

# Morgan L. Gustison, Ph.D.

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## EDUCATION

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- 2017      **Ph.D.** Biological Psychology, University of Michigan, Ann Arbor, MI, USA  
2010      **M.Res.** Primatology (*Distinction*), Roehampton University, London, UK  
2009      **B.Sc.** Psychology and Zoology (*Honors*), University of Wisconsin-Madison, Madison, WI, USA

## RESEARCH POSITIONS

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- 2023-      **Assistant Professor**, Department of Psychology, Western University, London, Canada  
2022-2023      **Research Associate**, Department of Integrative Biology, University of Texas at Austin, Austin, TX, USA  
2018-2022      **Postdoctoral Fellow**, Department of Integrative Biology, University of Texas at Austin, Austin, TX, USA (with Drs. Steven Phelps and Pavel Osten)  
2017-2018      **Postdoctoral Fellow**, Princeton Neuroscience Institute, Princeton University, Princeton, NJ, USA (with Drs. Asif Ghazanfar and Timothy Buschman)

## RESEARCH SUPPORT

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### External Funding

- 2023-2028      **National Sciences and Engineering Research Council of Canada**, Discovery Grants Program (Role: PI), Neuroethology of vocal communication during pair-bonding. Can\$ 190,000  
2023-2024      **National Sciences and Engineering Research Council of Canada**, Discovery Grants Program – Discovery Launch Supplement (Role: PI), Neuroethology of vocal communication during pair-bonding. Can\$ 12,500  
2021-2023      **National Institutes of Health**, K99/R00 Pathway to Independence Award (Grant: K99MH126164, Role: PI), Neural circuits of vocal communication during social bonding. \$212,782  
2017-2018      **National Institutes of Health**, NRSA Training Grant in Quantitative Neuroscience (Grant: T32MH065214, Role: Postdoc trainee). \$43,692  
2013-2016      **The Leakey Foundation**, Research Grant (Role: PI), The form and function of vocal complexity in gelada society. \$13,480

- 2013-2015 **National Geographic Society**, Waitt Young Investigator Grant (Grant: #W30414, Role: PI), Exploring the social function of vocal complexity in gelada society. \$11,995
- 2012-2013 **National Geographic Society**, Young Explorer Grant (Grant: #912212, Role: PI), Exploring the function of vocal complexity in gelada society. \$5,000
- 2012-2013 **Petridish**, Crowd-funding research grant (Role: PI), Unraveling the mystery of gelada monkey melodies. \$3,876
- Highlighted on [Nature's Soapbox Science guest blog](#)
- 2010 **International Primatological Society**, Research Grant (Role: PI), Behavioural coping strategies and physiological stress in free-ranging female Barbary macaques (*Macaca sylvanus*). \$1,500
- 2010 **L.S.B. Leakey Trust**, Research Grant (Role: PI), Behavioural coping strategies and physiological stress in free-ranging female Barbary macaques. £500

#### Contributions to Externally Funded Research

- 2018-2023 **National Institutes of Health** (Grant: R01MH115267, Role: Postdoc/Project Leader, PIs: Dr. Phelps, Dr. Osten), The bonding brain: Substrates of social attachment in monogamous voles.

#### Internal Grants and Fellowships

- 2016 University of Michigan, Rackham Spring/Summer Research Grant (Role: Graduate Student Research Assistant, PI: Dr. Aragona), Dopaminergic mechanisms of social communication in prairie voles. RA summer stipend
- 2016 University of Michigan, Psychology Department Dissertation Grant. \$1,000
- 2013-2014 University of Michigan, Rackham Candidate Research Grant. \$3,000
- 2013 University of Michigan, Rackham Pre-Candidate Research Grant. \$1,500
- 2012-2013 University of Michigan, Rackham Centennial Fellowship. \$6,000
- 2012-2013 University of Michigan, International Institute Individual Fellowship. \$5,000
- 2009-2010 Roehampton University, International Academic Scholarship. £2,000
- 2008-2009 University of Wisconsin, Hilldale Undergraduate Research Fellowship. \$5,000
- 2008 University of Wisconsin, Honors Thesis Research Grant. \$3,000 (Declined)

