

BLAIRE DUBE, PHD

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curriculum vitae

academic appointments

2019-current **Postdoctoral Fellow**
Department of Psychology
The Ohio State University (Ohio, USA)
Advisor: Dr. Julie Golomb

education

2015-2019 **PhD Psychology and Neuroscience**
Neuroscience & Applied Cognitive Science
University of Guelph (Ontario, CAN)
Advisor: Dr. Naseem Al-Aidroos

2017 **Honorary Research Fellow**
Cognitive Psychology
Vrije Universiteit Amsterdam (Amsterdam, NL)
Advisor: Dr. Christian N. L. Olivers

2013-2015 **MSc Psychology, Neuroscience Specialization**
Neuroscience & Applied Cognitive Science
University of Guelph (Ontario, CAN)
Advisor: Dr. Naseem Al-Aidroos

2008-2012 **Hon BA Psychology**
Brock University (Ontario, CAN)
First Class Distinction
Advisors: Dr. Gordon Hodson and Dr. Karen Arnell

funding, scholarships & awards

2021-2023 NSERC Postdoctoral Fellowship (\$90,000)
2020 Canadian Psychological Association Certificate of Excellence: Doctoral Thesis Award
2020 CAGS/ProQuest Distinguished Dissertation Award Nominee
2017 NSERC Michael Smith Foreign Study Supplement (\$6,000)
2017 Elsevier/Vision Research Travel Award (VSS Student Travel Award) (\$500)
2016 Canadian Psychological Association Certificate of Excellence: Master's Thesis Award
2015-2018 CSAHS Dean's Tri-Council Scholarship (\$15,000)
2015-2018 NSERC Canada Graduate Scholarship, Doctoral Level (\$105,000)
2015 Ontario Graduate Scholarship (\$15,000 – declined)

2014	CSAHS Dean's Scholarship (\$2,500)
2014	Ontario Graduate Scholarship (\$15,000)
2013	CSAHS Dean's Scholarship (\$2,500)
2009-2012	Dean's Honour List
2008-2012	Brock Scholar's Award (\$8,000)

refereed publications (*denotes student contributor)

Chang, S., **Dube, B.**, Golomb, J. D., & Leber, A. B. (*under revision*). Learned spatial suppression is not always proactive.

Narhi-Martinez, W., **Dube, B.**, Golomb, J.D. (2022). Attention as a system of weights and balances. *Invited submission to Wiley Interdisciplinary Reviews (WIREs) Cognitive Science*.

Dube, B., *Pidaparathi, L., & Golomb, J.D. (2022). Visual distraction disrupts category-tuned attentional filters in ventral visual cortex. *Journal of Cognitive Neuroscience*, 34(8), 1521-1533.

Plater, L., **Dube, B.**, Giammarco, M., *Donaldson, K., *Miller, K., & Al-Aidroos, N. (2022). Revisiting the role of visual working memory in attentional control settings. *Visual Cognition*, 30(5), 318-338.

Dube, B. and Golomb, J. D. (2021). Perceptual distraction causes visual memory encoding intrusions. *Psychonomic Bulletin & Review*, 28, 1592-1600.

Dube, B. and Golomb, J. D. (2020). Revisiting mixture models of memory. *Nature Human Behavior*, Invited News & Views commentary, 4, 1098-1099.

Salahub, C., Lockhart, H. A., **Dube, B.**, Al-Aidroos, N., & Emrich, S. M. (2019). Electrophysiological correlates of the flexible allocation of visual working memory resources. *Scientific Reports*, 9 (1), 1-11.

*Triglav, J., Howe, E., *Cheema, J., **Dube, B.**, Fenske, M. J., Strzalkowski, N., & Bent, L. (2019). Physiological and cognitive measures during prolonged sitting: Comparisons between a standard and multi-axial office chair. *Journal of Applied Ergonomics*, 78, 176-183.

