

# DanbeeKim

Field Neuroscientist | Teacher | Author

## CONTACT

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www.danbeekim.org

## LANGUAGES

English (fluent),  
Korean (intermediate),  
Portuguese (beginner)

## COMPUTER SKILLS

Microsoft Office Suite,  
Illustrator, Photoshop,  
Premier Pro, Bonsai-Rx,  
Github, L<sup>A</sup>T<sub>E</sub>X, Python

## FABRICATION TOOLS

Epilog Helix Laser  
Cutter, sewing  
machine (standard  
and overlocking)

## MOVEMENT ARTS

capoeira, fire spinning,  
musical theater

## INSTRUMENTS

bass guitar, djembe,  
violin, vocals

## REFERENCES

available upon request

## MISSION

To create interactive, empathic experiences that empower the study of nervous systems in natural settings.

## EDUCATION

2013-2020 **DOCTOR OF PHILOSOPHY IN NEUROSCIENCE** Chantalimaud Centre for the Unknown  
International Neuroscience Doctoral Programme, Intelligent Systems Lab  
Thesis title: *On the aims and methods of Field Neuroscience: Non-invasive techniques for studying nervous systems in natural settings*

2005-2009 **SCIENTÆBACCULAUREUS** Massachusetts Institute of Technology  
*Brain and Cognitive Sciences*

## EXPERIENCE

since 2021 **NEUROGEARS, LTD** London, UK  
*Research Scientist, Outreach*

since 2021 **THE BARTLETT SCHOOL OF ARCHITECTURE, UCL** London, UK  
*Tutor, MArch Design for Performance and Interaction*

since 2021 **TERRASCOPE, MIT** Cambridge, Massachusetts, USA  
*Alumni Mentor*

since 2010 **APPALACHIAN INSTITUTE FOR CREATIVE LEARNING** Mars Hill, North Carolina, USA  
*Teacher, Staff*

## PUBLICATIONS AND EXHIBITS

Danbee Kim, Kendra Buresch, Roger Hanlon, Adam R. Kampff. "An experimental method for evoking and characterizing dynamic color patterning of cuttlefish during prey capture". *In prep.*

Danbee Kim. *The First VIRS*. London; 2020.

Danbee Kim, Adam R. Kampff. "Neuroscience Does Design: What the Brain's Architecture Can Teach Architects". *Architectural Design*, 90.6 (2020): 94-99. DOI: 10.1002/ad.2637.

André Marques-Smith, Joana P. Neto, Gonçalo Lopes, Joana Nogueira, Lorenza Calcaterra, João Frazão, Danbee Kim, Matthew G. Phillips, George Dimitriadis, Adam R. Kampff. "Recording from the same neuron with high-density CMOS probes and patch-clamp: a ground-truth dataset and an experiment in collaboration". *BioRxiv*, 2018. DOI: 10.1101/370080.

Danbee Kim. "Why I refuse to do animal testing in my science career". *Massive Science*. June 18, 2018.

Darío R. Quiñones, Gonçalo Lopes, Danbee Kim, Cédric Honnet, David Moratal, Adam Kampff. "HIVE Tracker: a tiny, low-cost, and scalable device for sub-millimetric 3D positioning". *Augmented Human*, 9 (2018). DOI: 10.1145/3174910.3174935.

Gonçalo Lopes, Danbee Kim. "How theater, start-up culture, and business history helped us become better neuroscientists". *Massive Science*. Oct 16, 2017.

Danbee Kim, Gonçalo Lopes. "Does modern neuroscience really help us understand behavior?" *Massive Science*. Oct 3, 2017.

*Surprising Minds*. Interactive installation and crowd human behaviour experiment. Installed 4 July 2017 at Sea Life Brighton, Brighton, UK. Danbee Kim, Kerry Perkins, Clive Ramble, Hazel Garnade, Gonçalo Lopes, Darío R. Quiñones, Reanna Campbell-Russo, Robb Barrett, Martyn Stopps, The EveryMind Team, Adam Kampff.

## EXPERIENCE CONTINUED...

2016-2019 **SAINSBURY WELLCOME CENTRE FOR NEURAL CIRCUITS AND BEHAVIOUR**

London, UK

*Visiting Researcher, Intelligent Systems Lab*

### AWARDS:

- SWC Public Engagement Fund: £3,000 (Feb 2019)
- UCL Train and Engage program: £1,000 (July 2018)

### EVENTS:

- "Dear Neuroscience: Touch and Proprioception", Organizer and Speaker (24 May 2019)
- 2017 Systems Seminars Annual Symposium: Cross-Species Conversations, Organizing team (21 Sept 2018)
- "Orchestrating the Brain: A collaborative workshop of musicians and neuroscientists", Organizer and Speaker (31 May 2018)

### SOCIETIES AND WORKING GROUPS:

- SWC-Gatsby PhD Society, Social Chair (May 2018 - May 2019)
- SWC Staff Student Consultative Committee, Student representative (Oct 2017 - Oct 2018)
- SWC NC3Rs working group, Member (July 2017 - July 2019)
- SWC Public Engagement Network, Member (Jan 2016 - Nov 2018)

2005-2019 **MIT MUSICAL THEATER GUILD**

Cambridge, Massachusetts, USA

*Member*

- Corresponding Secretary (2013-2019)
- Costume Shop Manager (2007-2009)