## **PUBLICATIONS**

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Google Scholar Profile: <https://scholar.google.co.uk/citations?user=5Vr9Fx8AAAAJ&hl=en>

#### Peer-reviewed research articles

16. **Gustison, ML**, Muñoz Castañeda, R, Osten, P, Phelps, SM, Sexual coordination in a whole-brain map of prairie vole pair bonding. *eLife* **12**:RP87029 (2024)
- Preprint published on bioRxiv (<https://doi.org/10.1101/2023.07.26.550685>)

15. MacDowell, CJ, Briones, BA, Lenzi, MJ, **Gustison, ML**, Buschman, TJ, Differences in the expression of cortex-wide neural dynamics are related to behavioral phenotype. *Curr Biol.* **34**, 1333-1340 (2024)
  - Preprint published on bioRxiv (<https://doi.org/10.1101/2022.01.24.477572>)
14. Painter, MC, **Gustison, ML**, Snyder-Mackler, N, Johnson, ET, le Roux, A, Bergman, T. J, Acoustic variation and group-level convergence in gelada, *Theropithecus gelada*, contact calls. *Anim. Behav.* **207**, 235-246 (2024)
13. Kavanagh, E, **et al.**, Dominance style is a key predictor of vocal use and evolution across nonhuman primates. *R. Soc. Open Sci.* **8**, 210873 (2021).
12. Kershenbaum, A, Demartsev, V, Gammon, DE, Geffen, E, **Gustison, ML**, Ilany, A, Lameira, AR, Shannon entropy as a robust estimator of Zipf's Law in animal vocal communication repertoires. *Methods Ecol. Evol.* **12**, 553–564 (2021).
11. Miller, CM, Snyder-Mackler, N, Nguyen, N, Fashing, PJ, Tung, J, Wroblewski, EE, **Gustison, ML**, Wilson, ML, Extra-group paternity in gelada monkeys (*Theropithecus gelada*) at Guassa, Ethiopia and a comparison with other primates. *Anim. Behav.* **177**, 277–301 (2021).
10. **Gustison, ML**, Borjon, JI, Takahashi, DY, Ghazanfar, AA, Vocal and locomotor coordination develops in association with the autonomic nervous system. *Elife.* **8**, e41853 (2019).
9. **Gustison, ML**, Johnson, ET, Beehner, JC, Bergman, TJ, The social functions of complex vocal sequences in wild geladas. *Behav. Ecol. Sociobiol.* **73**, 14 (2019).
8. **Gustison, ML**, Bergman, TJ, Divergent acoustic properties of gelada and baboon vocalizations and their implications for the evolution of human speech. *J. Lang. Evol.* **2**, 20–36 (2017).
7. **Gustison\***, **ML**, Semple\*, S, Ferrer-i-Cancho, R, Bergman, TJ, Gelada vocal sequences follow Menzerath's linguistic law. *Proc. Natl. Acad. Sci.* **113**, E2750–E2758 (2016). (\* authors contributed equally)
  - Highlighted on [NPR's All Things Considered](#) and [Scientific American's 60-second Science](#)
6. **Gustison, ML**, Bergman, TJ, Vocal complexity influences female responses to gelada male calls. *Sci. Rep.* **6**, 19680 (2016).
5. Lu, A, Borries, C, **Gustison, ML**, Larney, E, Koenig, A, Age and reproductive status influence dominance in wild female Phayre's leaf monkeys. *Anim. Behav.* **117**, 145–153 (2016).
4. **Gustison, ML**, Townsend, SW, A survey of the context and structure of high- and low-amplitude calls in mammals. *Anim. Behav.* **105**, 281–288 (2015).
3. **Gustison, ML**, le Roux, A, Bergman, TJ, Derived vocalizations of geladas (*Theropithecus gelada*) and the evolution of vocal complexity in primates. *Philos. Trans. R. Soc. Lond. B. Biol. Sci.* **367**, 1847–59 (2012).
  - Highlighted on [NPR's All Thing's Considered](#)