Dube, B., & Al-Aidroos, N. (2019). Distinct prioritization of visual working memory representations for search and for recall. *Attention, Perception, & Psychophysics*, 81(5), 1253-1261.

Dube, B., *Lumsden, A., & Al-Aidroos, N. (2018). Probabilistic retro-cues do not determine state in visual working memory. *Psychonomic Bulletin & Review*, 26(2), 641-646.

Dube, B., Emrich, S.M., & Al-Aidroos, N. (2017). More than a filter: Feature-based attention regulates the distribution of visual working memory resources. *Journal of Experimental Psychology: Human Perception and Performance*, 43(10), 1843-1854.

Dube, B., *Basciano, A., Emrich, S.M., & Al-Aidroos, N. (2016). Visual working memory simultaneously guides facilitation and inhibition during visual search. *Attention, Perception, & Psychophysics*, 78(5), 1232-1244.

Hodson, G., **Dube, B.**, & Choma, B. (2014). Can (elaborated) imagined contact interventions reduce prejudice among those higher in intergroup disgust sensitivity (ITG-DS)? *Journal of Applied Social Psychology*, 45(3), 123-131.

manuscripts in preparation (*denotes student contributor)

Dube, B., *Bao, J., & Golomb, J. D. (*in prep*). Saccades disrupt attentional filtering for visual working memory.

Joubran, S., **Dube, B.**, *Dodwell, A., & Al-Aidroos, N. (*in prep*). No volitional control over distractor interference in visual working memory.

Dube, B., Lockhart, H. A., Emrich, S. E., & Al-Aidroos, N. (*in prep*). No flexible re-allocation of visual working memory resources following a retro-cue.

Lockhart, H.A., **Dube, B.**, MacDonald, K. J., Al-Aidroos, N., & Emrich, S. M. (*in prep*). Individual differences in multiple cues guiding flexible resource allocation in visual short-term memory.

presentations (*denotes student contributor)

invited talks

Dube, B. (2022, Mar). *Interactions between attention and visual working memory: How their circuit supports behavior, and what happens when it fails*. Leibniz Research Centre, Dortmund, Germany.

Dube, B. (2021, Nov). *Behavioural and neural evidence for the Filter Disruption Theory*. The Ohio State University Cognitive Proseminar Series, Ohio, USA.

Dube, B. (2019, Sept). *More than a filter: Attention regulates the distribution of visual working memory resources at encoding*. The Ohio State University Dept of Psychology Colloquium Series, Ohio, USA.

Dube, B. (2019, Sept). *On the flexible and reciprocal interactions between visual attention and visual working memory*. The Ohio State University Vision & Cognitive Neuroscience Lab, Ohio, USA.

Dube, B. (2017, Sept). *EEG dynamics of negative templates for visual search*. Vrije Universiteit Amsterdam Dept of Psychology Colloquium Series, Amsterdam, NL.

conference oral presentations

Chang, S., **Dube, B.**, Golomb, J. D., & Leber, A. B. (2022, November). *Learned spatial suppression is not always proactive*. Talk accepted for presentation at the 63rd Annual Meeting of the Psychonomic Society, Boston, MA.

Dube, B., *Pidaparathi, L., & Golomb, J. D. (2022, November). *Spatial distraction disrupts and reverses category-tuned attentional filters by breaking both facilitation and suppression*. Talk accepted for presentation at the 30th Annual Meeting of the conference for Object Perception, Attention, and Memory, Boston, MA.

Dube, B., *Pidaparathi, L., & Golomb, J. D. (2022, July). *The Filter Disruption Theory: Distraction disrupts filters for both attention and visual working memory*. Talk presented at the Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Halifax, Nova Scotia, Canada.

Dube, B., *Pidaparathi, L., & Golomb, J. D. (2021, November). *Distraction disrupts attentional filtering: Neural and behavioral evidence for the Filter Disruption Theory*. Talk presented at the 62nd Annual Meeting of the Psychonomic Society, virtual.

