

## Maggie Wiśniewska, Ph.D.

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### Education

- 2021 **Ph.D. in Biological Sciences** - New Jersey Institute of Technology (NJIT), Newark, NJ  
**Advisors:** Drs. Gareth Russell and Simon Garnier  
**Dissertation:** *The interplay of the physical landscape and social dynamics in shaping movement of African savanna elephants (Loxodonta africana)*
- 2011 **M.S. in Biology** - Western Kentucky University (WKU), Bowling Green, KY  
**Advisor:** Dr. Bruce Schulte  
**Thesis:** *Factors influencing travel order as proxy for leadership and trade-offs in activity budgets in lactating and nonlactating African savanna elephants*
- 2006 **B.S. in Biology** - University of Texas (UT Austin), Austin, TX
- 2003 **A.S. in Veterinary Technology** - Manor College, Jenkintown, PA  
PA State Board of Veterinary Medicine Certification

### Scientific Research Experience

- 2015 - 2021 **Doctoral Researcher** - NJIT
- Develop and lead multifaceted, computational research on movement behavior of group-living animals (with special focus on savanna elephants)
  - Set, tracked and adjusted self-imposed and external deadlines to meet project goals
  - Secured funding and managed budgets and expenses
  - Formed international data-sharing collaborations
  - Analyzed remotely sensed data using maximum likelihood estimation and statistical modeling
  - Published and disseminated research at scientific conferences in the US and abroad
- 2014 **Research Fellow** - Utopia Scientific and Etosha National Park (ENP), Namibia
- Collaborated in research on behavioral ecology of savanna elephants
  - Supervised day-to-day operations of a research team at a remote, research station
  - Collected and analyzed behavioral, demographic and biological sample data
  - Constructed photographic database of unknown elephant herds
  - Co-wrote research manuscripts for publication
  - Developed a set of recommendations for elephant management upon solicitation by ENP's personnel
- 2009 - 2011 **Masters Researcher** - WKU and Addo Elephant National Park (AENP), South Africa
- Developed and lead field research on socioreproductive behavior of savanna elephants
  - Analyzed behavioral using with frequentist statistics
  - Published research articles
  - Disseminated research at scientific conferences in the US
  - Coordinated research activities with AENP personnel and administrators at the local and regional levels
  - Assisted in research on 1) behavior and conservation of black rhinoceros; and 2) the effects of lions predation on elephant sociality
- 2007 - 2009 **Research Assistant** - Brackenridge Field Laboratory (BFL), UT Austin
- Assisted in research on biocontrol of invasive fire ants
  - Provided insect husbandry
  - Collected and curated behavioral data on interactions between fire ants and their parasites
  - Established BFL's genomic laboratory and developed a genetic microsatellite library for various eusocial, behavior marker
- 2003 - 2005 **Licensed Veterinary Technician** - AMPM Animal Hospital, Austin, TX
- Practiced prophylactic, emergency and intensive care veterinary nursing
  - Conducted case management and client education

## Teaching Experience

- 2015 - 2021 **Graduate Teaching Assistant - NJIT**  
**Courses:** Concepts in Biology Recitation; Foundations of Ecology and Evolution Laboratory  
**Tasks:** Taught in person and virtual, lower- and upper-level lecture and laboratory courses; Created lesson plans and testing materials; Facilitated in-class discussion and guided students during in-class assignments; Graded assignments and provided feedback; Maintained student records; Held office hours
- 2014 - 2015 **Instructor of Record - Warren County Community College, Washington, NJ**  
**Course:** General Biology Lecture; Principles of Human Biology Laboratory and Lecture, Evolutionary Biology Lecture  
**Tasks:** Performed all tasks described above in lower-level lecture and laboratory courses
- 2012 - 2013 **Instructor of Record - San Jose City College, San Jose, CA**  
**Courses:** Human Biology Laboratory and Lecture; Ecology Lecture  
**Tasks:** Performed all tasks described above in lower-level lecture and laboratory courses
- 2012 - 2013 **Instructor of Record - Cañada Community College, Redwood City, CA**  
**Courses:** General Health Science  
**Tasks:** Performed all tasks described above in lower-level lecture and laboratory courses
- 2012 - 2013 **Instructor of Record - Monterey Community College, Monterey, CA**  
**Courses:** Organismal Biology Laboratory  
**Tasks:** Performed all tasks described above in a lower-level laboratory course
- 2012 **Teaching Assistant - University of Notre Dame Research Center, Land O'Lakes, WI**  
**Course:** Practicum in Field Ecology  
**Tasks:** Assisted in instruction of an upper-level field practicum course; Guided students during field and desk research
- 2009 - 2011 **Graduate Teaching Assistant - WKU**  
**Course:** Ecology, Evolution and Biodiversity Laboratory  
**Tasks:** Assisted in instruction of a lower-level laboratory course; Facilitated in-class discussion and guided students during in-class assignments; Graded assignments and provided feedback; Maintained student records; Held office hours

