

# BLAIRE DUBE, PHD

DUBE.25@OSU.EDU

## curriculum vitae

### academic appointments

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

### education

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

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

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

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

### 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)

**Dube, B.**, \*Pidaparathi, L., & Golomb, J.D. (*under review*). Visual distraction disrupts category-tuned attentional filters in ventral visual cortex.

Narhi-Martinez, W., **Dube, B.**, Golomb, J.D. (*under review*). Attention as a system of weights and balances. *WIREs Cognitive Science*.

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*, DOI: 10.1080/13506285.2022.2044949.

**Dube, B.** and Golomb, J. D. (2021). Perceptual distraction causes visual memory encoding intrusions. *Psychonomic Bulletin & Review*, <https://doi.org/10.3758/s13423-021-01937-6>.

**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.

**Dube, B.**, Dodwell, A., Joubran, S., & 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.

## conference presentations (\*denotes student contributor)

### talks

**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 62<sup>nd</sup> Annual Meeting of the Psychonomic Society.

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

**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 19<sup>th</sup> 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 17<sup>th</sup> 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, Netherlands.

## posters

\*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 29<sup>th</sup> 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 21<sup>st</sup> 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 21<sup>st</sup> 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 28<sup>th</sup> 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 20<sup>th</sup> 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 20<sup>th</sup> 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 27<sup>th</sup> 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 19<sup>th</sup> 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 accepted for presentation at the 19<sup>th</sup> 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 18<sup>th</sup> 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 18<sup>th</sup> 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 18<sup>th</sup> 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 38<sup>th</sup> 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 47<sup>th</sup> 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 46<sup>th</sup> 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 57<sup>th</sup> 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 16<sup>th</sup> 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 16<sup>th</sup> 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 45<sup>th</sup> 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 56<sup>th</sup> 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 15<sup>th</sup> 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 15<sup>th</sup> 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 55<sup>th</sup> 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 24<sup>th</sup> 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 14<sup>th</sup> 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)
- **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*  
*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-current)      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?
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**invited talks**

Spring 2022	Leibniz Research Centre, Dortmund, Germany
Fall 2021	The Ohio State University Cognitive Proseminar Series, Ohio, USA
Fall 2019	The Ohio State University Dept of Psychology Colloquium Series, Ohio, USA
Spring 2019	The Ohio State University Vision & Cognitive Neuroscience Lab, Ohio, USA
Fall 2017	Vrije Universiteit Amsterdam Dept of Psychology Colloquium Series, NL

**guest lecturer**

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

### **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