*Bao, J., **Dube, B.**, & Golomb, J. D. (2021, November). *Saccades disrupt attentional filtering for visual working memory*. Talk presented at the 29th Annual Meeting for Object Perception, Attention, and Memory, *virtual*.

Dube, B. & Golomb, J. D. (2021, June). *Dynamic distraction disrupts control over attentional filtering: Neural and behavioural evidence for the Filter Disruption Theory*. Talk presented at the Virtual Working Memory Symposium.

Joubran, S., **Dube, B.**, Lockhart, H., Emrich, S. M., Al-Aidroos, N. (2021, June). *How is occipito-parietal connectivity altered to protect visual working memory from distraction?* Talk presented at the Virtual Working Memory Symposium.

Plater, L., **Dube, B.**, Giammarco, M., *Donaldson, K., *Miller, K., & Al-Aidroos, N. (2021, June). *Attentional control settings and visual working memory*. Talk presented at the Virtual Working Memory Symposium.

Dube, B. and Golomb, J. D. (2020, June). *Perceptual distraction disrupts control over visual memory encoding*. Talk presented at the Virtual Working Memory Symposium.

Dube, B., *Rak, S., & Al-Aidroos, N. (2019, June). *Limits to the re-distribution of resources in visual working memory*. Talk presented at the Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Waterloo, Ontario, Canada.

Salahub, C., Lockhart, H., **Dube, B.**, Al-Aidroos, N., & Emrich, S. M. (2019, May). *Beyond Load: Neural markers of visual working memory encoding and maintenance track attentional priority*. Talk presented at the 19th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Dube, B., *Rak, S., & Al-Aidroos, N. (2018, July). *No flexible re-distribution of visual working memory resources after encoding*. Talk presented at the Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, St. John's, Newfoundland, Canada.

Dube, B., Emrich, S.M., & Al-Aidroos, N. (2017, May). *More than a filter: Feature-based attention regulates the distribution of visual working memory resources*. Talk presented at the 17th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Hodson, G., **Dube, B.**, & Choma, C. (2014, June). *Can (elaborated) imagined contact reduce prejudice among those higher in intergroup disgust sensitivity (ITG-DS)?* Talk presented at the European Association of Social Psychology (EASP) annual conference, Amsterdam, Netherlands.

conference poster presentations

Narhi-Martinez, W., McNally, J., **Dube, B.**, Leber, A. B., & Golomb, J. D. (2022, November). *Experience-driven attention: How learning what to attend and what to avoid impacts feature interference*. Poster accepted for presentation at the 30th Annual Meeting of the conference for Object Perception, Attention, and Memory, Boston, MA.

Narhi-Martinez, W., **Dube, B.**, Chen, J., Leber, A.B., Golomb, J.D. (2022, July). *Learned Distractor Locations Can Reduce Feature Interference*. Poster presentation at the HVD conference, Ammersee, Germany.

Dube, B., *Bao, J. Y., & Golomb, J. D. (2022, May). *Attentional filters that gate visual working memory encoding are temporarily disrupted by eye movements*. Poster presented at the Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Narhi-Martinez, W., **Dube, B.**, & Golomb, J. D. (2022, May). *Learned distractor locations can reduce feature interference*. Poster presented at the Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Joubran, S., **Dube, B.**, Dodwell, A., & Al-Aidroos, N. (2022, May). *Effects of distractor interference cannot be mitigated by predictive cues*. Poster presented at the Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

*Pidaparathi, L., **Dube, B.**, & Golomb, J. D. (2021, November). *Visual distraction disrupts category-tuned attentional filters in ventral visual cortex*. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.

Narhi-Martinez, W., **Dube, B.**, Chen, J., Leber, A. B., & Golomb, J.D. (2021, November). *Learned distractor locations can reduce feature interference*. Poster presented at the 29th Annual Meeting of the conference for Object Perception, Attention, and Memory.