2. Aubert, Y, **Gustison, ML**, Gardner, LA, Bohl, MA, Lange, JR, Allers, KA, Sommer, B, Datson, NA, Abbott, DH, Flibanserin and 8-OH-DPAT implicate serotonin in association between female marmoset monkey sexual behavior and changes in pair-bond quality. *J. Sex. Med.* **9**, 694–707 (2012).
1. **Gustison, ML**, MacLarnon, A, Wiper, S, Semple, S, An experimental study of behavioural coping strategies in free-ranging female Barbary macaques (*Macaca sylvanus*). *Stress.* **15**, 608–17 (2012).

#### Reviews and commentaries

6. **Gustison, ML**, Phelps, SM, Individual differences in social attachment: A multi-disciplinary perspective. *Genes Brain Behav.* **21**, e12792 (2022) DOI: 10.1111/gbb.12792.
5. Semple\*, S, Ferrer-i-Cancho\*, R, **Gustison\***, **ML**, Linguistic laws in biology. *Trends Ecol. Evol.* **37**, 53-66 (2022). (\*authors contributed equally)
4. Kenkel, WM, **Gustison, ML**, Beery, AK, A neuroscientist’s guide to the vole. *Curr. Protoc.* **1**, e175 (2021).
3. Phelps, SM, **Gustison, ML**, The transient joys of others—neural ensembles encode social approach in bonded voles. *Proc. Natl. Acad. Sci.* **117**, 12510–12512 (2020).
2. Bergman, TJ, Beehner, JC, Painter, MC, **Gustison, ML**, The speech-like properties of nonhuman primate vocalizations. *Anim. Behav.* **151**, 229–237 (2019).
1. Kershenbaum, A, **et al.**, Acoustic sequences in non-human animals: a tutorial review and prospectus. *Biol. Rev.* **91**, 13–52 (2016).

#### **HONORS AND AWARDS**

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2017	Wyvell Award for Outstanding Dissertation in Biopsychology, Department of Psychology, University of Michigan Outstanding Graduate Student Instructor Award, University of Michigan
2016	Pillsbury Research Award, Psychology Dept., University of Michigan Graduate Student Travel Award, Animal Behavior Society Travel Award, Rackham Graduate School, University of Michigan
2013	Travel Award, Rackham Graduate School, University of Michigan
2012	Travel Award, Rackham Graduate School, University of Michigan
2011	Education Committee Travel Award, Animal Behavior Society Travel Award, Rackham Graduate School, University of Michigan
2009	University Bookstore Academic Excellence Award for Outstanding Honors Thesis, University of Wisconsin-Madison Rosevear Travel Award, Psychology Dept., University of Wisconsin-Madison
2008	Gilchrist Award for Outstanding Experimental Psychology Project, Psychology Dept., University of Wisconsin-Madison
2008	Rosevear Travel Award, Psychology Dept., University of Wisconsin-Madison

## **SELECTED PRESENTATIONS**

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### Seminars and Invited Talks

- 2022 Emory University, Center of Translational Neuroscience Journal Club  
University of Texas at Austin, Brain, Behavior and Evolution Seminar Series
- 2021 Society for Neuroscience Conference, Neural Mechanisms of Rodent Vocal Communication Symposium
- 2020 University of Texas at Austin, Molecular Sciences BioTACOS Lecture Series  
University of Texas at Austin, Brain, Behavior and Evolution Seminar Series
- 2018 Animal Behavior Society Meeting, President's Symposium  
University of Texas at Austin, Brain, Behavior and Evolution Seminar Series
- 2017 Animal Behavior Society Meeting, Allee Symposium
- 2015 University of Michigan, Department of Psychology, Pat Gurin Lecture Series
- 2014 Animal Behavior Society Meeting, Function and Evolution of Low-Amplitude Communication Signals Symposium
- 2013 University of Wisconsin-Madison, Charles Snowdon Festschrift Symposium  
Roehampton University, Primatology Masters Program 10-year Celebration
- 2012 XXIV Congress of the International Primatological Society, Eavesdropping on the Acoustic World of Nonhuman Primates Symposium

