactile information improves proprioceptive reaching target localization. *PLoS ONE*, 13(7): e0199627. DOI: 10.1371/journal.pone.0199627
- 2018 **Mikula L**, Gaveau V, Pisella L, Khan AZ, Blohm G. Learned rather than online relative weighting of visual-proprioceptive sensory cues. *Journal of Neurophysiology*, 119(5), 1981-1992. DOI: 10.1152/jn.00338.2017

Thesis

- 2018 Intégration multisensorielle pour les mouvements de pointage chez les sujets sains et les patients avec ataxie optique. *Université Claude Bernard Lyon 1*. Supervisors: Laure Pisella & Aarlenne Z Khan

Conference Proceedings

- 2016 **Mikula L**, Jacob M, Pisella L, Khan AZ. Temporal dynamics of attention before anti-saccades. *Journal of Vision*, 16(12), 1044-1044. DOI: 10.1167/16.12.1044

Submitted Articles

- 2022 Mikula L, 't Hart BM, Henriques DYP. Rapid motor adaptation to bounce perturbations in online Pong game is independent from the visual tilt of the bouncing surface. [Preprint]

FELLOWSHIPS & AWARDS

- 2020 Vision: Science to Applications (VISTA) Postdoctoral Fellowship, York University, Canada
- 2020 Postdoctoral Student Award, Road Safety Research Network (RRSR) of Quebec, Canada
- 2017 Excellence Scholarship, Faculté des Etudes Supérieures (FESP) & École d'Optométrie de l'Université de Montréal (ÉOUM), Canada
- 2017 Scholarship for end of PhD studies, Faculté des Etudes Supérieures et Postdoctorales (FESP), Canada
- 2017 Additional funding for students, Groupe de Recherche en Sciences de la Vision (GRSV), Canada
- 2016 Winner of the contest "Votre recherche en BD" (Your research in comics), Fédération des Associations Étudiantes du Campus de l'Université de Montréal (FAÉCUM), Canada
- 2015 Doctoral Mobility Fellowship, LabEx CORTEX, France
- 2015 Doctoral Mobility Fellowship, Programme Avenir Lyon Saint-Étienne (PALSE), France

INVITED TALKS

- 2019 Multisensory integration for reaching movements. York University, Toronto, Canada, May 27
- 2018 Multisensory integration for reaching movements. Justus Liebig University Giessen, Germany, August 14
- 2016 Proprioceptive weights are independent of left and right hand sensory reliabilities. CORTEX Students Club, Lyon, France, April 25

CONFERENCE PARTICIPATION

Oral Presentations

- 2020 **Mikula L**, Mejía-Romero S, Chaumillon R, Patoine A, Lugo E, Bernardin D, Faubert J. Increased visual-cognitive demands in driving simulator result in modifications of eye-head coordination and dynamic visual scanning. *The Eye, The Brain & The Auto*, Online, December 7-8
- 2020 **Mikula L**, Mejía-Romero S, Chaumillon R, Patoine A, Lugo E, Bernardin D, Faubert J. Dynamic analysis of eye-head movements for estimating visuo-cognitive demands during driving. *Neuromatch Conference 3.0*, Online, October 26-30
- 2019 Pisella L, Jurkiewicz T, **Mikula L**. Troubles visuo-spatiaux et ataxie optique. *Journées de Neurologie de Langue Française*, Lille, France, April 16-19