Dube, B., & Golomb, J. D. (2021, May). *Distraction disrupts attentional filtering for visual working memory: Neural and behavioural evidence for the Filter Disruption Theory*. Poster presented at the 21st Annual Meeting of the Vision Sciences Society.

*Bao, J., **Dube, B.**, & Golomb, J. D. (2021, May). *Saccades disrupt attentional filtering for visual working memory*. Poster presented at the 21st Annual Meeting of the Vision Sciences Society.

Dube, B., & Golomb, J. D. (2021, May). *Neural processing of task-irrelevant features following visual distraction*. Poster presented at the 28th Annual Meeting of the Cognitive Neuroscience Society.

Dube, B., Leber, A. B., & Golomb, J. D. (2020, May). *Perceptual distraction disrupts control over visual memory encoding*. Poster presented at the 20th Annual Meeting of the Vision Sciences Society.

Plater, L., **Dube, B.**, Giammarco, M., *Donaldson, K., *Miller, K., & Al-Aidroos, N. (2020, May). *Goals matter: Only searched-for visual working memory representations form an attentional control set*. Poster presented at the 20th Annual Meeting of the Vision Sciences Society.

Dube, B., & Golomb, J. D. (2020, May). *Perceptual distraction disrupts the filter that gates visual working memory access*. Poster presented at the 27th Annual Meeting of the Cognitive Neuroscience Society.

Dube, B., *Dodwell, A., & Al-Aidroos, N. (2019, November). *No volitional control over distractor interference in visual working memory*. Poster presented at the 19th Annual Meeting of the conference for Object Perception, Visual Attention, and Visual Memory, Montreal, CAN.

Dube, B., *Rak, S., *Iannucci, L., & Al-Aidroos, N. (2019, May). *Too little too late: No flexible control of memory by retro-cues*. Poster presented at the 19th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Dube, B., & Al-Aidroos, N. (2018, November). *Increasing item precision in visual working memory is insufficient to grant template status*. Poster presented at the 18th Annual Meeting of the conference for Object Perception, Visual Attention, and Visual Memory, New Orleans, LA.

Dube, B., *Lumsden, A., & Al-Aidroos, N. (2018, May). *Probabilistic retro-cues do not determine representational state in visual working memory*. Poster presented at the 18th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Salahub, C., **Dube, B.**, Al-Aidroos, N., & Emrich, S. M. (2018, May). *ERP measures of target and distractor processing are affected by attentional prioritization*. Poster presented at the 18th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

*Gillies, G., *Goodman, H., **Dube, B.**, & Al-Aidroos, N. (2018, May). *The distribution of resources in visual working memory is not accomplished via a simple filter*. Poster presented at the 38th Annual Meeting of the Southern Ontario Neuroscience Association, Guelph, Canada.

Dube, B., *Pike, V. A. A., & Fenske, M. J. (2018, February). *When fidgeting is functional: Tactile fidgeting enhances cognitive performance and subjective experience during lecture*. Poster presented at the 47th Annual Lower Ontario Visionary Establishment Conference, Niagara Falls, Canada.

Dube, B., de Vries, I. E. J., van Driel, J., & Olivers, C. N. L. (2017, December). *EEG Dynamics of Negative Templates for Visual Search*. Poster presented at De Nederlandse Vereniging voor Psychonomie, Egmond aan Zee, Netherlands.

*Pike, V., **Dube, B.**, & Fenske, M.J. (2017, February). *The Link Between Boredom and Fidgeting: Examining Subjective Experience*. Poster presented at the 46th Annual Lake Ontario Visionary Establishment Conference, Niagara Falls, Canada.

Dube, B., *Chen, A., Eastwood, J.D., & Fenske, M.J. (2016, November). *Individual differences in fidgeting and the link between state boredom and spontaneous movement during lectures*. Poster presented at the Psychonomic Society's 57th Annual Meeting, Boston, Massachusetts.

