

# Dongmin (Dennis) Kim

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## Education

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|---|-----------|
| <b>Ph.D. in Ecology, Evolution and Behavior</b>   | 2019-2024 |
| <ul style="list-style-type: none"><li>University of Minnesota, Twin Cities</li><li>(Advisors: Allison Shaw, John Fieberg)</li><li><i>Dissertation: Exploring the hidden drivers of animal movement: traits, memory, and disease</i></li></ul> |           |
| <b>B.A. in Statistics</b>   | 2013-2019 |
| <ul style="list-style-type: none"><li>University of Minnesota, Morris</li></ul>   |           |

## Primary Academic Appointments

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|---|--------------|
| <b>Postdoctoral Associate</b>   | 2024-present |
| <ul style="list-style-type: none"><li>University of Minnesota, Twin Cities</li><li>Department of Ecology, Evolution, and Behavior (EEB)</li></ul> |              |
| <b>Postdoctoral Associate</b>   | 2024-present |
| <ul style="list-style-type: none"><li>Harvard University</li><li>Department of Organismic and Evolutionary Biology (OEB)</li></ul>                |              |

## Other Academic Experience

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|---|--------------|
| <b>Max Planck Institute of Animal Behavior</b>  | 2024-present |
| <ul style="list-style-type: none"><li><a href="#">Drylands Project and Vulture Research Consortium</a></li></ul>  |              |
| <b>Smithsonian's National Zoo &amp; Conservation Biology Institute</b>  | 2022-2024    |
| <ul style="list-style-type: none"><li><a href="#">Scimitar-horned Oryx Reintroduction</a></li><li><a href="#">Tracking and Migratory Connectivity</a></li></ul> |              |

## Professional Experience

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| <b>Max Planck Institute of Animal Behavior</b>   | 2024-present |
| <ul style="list-style-type: none"><li>Google Earth Engine, Generalized Mixed Effects Models (GLMMs)</li><li>Advisor(s): Anne K. Scharf, Martina Scacco, Kamran Safi</li></ul>                |              |
| <b>Smithsonian's National Zoo &amp; Conservation Biology Institute</b>   | 2022-present |
| <ul style="list-style-type: none"><li>Hidden Markov models (HMMs), simulation of animal space use</li><li>Advisor(s): Katherine Mertes, Théo Michelot, Jared Stabach, John Fieberg</li></ul> |              |
| <b>National Science Foundation (NSF) INTERN</b>  | 2022-2023    |
| <ul style="list-style-type: none"><li>SIR models, Ordinary differential equations (ODEs)</li><li>Advisor(s): Allison Shaw</li></ul>  |              |
| <b>Smithsonian Migratory Bird Center</b>   | 2022         |
| <ul style="list-style-type: none"><li>Visualization of NOAA satellite images, animal migration</li><li>Advisor(s): Autumn-Lynn Harrison</li></ul>  |              |
| <b>University of Minnesota, Twin Cities</b>  | 2019, 2022   |
| <ul style="list-style-type: none"><li>Bayesian hierarchical model, integrated step selection analyses (iSSAs)</li><li>Advisor(s): Todd Arnold, John Fieberg</li></ul>                        |              |

## Honors, Awards, Fellowships

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|---|-----------------|
| University of Minnesota - Doctoral Dissertation Fellowship (\$26,000)                               | 2023-2024       |
| National Science Foundation (NSF) - INTERN Award (\$50,329)   | 2022-2023       |
| Smithsonian Institution Fellowship (\$11,200)   | 2022            |
| World Wildlife Fund (WWF) BRIDGE Data Science and Visualization Graduate Intern (declined)          | 2022            |
| University of Minnesota - Graduate Summer Fellowship (\$14,570)                                     | 2021, 2023-2024 |
| Howard Hughes Medical Institute (HHMI) Inclusive Excellence Teaching Assistant Fellowship (\$1,000) | 2019            |

## Publications

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### Published

- **Kim D**, Shaw AK. [“Migration and tolerance shape host behavior and response to parasites infection”](#) *Journal of Animal Ecology* (2021)
- Chatterjee N, Wolfson DW, **Kim D**, Velez J, Freeman S, Bachelier N, Shertzer K, Christopher Taylor J, Fieberg J. [”Modeling individual variability in habitat selection and movement using integrated step-selection analyses”](#) *Methods in Ecology and Evolution* (2024)

### In Press

- Shaw AK, Ales R, Bisesi AT, **Kim D**, Lutz P, Narayanan N, Shao C, Torstenson MS, Wojan CM. [”Six personas to adopt when framing theoretical research questions in biology”](#) *Proceedings of the Royal Society B* (2024)

