

Danbee Kim, PhD

Neuroscientist | Educator



SUMMARY

Neuroscientist and educator with **15+ years of experience teaching neuroanatomy, physiology, and systems biology** across university, industry, and community settings. Specialized in translating complex biological concepts into accessible, engaging experiences for diverse learners. Extensive experience developing curricula, mentoring students, and delivering high-quality instruction in traditional and project-based environments. Demonstrated commitment to inclusive, curiosity-driven education.

EDUCATION

2013 to 2020
Lisboa, Portugal

PhD in Neuroscience
*Chamalimaud Centre for the Unknown,
International Neuroscience Doctoral Programme*

2005 to 2009
Cambridge, USA

BSc in Brain and Cognitive Sciences (Course 9)
Massachusetts Institute of Technology

TEACHING EXPERIENCE

Lead Instructor

Matter Neuroscience | London, UK | 2023-2024

- Designed and delivered neuroscience and physiology curriculum for adult learners, interdisciplinary teams, and public audiences.
- Taught foundational concepts in **neuroanatomy, neural signaling, sensory systems, and physiological regulation**.
- Created multimedia teaching materials and assessment tools for diverse learning styles.

Course Co-director

CAJAL Advanced Neuroscience Training Programme | Multiple Locations | 2022-2024

- Designed and delivered "Modern Approaches to Behavioural Analysis", an annual one-week intensive training course for undergraduate, graduate, and post-doctoral researchers.
- Taught **conceptual frameworks for studying biological behavior**, fundamental concepts in **nervous system anatomy**, and **experimental design principles** for behavioral neuroscience.
- Organized online guest lecturers, local teaching assistants, and a course Discord server to provide further resources and 24/7 support to students joining the course from locations around the world.

Co-founder, Curriculum Developer, Instructor

Neuronautas, Academia Gulbenkian do Conhecimento | Lisboa, Portugal | 2018-2023

- Developed and taught a two-week project-based curriculum in **neurobiology, physiology, philosophy of science, and robotics** for high-school and early-college students.
- Created hands-on modules covering **organ systems, sensory physiology, motor control, and homeostasis**.
- Managed teaching assistants and mentored students through independent group projects.

Theory Tutor, Masters Thesis Advisor

Bartlett School of Architecture, University College London | London, UK | 2020-2022

- Taught biological principles -- including **human physiology, perception, and systems neuroscience** -- to graduate students in the *Design for Performance and Interaction MArch* course.
- Supervised thesis research, provided structured feedback, and fostered scientific communication skills.

Teacher, Staff

Appalachian Institute for Creative Learning | Mars Hill, North Carolina, USA | 2010-present

- Taught interdisciplinary courses including **introductory biology, neuroanatomy, and organismal physiology** in mixed-age classrooms at a summer camp for rising 3rd-12th grade students.
- Designed experiential learning activities emphasizing scientific reasoning and systems thinking.

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RELEVANT BIOLOGY & PHYSIOLOGY EXPERIENCE

- 15+ years teaching **neuroanatomy and physiology** in academic and informal settings.
- Developed neuroscience primer emphasizing **anatomy and physiology of nervous systems**, adapted for learners ranging from 8 year olds to university researchers.
- PhD research required deep understanding of **organ systems, behavior, and physiological regulation** in naturalistic contexts.
- Experience grounding interdisciplinary debates in **core anatomical and physiological principles**.
- Strong background in **cellular physiology, sensory systems, motor systems, and organism-level integration**.

CURRICULUM DEVELOPMENT & EDUCATIONAL LEADERSHIP

- Led strategic planning and content development for educational programs at Matter Neuroscience.
- Designed multi-week curricula, lab-free physiology activities, and interactive learning modules in settings such as aquariums, museums, and community centers.
- Created online learning environments, custom websites, and digital teaching tools that provided access to remote learners and supported organizational resilience during COVID-19 lockdowns.
- Launched a Junior TA program to nurture student leadership at Neuronautas.
- Managed teams of volunteer teaching assistants and cultivated a collective philosophy of compassionate, multi-cultural, and liberatory education.
- Participate as an alumni mentor, academic advisor, and life-long learner in intergenerational communities that emphasize free-choice, project-based, and site-specific curricula.