Poster Presentations

- 2022 **Mikula L**, King A, Modchalingam S, 't Hart BM, Henriques DYP. Using tools as cues for dual adaptation to opposing visuomotor rotations in virtual reality. *Society for the Neural Control of Movement*, Dublin, Ireland, July 26-29
- 2022 **Mikula L**, 't Hart BM, Henriques DYP. Adaptation to Pong bounce perturbations is quick and independent from wall tilt. *CVR/VISTA Conference*, Toronto, ON, Canada, June 6-9
- 2022 **Mikula L**, 't Hart BM, Henriques DYP. Adaptation to Pong bounce perturbations is quick and independent from wall tilt. *Virtual Vision Sciences Society*, Online, June 1-2
- 2017 **Mikula L**, Pisella L, Blohm G, Khan AZ. Involvement of the posterior parietal cortex in online control of reaching. *Society for Neuroscience*, Washington, DC, USA, November 11-17
- 2016 **Mikula L**, Jacob M, Tran T, Pisella L, Khan AZ. Temporal dynamics of attention before anti-saccades. *Vision Sciences Society*, St. Pete Beach, FL, USA, May 13-16
- 2015 **Mikula L**, Pisella L, Blohm G, Khan AZ. Proprioceptive weights are independent of left and right hand sensory reliabilities. *21st Annual Meeting of the FRQS Vision Health Research Network*, Québec, QC, Canada, November 6
- 2015 **Mikula L**, Pisella L, Blohm G, Khan AZ. Proprioceptive weights are independent of left and right hand sensory reliabilities. *Society for Neuroscience*, Chicago, IL, USA, October 17-21

- 2013 Claude L, Sauzeau J-B, **Mikula L**, Perchet C, Magnin M, Garcia-Larrea L, Mazza S, Bastuji H. Modulation of nociceptive information processing during paradoxical sleep: an intracerebral recording study in Humans. *Congress of the EFIC (European Federation of IASP Chapters)*, Florence, Italy, October 9-12

DEPARTMENTAL TALKS

- 2022 Can we adapt to two opposing visuomotor rotations in virtual reality when using different tools as cues? *IRTG Brain in Action Annual Retreat*. Grünberg, Germany, June 26 - July 2
- 2021 Interpreting and integrating vision for adapting to dynamic environments. *Virtual Vision Futures*. Online, June 14-17
- 2021 Interpreting and integrating vision for adapting to dynamic environments. *VISTA Annual Research Retreat*. Online, February 18
- 2018 Intégration visuo-proprioceptive pour l'action. *Rencontres Mouvement et Handicap*. Lyon, France, February 8
- 2017 Involvement of the posterior parietal cortex in online control of reaching. *Doctoral School Neuroscience and Cognition Annual Scientific Meeting*. Lyon, France, September 11
- 2016 Temporal dynamics of attention before anti-saccades. *Doctoral School Neuroscience and Cognition Annual Scientific Meeting*. Lyon, France, May 3
- 2015 Intégration multi-sensorielle pour l'action chez les sujets sains et les patients avec ataxie optique. *École d'optométrie, Université de Montréal, Canada*, December 15

AD-HOC REVIEWER

Frontiers in Neuroscience

TEACHING EXPERIENCE

Mentoring

- 2021 CVR-VISTA Vision Science Summer School (York University)
Provided scientific guidance to undergraduate students for a 1-week group project
- 2020 Neuromatch Academy (online computational neuroscience school)
Provided scientific guidance to students for 3-week group projects
- 2015-2020 Université de Montréal
Helped supervising 3 undergraduate and 2 graduate students: ethics application, data collection, data analysis and scientific writing

Université de Montréal, Teaching Assistant

Neurophysiology of Eye Movements (undergraduate, fall 2015)

OTHER RESEARCH EXPERIENCE

- 2014 2nd year Master's project
"Contribution of visual and proprioceptive information to pointing movements", ImpAct team, Lyon Neuroscience Research Center, Bron, France.
Supervisors: Laure Pisella & Aarlenne Z Khan
- 2013 1st year Master's project
"Modulation of nociceptive information processing during paradoxical sleep in humans", Neuropain team, Lyon Neuroscience Research Center, Bron, France.
Supervisor: H el ene Bastuji

OUTREACH

- 2017 Ma Th ese Pour Les Nuls (My Thesis for Dummies), Lyon Science Fair, October 14
- 2016 Ma Th ese en 180 secondes (Three Minute Thesis), Rh one-Alpes regional final, April 28

LANGUAGES

French: Native



English: Fluent



Spanish: Elementary reading, writing and speaking



REFERENCES

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