### In Review

- **Kim D**, Thompson PR, Wolfson DW, Merkle J, Oliveira-Santos L. G. R., Forester J, Avgar T, Lewis MA, Fieberg J. [”Identifying signals of memory from observations of animal movements”](#)
- Gould E, Fraser HS, Parker TH, Shinichi N, Griffith SC, Vesk PA, Fidler F,... **Kim D**, ..., Tompkins EM. [”Same data, different analysts: variation in effect sizes due to analytical decisions in ecology and evolutionary biology”](#)
- Torstenson MS, Wolfson DW, Safran SM, Walton DJ, Halberg AB, **Kim D**, Tan YF, Kramer GR, Andersen DE. [”North American bird migration in the context of conservation: a review”](#)
- Shaw AK, Fouda L, Mezzini S, **Kim D**, Chatterjee N, Wolfson D, Abrahms B, Attias N, Beardsworth CE, Beltran R, Binning SA, Blincow KM, Chan Y-C, Fronhofer EA, Hegemann A, Hurme ER, Iannarilli F, Kellner JB, McCoy KD, Rafiq K, Saastamoinen M, Sequeira AMM, Serota MW, Sumasgutner P, Tao Y, Torstenson M, Yanco SW, Beck KB, Bertram MG, Beumer LT, Bradarić M, Clermont J, Ellis-Soto D, Faltusová M, Fieberg J, Hall RJ, Kölzsch A, Lai S, Lee-Cruz L, Loretto M-C, Loveridge A, Michelangeli M, Mueller T, Riotte-Lambert L, Sapir N, Scacco M, Teitelbaum CS, Cagnacci F. [”Perceived and observed biases within scientific communities: a case study in movement ecology”](#)
- **Kim D**, Mertes K, Michelot T, Stabach JA, & Fieberg J, [”Detecting disease progression from animal movement using hidden Markov models”](#)

### In Preparation

- Chatterjee N, Wolfson DW **Kim D**, Freeman S, Kelly A, Hodson J, & Fieberg J, [”Synthesis of methods to analyze responses to linear features using telemetry data”](#)

## Selected Invited Talks

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| Smithsonian National Zoological Park, Remote Sensing Group | Oct 2023 |
| Harvard University, Moorcroft Lab                          | Sep 2023 |
| University of Minnesota, EEB Seminar                       | Sep 2023 |

## Conference Presentations

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|---|----------|
| The Wildlife Society (TWS) Annual Conference, KY, USA (Poster)  | Nov 2023 |
| Gordon Research Conference (GRC), Lucca, Italy (Poster)         | May 2023 |
| Gordon Research Seminar (GRS), Lucca, Italy (Poster)            | May 2023 |
| North American Duck Symposium (NADS), Winnipeg, Canada (Poster) | Aug 2019 |

## Teaching Experience

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### University of Minnesota, Twin Cities:

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| FW 5051: Analysis of Population        | Spring 2022     |
| EEB 3407/5407: Ecology                 | Fall 2019, 2021 |
| EEB 1961: Foundations of Biology Lab I | Spring 2021     |

### University of Minnesota, Morris:

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|--------------------------------|-------------|
| STAT 3601: Data Analysis       | Fall 2018   |
| STAT 1601: Intro to Statistics | Spring 2018 |

## Service & Outreach

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### Non-academic Career Seminar | *Lead organizer* 2021-2023

- Initiated and organized informal informational interviews with early-career researchers in non-academic positions (PhDs in Ecology, Evolution, Behavior, and Conservation Science)

### Field Guides | *Mentor* 2022-2024

- Mentored undergraduate students broadly interested in ecology, evolution, and behavior to help them find on-campus research positions, connect them with potential employers, help them apply to summer research positions

### Bell Museum Summer Camp Summer 2024

- Taught kids learn about animal migration, reduced fear of math, introduction to using conceptual models to study the real world

## Data Competition

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### Interdisciplinary Health Data Competition | *Machine Learning* 2021

- Analyzed Covid-19 data to identify possible factors that shape Covid-19 responses (cases, deaths, hospitalization)
- Performed variable selection in the data by using Lasso methods and fit the model with Generalized Linear Mixed Model (GLMM)

### Midwest Undergraduate Data Analytics Competition (MUDAC) | *Decision tree learning* 2018

- Identify relevant fan retention metrics in order to maximize the renewal rate of season ticket holders for the Minnesota Wild
- Analyzed the dataset provided by the Minnesota Wild by using classification analysis

## Technical Skills

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**Programming languages:** Bash, R

**Miscellany:** Google Earth Engine, GitHub, HTML, Knitr, LaTeX, Markdown