RESEARCH EXPERIENCE

Research & Outreach Scientist

NeuroGEARS, Ltd | London, UK | 2021-2023

- Conducted research on neural activity in naturalistic settings; developed tools for behavioral and physiological measurement.
- Communicated scientific findings to interdisciplinary collaborators and public audiences.

PhD Researcher

Champalimaud Centre for the Unknown | Lisboa, Portugal | 2012-2020

Marine Biological Laboratory | Woods Hole, Massachusetts, USA | 2014-2015

Sainsbury Wellcome Centre for Neural Circuits and Behaviour | London, UK | 2017-2020

- Developed theoretical and methodological framework for **field neuroscience**, integrating behavior, physiology, and environmental context.
- Benchmarked eye-tracking as a non-invasive measure of nervous system activity in complex environments.
- Designed and published a non-invasive technique for simultaneously studying single-cell neural activity and whole organism behavior.

SELECTED PUBLICATIONS

(Abridged for relevance; full list available upon request)

- Kim, D. & Xiao, X. (2023). "A Solarpunk Nervous System". *Vector*, 297, 141-145.
- Kim, D., et al. (2022) "An experimental method for evoking and characterizing dynamic color patterning of cuttlefish during prey capture." *Journal of Biological Methods* 9, no. 2: e161.
- Kim, D. (2022) "Are cephalopods making a comeback in neuroscience?". *BioTechniques*.
- Kim, D. & Kampff, A.R. (2020) "Neuroscience Does Design: What the Brain's Architecture Can Teach Architects." *Architectural Design* 90.6: 94-99.
- Kim, D. (2020) On the aims and methods of field neuroscience. PhD dissertation. Universidade Nova de Lisboa. DOI: 10.13140/RG.2.2.35235.11042

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TECHNICAL & TEACHING SKILLS

Biology & Physiology

- Human anatomy & physiology
- Neuroanatomy & systems neuroscience
- Sensory & motor physiology
- Behavioral biology
- Experimental design & data interpretation

Digital Tools

- Python (numpy, scipy, OpenCV, matplotlib), MATLAB, R
- Bonsai-Rx, Arduino
- HTML/CSS/JS, Markdown, LaTeX
- Illustrator, Photoshop, Premiere Pro

Pedagogical Skills

- Curriculum design
- Project-based learning
- Inclusive, multi-cultural, and multi-modal teaching practices
- Assessment design
- Science communication

ADDITIONAL CREATIVE & COMMUNITY WORK

2024 to 2025 Walthamstow, UK	Co-director, Events Manager, Chef <i>Pulse & Pickle</i> CIC, a community cultural center and plant-based restaurant
2018 to 2020 London, UK	Author, Illustrator, Project Manager <i>The First VIRS</i> , a YA sci-fi graphic novel integrating neuroscience concepts
2017 to 2020 Brighton, UK	Scientific & Artistic Director <i>Surprising Minds</i> , an interactive aquarium exhibit engaging 24,000+ visitors
2005 to present Various Locations	Experienced live performer (theater, music, circus arts) with strong public-facing communication skills

SELECTED FUNDRAISING AWARDS & EXPERIENCE

- 2019 | Kickstarter | 155 backers, 145% funding for *The First VIRS*
- 2019 | Sainsbury Wellcome Centre for Neural Circuits and Behaviour | Public Engagement Fund
- 2018 | University College London | Train and Engage Fund
- 2018 | Fundação Calouste Gulbenkian | Academias Gulbenkian do Conhecimento (Neuronautas)

REFERENCES

Available upon request.