### Conference Abstracts (\*selected for oral presentation)

- 2022 Gustison, ML, Muñoz Castañeda, R, Osten, P, Phelps, SM, Sexual coordination in a whole-brain map of pair-bonding. Neuroscience, San Diego, CA  
Gustison, ML, Muñoz Castañeda, R, Osten, P, Phelps, SM, Sexual coordination in a whole-brain map of pair-bonding. Society for Social Neuroscience Meeting, San Diego, CA  
Gustison, ML, Muñoz Castañeda, R, Osten, P, Phelps, SM, Mapping the vocal behavior network in a socially monogamous rodent. Neural Mechanisms of Acoustic Communication Gordon Research Conference, Mt. Holyoke, MA  
Gustison, ML, Muñoz Castañeda, R, Osten, P, Phelps, SM, A whole-brain map of prairie vole pair-bonding circuits. CSHL Neuronal Circuits Meeting, Cold Spring Harbor, NY \*
- 2021 Gustison, ML, Brain-wide networks underlying vocal behavior during prairie vole pair-bonding. Neuroscience, Chicago, IL \*  
Gustison, ML, Phelps, SM, Vocal complexity predicts social bonding behavior in a monogamous rodent. Animal Behavior Society Virtual Meeting \*  
Gustison, ML, Phelps, SM, A vocal signature of pair-bonding in prairie voles. Society for Behavioral Neuroendocrinology Virtual Meeting

- 2020 Gustison, ML, Muñoz Castañeda, R, Osten, P, Phelps, SM, Mapping the vocal behavior network in a monogamous rodent, Gordon Research Conference - Neural Mechanisms of Acoustic Communication, Newry, ME. (*Meeting canceled*)  
Gustison, ML, Phelps, SM, Vocal activity is coupled to partner proximity and mating during pair-bonding in a monogamous rodent. Society for Integrative and Comparative Biology Meeting, Austin, TX \*
- 2019 Gustison, ML, Phelps, SM, Automated tracking of social interaction as a tool to capture the emergence of prairie vole pair bonds. Society for Social Neuroscience Meeting, Chicago, IL  
Gustison, ML, Phelps, SM, Vocal communication during prairie vole pair bond formation, Society for Vole Research Meeting, Austin, TX
- 2018 Gustison, ML, Ghazanfar, AA, The developmental neuromechanics of vocal behavior. Animal Behavior Society Meeting, Milwaukee, WI \*  
Gustison, ML, Borjon, JI, Takahashi, DY, Ghazanfar, AA, Energy mediates developmental interactions between vocal, postural and locomotor behavior in marmosets. Animal Behavior Society Meeting, Milwaukee, WI \*
- 2017 Gustison, ML, Social functions of vocal complexity in wild geladas. Animal Behavior Society Meeting, Toronto, Canada \*
- 2016 Gustison, ML, Nevárez, N, Seharsweeney, M, Wybrecht, M, Wohl, IK, Wright, E E, Aragona, BJ, Dopaminergic mechanisms of vocal communication in prairie voles. Neuroscience, San Diego, CA  
Gustison, ML, Bergman, TJ, Wild geladas use complex calls to manage conflicts. XXVI Congress of the International Primatological Society, Chicago, IL \*  
Gustison, ML, Tinsley Johnson, E, Fashing, PJ, Nguyen, N, Bergman, TJ, Defining 'complexity' in gelada vocal sequences. Animal Behavior Society Meeting, Columbia, MO
- 2014 Gustison, ML, Bergman, TJ, Why grunt? Exploring the form and function of soft calls in geladas and other primates. Animal Behavior Society Meeting, Princeton, NJ \*
- 2013 Gustison, ML, Le Roux, A, Fashing, P, Nguyen, N, Bergman, TJ, Geographical variation in gelada call sequences. Animal Behavior Society Meeting, Boulder, CO \*
- 2012 Gustison, ML, Aubert, Y, Edwards, AK, Abbott, DH, Manipulation of female marmoset serotonin alters social transitions with male pairmates. XXIV Congress of the International Primatological Society, Cancun, Mexico \*  
Gustison, ML, Bergman, TJ, Comparing vocal complexity in baboons and geladas. XXIV Congress of the International Primatological Society, Cancun, Mexico \*
- 2011 Gustison, ML, Le Roux, A, Bergman, TJ, A comparative study of vocal complexity in wild baboons (*Papio ursinus*) and geladas (*Theropithecus gelada*). VIII Göttinger Freilandtage, Göttingen, Germany.