## Peer-Reviewed Publications

- Wiśniewska M**, Puga-Gonzalez I, Lee P, Moss C, Russell G, Garnier S, Sueur C. "Simulating the effects of poaching on the functioning of African savanna elephant social networks." *PLoS Computational Biology*, 18 (1): e1009792
- Wiśniewska M**, Freeman EW, Schulte BA. (2015). "Activity patterns among female African elephants: the role of age, lactational status and sex of the nursing calf." *Behaviour*, 152, 1719-44
- Wiśniewska M**, Pridgen L, Eldridge J, Yates J, Hook M, Kem D, Schulte B. (2012). "A primer of conservation Behavior, Blumstein D, Fernández-Juricic E." *Biological Conservation*, 148, 219-21
- O'Connell-Rodwell C, Freeman P, Kinzley C, Berezin J, Sandri M, **Wiśniewska M**, Jessup K, Rodwell T. "Digital photogrammetry of the craniofacial region offers a novel non-invasive technique for aging male African elephants." In review at *Mammalian Biology* journal
- O'Connell-Rodwell C, Sandri M, Berezin J, Munevar J, Kinzley C, Wood J, **Wiśniewska M**, Kilian W. "Hormonal and age driven responses of male African elephants (*Loxodonta africana*) to estrous call playbacks may inform conservation management tools." In review at *Animals* journal

## Selected Conference Presentations

- Wiśniewska M**, O'Connell-Rodwell C, Kilian W, Garnier S, Russell G. "Environmental and social drivers of movement in African savanna elephant - a collective movement perspective." Virtual presentation - Annual Conference of the Animal Behavior Society (ABS), 2021
- Wiśniewska M**, O'Connell-Rodwell C, Kilian W, Garnier S, Russell G. "Environmental and social drivers of movement in African savanna elephant - a collective movement perspective." Virtual presentation - Animal Behaviour Live, 2020
- Wiśniewska M**, Puga-Gonzalez I, Lee P, Moss C, Russell G, Garnier S, Sueur, C. "Simulating the effects of poaching on the functioning of African savanna elephant social networks" Presentation - International Conference for Conservation Biology (ICCB), Kuala Lumpur, Malaysia, 2019

**Wiśniewska M**, Dykstra N, O'Bryan L, Cowlshaw G, King A, Garnier S, Russell G. "Social resource selection model - assessing the effects of the physical and social landscapes on individual movement in group living species." Poster - Annual Conference of ABS Milwaukee, WI, 2018

**Wiśniewska M**, Dykstra N, O'Bryan L, Cowlshaw G, King A, Garnier S, Russell G. "Teasing apart environmental and social influences during group movement in free-ranging animals." Presentation - ICCB, Cartagena, Colombia, 2017

**Wiśniewska M**, Freeman E, Schulte B. "Risk-sensitive behaviors as influenced by age and reproduction in female African elephants." Poster - Annual Conference of ABS, Princeton, NJ, 2014

### Selected Awards and Fellowships

2021	<b>College of Science and Liberal Arts Outstanding Graduate Student Award</b> , NJIT
2019	<b>Graduate Student Travel Award</b> , NJIT (US\$ 800)
2019	<b>STEM Chateaubriand Fellowship</b> , The Hubert Curien Interdisciplinary Institute, Strasbourg, France (€ 5000)
2018	<b>Excellence in Instruction by Teaching Assistants Award</b> , NJIT (US\$ 1500)
2018	<b>Graduate Student Travel Award</b> , The Annual Conference of ABS (US\$ 500)
2017	<b>Initiative for Multidisciplinary Research Teams Application Award</b> , Rutgers University Newark (US\$ 3000)
2011	<b>Alltech Young Scientist, United States Zone 3rd Place Graduate Award</b> , WKU (US\$ 300)

### References

**Gareth Russell, Ph.D.** – Dissertation Research Mentor  
Associate Professor of Biology  
The Federated Department of Biological Sciences, NJIT  
[russell@njit.edu](mailto:russell@njit.edu)

**Maria Stanko, Ph.D.** – Teaching Mentor  
Senior University Lecturer  
The Federated Department of Biological Sciences, NJIT  
[mstanko@njit.edu](mailto:mstanko@njit.edu)

**Bruce Schulte, Ph.D.** – Master's Research Mentor  
Professor of Biology; Associate Vice-President for Strategy, Performance and Accountability  
The Biology Department, WKU  
[bruce.schulte@wku.edu](mailto:bruce.schulte@wku.edu)

**Cédric Sueur, Ph.D.** – Academic Collaborator  
Associate Professor of Life Sciences  
Department of Ecology, Physiology and Ethology, Université de Strasbourg, CNRS, IPHC, UMR 7178, Strasbourg, France  
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**Caitlin O'Connell-Rodwell, PhD** – Academic Collaborator  
Research Professor of Biology  
Harvard University Center for the Environment  
Co-founder of Utopia Scientific  
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