Dube, B., *Miller, K., Giammarco, M., & Al-Aidroos, N. (2016, May). *Active visual working memory representations are insufficient to control spatial attentional capture*. Poster presented at the 16th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Giammarco, M., *Hryciw, J., **Dube, B.**, & Al-Aidroos, N. (2016, May). *Limits on the contribution of priming to attentional control settings: Evidence from long-term memory control sets*. Poster presented at the 16th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

*Chen, A., **Dube, B.**, & Fenske, M. J. (2016, February). *Establishing a potential link between boredom and fidgeting*. Poster presented at the 45th Annual Lake Ontario Visionary Establishment Conference, Niagara Falls, Canada.

Dube, B., & Al-Aidroos, N. (2015, November). *Monetary Reward Accelerates Conscious Visual Perception*. Poster presented at the Psychonomic Society's 56th Annual Meeting, Chicago, Illinois.

Dube, B., Emrich, S.M., & Al-Aidroos, N. (2015, May). *Feature-based attention separately influences visual working memory resolution and encoding probability*. Poster presented at the 15th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Arnell, K., & **Dube, B.** (2015, May). *Extraversion predicts superior face-specific recognition ability, but through experience, not positive affect*. Poster presented at the 15th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida.

Dube, B., *Basciano, A., Emrich, S.M., & Al-Aidroos, N. (2014, November). *Concurrent inhibition and facilitation by the contents of visual working memory during visual search*. Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, California.

Dube, B., & Al-Aidroos, N. (2014, July). *Monetary rewards speed conscious visual perception*. Poster presented at the 24th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science, Toronto, Ontario.

Dube, B., Arnell, K., & Mondloch, C. (2014, May). *Does attention to low spatial frequencies enhance face recognition? An individual differences approach*. Poster presented at the 14th Annual Meeting of the Vision Science Society, St Pete Beach, Florida.

Dube, B. & Al-Aidroos, N. (2014, April). *The application of attentional goals across the stages of visual processing*. Poster presented at the University of Guelph Annual Neuroscience Day, Guelph, ON.

Dube, B. & Al-Aidroos, N. (2014, February). *Goal-directed processing in visual working memory*. Poster presented at the University of Guelph PGSA Research Roundtable, Guelph, ON.

service

service to profession

- **Conference Organizer:**
Annual Meeting for Object Perception, Attention, and Memory (2020-2022)
- **Organizer and Chair:**
Equity in Vision Science workshop & panel discussion (2021)
Diversity in OPAM workshop and roundtable discussion (2020)
- **Organizer:**
Career panel: Academic and non-academic routes for early-career scientists (2021)
Career panel: Academic and non-academic routes for early-career scientists (2020)
- **Invited speaker:**
University of Guelph Career Panel: Academic and non-academic routes for early-career scientists (2022)
Vision Sciences Society Accessibility Panel: Considerations for first-generation scientists (2022)
- **Adhoc Reviewer:**
Attention, Perception, & Psychophysics
Journal of Cognitive Psychology
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Human Perception and Performance
Journal of Vision
Memory and Cognition
PLoS One
Psychonomic Bulletin & Review
Quarterly Journal of Experimental Psychology
Scientific Reports
Visual Cognition

department and university service

- University of Guelph Psychology Participant Pool Administrator (2014-2019)
- University of Guelph Psychology + Neuroscience hiring committee voting member (2016)

teaching and dissemination of research

student supervision

OSU undergraduate research apprentice program

Jackie Bao (2019-2022) Do saccades disrupt attentional filtering?