### SHOWS:

9 to 5, 2016: vocal director

Spring Awakening, 2015: pit orchestra (violin and guitar)

Legally Blonde, 2014: co-choreographer

Sweeney Todd, 2014: vocal director, pit orchestra (violin)

Reefer Madness, 2012: choreographer

Urinetown, 2012: Ma Strong, ensemble

Hack, Punt, Tool, 2012: co-writer, choreographer

Children of Eden, 2011: vocal director, Snake

Assassins, 2011: Charles Guiteau, co-props

25th Annual Putnam County Spelling Bee, 2011: vocal director, pit orchestra (violin)

Jekyll and Hyde, 2011: co-director, choreographer

Evil Dead, 2010: Annie, master seamstress

Little Shop of Horrors, 2010: assistant choreographer

Side Show, 2009: choreographer

Bare, 2009: Kyra; program designer, master seamstress

The Mystery of Edwin Drood, 2009: Angela Prysock/Princess Puffer; costume designer

Wild Party, 2008: Kate

Pippin, 2007: Bertha, Manson Trio; co-costume designer

Cabaret, 2007: costume designer

Reefer Madness, 2007: Mae; props designer

Children of Eden, 2006: Eve; costume designer

Crazy For You, 2006: Everett Baker

Chicago, 2006: director

Urinetown, 2006: Hot Blades Harry

Star Wars: The Musical, 2005: Bail Organa, Lobot, ensemble

2011-2013 **HACK, PUNT, TOOL**

Cambridge, Massachusetts, USA

*Co-writer*

- Co-wrote script and contributed to music to create an original show about hacking culture and life at MIT
- Collaborated with MIT administration, teachers, and students to create a work that has a significant positive impact on the MIT community
- Produced by the MIT Musical Theater Guild during IAP 2012
- Writing and music teams recorded and mastered an original cast recording, released in Sept 2012
- Released a subtitled video recording of the MIT production on YouTube in Sept 2013

## EXPERIENCE CONTINUED...

- 2011-2012 **MUSEUM OF SCIENCE** Boston, Massachusetts, USA  
*Education Associate, Current Science & Technology*
- developed, and performed 20-minute presentations on science and technology topics
  - contacted and coordinated guest presenters
  - organized logistics for Museum events
- 2009-2011 **HARVARD MEDICAL SCHOOL, BETH ISRAEL DEACONESS MEDICAL CENTER** Boston, Massachusetts, USA  
*EEG Lab Technician, Research Assistant*
- organized and managed EEG lab, Psychiatry Suite of BIDMC West Campus
  - designed and implemented EEG protocols written in Superlab and Presentation software
  - manage subject recruitment, coordination with clinical assessments, and payment
- 2009-2010 **ROFLCon** Boston, Massachusetts, USA  
*Staff*
- coordinated guest travel/lodging and event volunteers
  - organized event AV logistics
- 2008-2009 **DEPARTMENT OF BRAIN AND COGNITIVE SCIENCES, MIT** Cambridge, Massachusetts, USA  
*Undergraduate Researcher*
- HOW EXPECTATIONS CAN CHANGE PERCEPTION**  
Higher-Level Cognition Lab: Talia Konkle, Steven Piantadosi, Rebecca Saxe
- studied the effect of prior expectations on the perception of incongruent stimuli
  - designed and coded experimental tasks in Matlab; analyzed data in R
- OBSERVING CAUSAL LAWS BY TRACKING EYE MOVEMENTS**  
Early Childhood Cognition Lab: Elizabeth Bonawitz, Laura Schulz
- studied how young children learn to make predictions based on patterns
  - tracked eye movements using Tobii Eyetracker software; analyzed data using Matlab
  - studies were conducted at the Learning Lab at the Children's Museum of Boston
- 2005-2008 **FRESHMEN PRE-ORIENTATION PROGRAMS, MIT** Cambridge, Massachusetts, USA  
*Film Counselor for Freshmen Arts Pre-Orientation (FAP)*
- participated in FAP 2005; film counselor for FAP 2006, 2007, and 2008
  - organized projects and activities for the week-long program
  - co-wrote, filmed, and edited counselor introduction videos and a yearly FAP video
- 2006-2008 **SENIOR HAUS ANNUAL STEER ROAST** Cambridge, Massachusetts, USA  
*Food Veep*
- organized an outdoor feast for approximately 400 people
  - worked with fellow veeps and MIT staff on event registration, logistics, funding, and safety
  - coordinated shopping trips and the borrowed use of an industrial kitchen
  - trained an apprentice and contributed to a Food Veep Bible
- 2005-2008 **TERRASCOPE, MIT** Cambridge, Massachusetts, USA  
*Undergraduate Teaching Fellow, Kitchen and Snacks Coordinator*
- Terrascope is a year-long freshmen seminar that examines complex real-world problems, presents potential solutions to a visiting board of experts at the end of fall term, then creates a museum exhibit during spring term.
- participated as a freshman in Mission 2009: The Tsunami Threat to the Pacific
  - mentored as an Undergraduate Teaching Fellow in Mission 2011: Saving the Oceans
  - worked within a budget to stock and maintain the Terrascope kitchen
- 2007 **EDGERTON CENTER OUTREACH PROGRAM, MIT** Cambridge, Massachusetts, USA  
*Teaching Assistant*
- taught grade-school children topics in science and technology via hands-on classroom projects, including motorized Lego cars, rudimentary circuits, high speed photography, and basic chemistry