Gustison, ML, MacLarnon, A, Wiper, S, Semple, S, An experimental study of behavioural coping strategies in free-ranging Barbary macaques (*Macaca sylvanus*). American Society of Primatologists Meeting, Austin, TX \*

Gustison, ML, MacLarnon, A, Wiper, S, Semple, S, An experimental study of behavioural coping strategies in free-ranging Barbary macaques (*Macaca sylvanus*). Animal Behavior Society Meeting, Bloomington, IN

2009 Gustison, ML, Snowdon, CT, Fernandez-Duque, E, Social monogamy: Proximity maintenance and foraging patterns in the wild Argentinean owl monkey. American Society of Primatologists Meeting, San Diego, CA \*

## **TEACHING EXPERIENCE**

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### Courses – Instructor

#### *Western University*

2024 Psych 4991G: Undergraduate Special Topics Course on “Neuroethology of Social Behaviour” (6 students)

#### *University of Michigan*

2017 Psych 401: Undergraduate Capstone Seminar on “Exploring the Origins of Language” (18 students)

2016 Psych 401: Undergraduate Capstone Seminar on “Exploring the Origins of Language” (9 students)

### Courses – Teaching Assistant

#### *University of Michigan*

2015 Psych 335: Introduction to Animal Behavior (Instructor: Dr. Ben Dantzer). Taught 57 students across three Discussion/lab sections.

Psych 230: Introduction to Biopsychology (Instructor: Dr. Martin Sarter). Taught 77 students across 3 Lab sections.

2013 Psych 335: Introduction to Animal Behavior (Instructor: Dr. Thore Bergman). Taught 69 students across 3 Discussion/Lab sections.

2012 Psych 335: Introduction to Animal Behavior (Instructor: Dr. Thore Bergman). Taught 71 students across 3 Discussion/Lab sections.

2012 Psych 111: Introduction to Psychology (Instructor: Dr. Marion Perlmutter). Taught 70 students across 3 Discussion sections.

#### *University of Wisconsin-Madison*

2011 Psych 225: Experimental Psychology (Instructor: Dr. Bryan Hendricks). Taught 17 students across 2 Lab sections.

### Formal Training

2016 Graduate Teaching Certificate Program, University of Michigan

2015 Preparing Future Faculty Training Course, University of Michigan

### Guest Lectures

- 2016 Undergraduate Seminar “Friendships and Social Networks in Primate Behavior”,  
University of Michigan  
Undergraduate Seminar “What Makes Us Human?”, University of Michigan
- 2012 Observational Methods, University of Michigan  
Introduction to Psychology, University of Michigan

### **MENTORING EXPERIENCE**

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#### Graduate Students

##### *University of Texas at Austin*

- 2022 Taylor Hite, PhD student, SAGES mentoring program, UT Austin  
2020-2022 Katherine Horton, Masters Student, Roehampton University  
2018-2021 Melissa Painter, PhD Student, University of Michigan  
2018 Madeleine Dwortz, PhD Rotation Student, University of Texas at Austin