OSU undergraduate research assistants

Lyric Ransom (2022) Do features intrude into VWM when memory is loaded?
Jazmine Burkes (2022) Do features intrude into VWM when memory is loaded?
Sigrid Zhu (2019-2021) Do distractors distort visual working memory representations?
Ian Mboya (2019) Do distractors distort visual working memory representations?

psyc*4870/80, honours thesis

Greer Gillies (2017-2018) Limits to the flexible distribution of resources within visual working memory
Corey Loo (2016-2017) Testing the relational account of memory-based capture
Victoria Pike (2016-2017) Examining the functional link between boredom and fidgeting
Angela Chen (2015-2016) Establishing a potential link between boredom and fidgeting (awarded 2016 Best Honours Thesis at University of Guelph)
Jacob Lindsay-Kolari (2015) The chronometry of working memory precision

psyc*4510, current issues in psychology

Alison Dodwell (2018) How do we protect the contents of visual working memory from distraction?
Alanna Lumsden (2017) Assessing the effects of retro-cues on memory-driven capture
Krista Miller (2016) Visual working memory and attentional control settings are distinct
Corey Loo (2016) What constitutes “similarity” in visual working memory-based capture?

psyc*4500, current theoretical issues in psychology

Alanna Lumsden (2016) Is memory driven capture determined by memory resolution?
Stephanie Rak (2017) Assessing the effects of retro-cues on memory resolution
Corey Loo (2015) The attentional consequences of accessory memory representations

psyc*3240, independent research

Hannah Goodman (2018) Are probabilistic retro-cues sufficient to characterize a search template?

guest lecturer

Winter 2017 Cognitive Neuroscience (4th yr), University of Guelph
Fall 2016 Cognitive Neuroscience (4th yr), University of Guelph
Fall 2015 Principles of Learning (2nd yr), University of Guelph
Fall 2015 Cognitive Neuroscience (4th yr), University of Guelph
Winter 2015 Cognitive Neuroscience (4th yr), University of Guelph

graduate teaching assistant

Fall 2015 Seminar in Motivation and Emotion, University of Guelph
Winter 2015 Cognitive Processes, University of Guelph
Fall 2014 Quantification in Psychology, University of Guelph
Summer 2014 Behavioural Neuroscience, University of Guelph

Winter 2014

Principles of Sensation and Perception, University of Guelph

Fall 2013

Principles of Sensation and Perception, University of Guelph

undergraduate tutor

2011 - 2013

Introduction to Psychology, Brock University

Statistics and Research Design in the Behavioural Sciences, Brock University

Brain and Behaviour I, Brock University

professional affiliations and activities

research positions

2013 - 2019

Undergraduate Mentor, Visual Cognitive Neuroscience Lab (Dr. Naseem Al-Aidroos) & Cognitive-Affective Neuroscience Lab (Dr. Mark Fenske), University of Guelph

- Manage research projects across multiple labs
- Supervise multiple honours thesis students

2011 – 2014

Research Assistant, Attention Lab (Dr. Karen Arnell), Brock University

- Conceptualize/design research projects, create stimuli and experimental tasks, data collection and analysis, writing

2012 – 2013

Research Assistant, Well-Being Research Lab (Dr. Michael Busseri), Brock University

- Participant recruitment, data collection/coding/analysis

2012 – 2013

Research Assistant, Department of Organizational Behaviour, Human Resources, Entrepreneurship, and Ethics (Dr. Tunde Ogunfowora), Brock University

- Participant recruitment, create marketing materials and informational presentations, hire and schedule confederates, schedule/conduct weekly research sessions run in groups of 10-15, data collection/entry.

professional memberships

- The Canadian Society for Brain, Behaviour, and Cognitive Science
- The Cognitive Neuroscience Society
- The Psychonomic Society
- The Vision Sciences Society
- OSU Center for Cognitive and Behavioral Brain Imaging

professional skills

- Behavioural data collection and analysis
- Computational modeling (Mixture Model and variants, Variable Precision Model)
- EEG data collection and analysis (ERP and time-frequency analyses)
- fMRI data collection and basic analyses
- Eyetracking methods
- PsyJS and PsychoPy (Python), Psychtoolbox (Matlab), E-Prime, & OpenSesame experimental software
- SPSS, JASP, R, BrainVoyager, & Matlab analysis software
- Adobe Illustrator, Photoshop, & Inkscape graphics software
- Visual Basic & Microsoft Excel