#### Undergraduate Students

##### *Western University*

- 2024- Timothy Zhang, Research Assistant, Psychology Volunteer Program  
2023- Yashvi Patel, Research Assistant, Psychology Volunteer Program (Fall 2023),  
Independent Study Student (Winter 2024)  
2023- Eric Lu, Research Assistant, Psychology Volunteer Program (Fall 2023), Work  
Study Program (Winter 2024)  
2023- Khali Ahmed, Research Assistant, Work Study Program  
2023- Mohamad Abdulal, Research Assistant, Work Study Program

##### *University of Texas at Austin*

- 2021 Ishita Rawat, Association for Women in Science Mentorship Program  
2021 Angela Chung, Research Assistant  
2018-2021 Desiree Lama, Research Assistant and Independent Study Student  
2019 Morgan Klein, Research Assistant and Independent Study Student

##### *Princeton University*

- 2017-2018 Kaamya Varagur, Honors Thesis Student

##### *University of Michigan*

- 2015-2016 Matt Sehrsweeney, Honors Thesis Student  
Minna Wybrecht, Research Assistant  
2014-2016 Megan Skrzypek, Undergraduate Research Opportunity Program  
2013-2015 Niki Abdou, Undergraduate Research Opportunity Program  
Sara Shamaskin, Research Assistant  
2011-2012 Edna Chiang, Undergraduate Research Opportunity Program  
Natalie Cook, Michigan Association of Psychology Scholars Program  
Rebecca David, Michigan Community Scholars Program  
Jessica Feller, Research Assistant  
Chelsea Miller, Research Assistant



Erin Person, Undergraduate Research Opportunity Program

## **ACADEMIC SERVICE**

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### Journal ad hoc review

- *Animals, Animal Behaviour, Axios Review, Behavioral Ecology and Sociobiology, Biology, BMC Zoology, Biology Letters, Communications Biology, Current Biology, Ethology, Evolution, Human Evolution, International Journal of Primatology, Naturwissenschaften, PloS ONE, Proceedings of the Royal Society B, Royal Society Open Science*

### Institutional service

- Graduate Affairs Committee, Psychology, Western University (2023-Present)
- Strategic Planning Committee, Psychology, Western University (2023-Present)
- Mentor, Students' Association for Gender Studies Engagement, UT Austin (2022)
- Guest panelist, Career development workshop, University of Roehampton (2022)
- Guest speaker, Career development seminar, Psychology, University of Michigan (2021)
- Mentor, Association for Women in Science, University of Texas at Austin (2021)
- Graduate Student Liaison, Department of Psychology, University of Michigan (2015-2016)

### Society service

- Diversity, Equity and Inclusion Committee, Society for Social Neuroscience (2021-2022)
- Minisymposium Chair, Society for Neuroscience (2021)
- Session Moderator, Animal Behavior Society (2021)
- Grant Reviewer, Animal Behavior Society (2018, 2019)

## **PROFESSIONAL MEMBERSHIPS**

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### Current

- Society for Behavioral Neuroendocrinology (joined 2021)
- Society for Neuroscience (joined 2014)
- Society for Social Neuroscience (joined 2014)
- Animal Behavior Society (joined 2011)

### Previous

- Society for Integrative and Comparative Biology (2019-2020)
- International Primatological Society (2010-2016)
- American Society of Primatologists (2009-2012)
- Primate Society of Great Britain (2009-2010)

## **SCIENCE OUTREACH**

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- Co-organizer and Demonstrator for a Brain Anatomy Workshop, Women in Science and Engineering (WISE) Summer Camp, University of Michigan, Ann Arbor, MI (2016)
- Demonstrator, MYELIN outreach event, Bryant Center, Ann Arbor, MI (2016)
- Demonstrator, BrainsRule! outreach event for 6<sup>th</sup>-7<sup>th</sup> grade students in the Detroit Metropolitan Area, Michigan League, Ann Arbor, MI (2015)
- Guest speaker, Kamp Kurat Family Summer Program, Somerset Center, MI (2014)

- Guest speaker, Ann Arbor Science and Skeptics Group, Ann Arbor, MI (2013)