

# Danielle Lauren Kurtin

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Nationality: U.S. Citizen

## Education

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**PhD: University of Surrey**, Surrey, UK October 2019 – Present  
Department: Psychology, Faculty of Health and Medical Sciences

**MSc: Imperial College London**, London, UK October 2018 – October 2019  
**Translational Neuroscience** Awarded: Distinction

**Relevant Courses:** Functional Neuroanatomy · Cellular and Molecular Neuroscience · Neurodegenerative Disorders · Neuroinflammation, Stroke, and CNS Trauma · Neuroimaging · Computational Neuroscience

**BSc: Florida State University**, Tallahassee, FL, USA BSc awarded August 2017  
**Major:** Biological sciences Cumulative FSU GPA: 3.3  
**Minor:** Chemistry

## Research Experience

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**University of Surrey**, NeMo Lab October 2018 – Present  
*PhD Candidate*

- I will collect high-density EEG and fMRI data from participants in a task switching paradigm. Using functional and structural data I will create a model of the neural network dynamics during task switching. In a computational experiment space, Bayesian optimization will determine noninvasive brain stimulation parameters targeted to reduce the switch cost via modulating neural network dynamics. The data-driven hypothesized parameters will be tested empirically.
- Supervisory team: Dr. Ines Violante, Prof Anne Skeldon, Dr. Adam Hampshire, Dr. Romy Lorenz

**Imperial College London**, C3NL Lab, supervised by Dr. David Sharp and Dr. Lucia Li October 2018 - Present  
*Student Researcher*

- I characterized the mechanisms driving the effects of tDCS by modulating parameters such as brain state, stimulation polarity, and white matter structure (through study of traumatic brain injury patients). By developing an understanding of these parameters through the lens of activation and connectivity of neural networks, I hope to further develop the therapeutic potential of tDCS.

**Netherlands Institute for Neuroscience**, supervised by Dr. Ingo Willuhn January 2018 – September 2018  
*Student Researcher*

- I investigated the behavioral effects of deep brain stimulation with pilot technology in an OCD rat model. My methods included DBS, elevated plus maze, ultrasonic vocalizations, brain clearing, schedule induced polydipsia, and histology. I assisted another project studying the optogenetic inhibition of orexin neurons and assessed their role in acquiring habitual and goal-directed behaviors.

**Stagg Laboratory**, supervised by Dr. Scott Stagg January 2016 – May 2017  
*Student Researcher*

- I optimized purification procedures of clathrin-coated vesicles and prepared them for cryogenic electron microscopy. Creative highlights include using visual assessment of bovine brain tissue for quality and introducing a sucrose gradient.
- Publications: Paraan, Mohammadreza, Joshua Mendez, Savanna Sharum, Danielle Kurtin, Huan He, and Scott M. Stagg. "The Structures of Natively Assembled Clathrin Coated Vesicles." *bioRxiv* (2020).

## Publications and Literary Involvement

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### Publications:

Paraan, Mohammadreza, Joshua H. Mendez, Savanna Sharum, **Danielle Kurtin**, Huan He, and Scott M. Stagg. "The structures of natively assembled clathrin coated vesicles." *bioRxiv* (2020).

### Literary involvement:

Founder and a member of the Mini Hack Collection Board of Advisors on F1000 Research.

## Poster Presentations

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**Poster Title:** “Electric Anatomy”

Authors: Danielle Kurtin, Dr. Lucia Li, Prof Anne Skeldon, Dr. Ines Violante

*Presented at:* Lifelong Health Launch, University of Surrey, October 2019 • Postgraduate Research Showcase, University of Surrey, January 2020 • Meeting of the Minds, Imperial College London 2020

**Poster Title:** “Developing a mechanistic understanding of transcranial direct current stimulation”

Authors: Danielle Kurtin, Dr. Lucia Li

*Presented at:* Translational Neuroscience Presentations, Imperial College London, July 2019 • Dementia Research Symposium, Imperial College London, July 2019 • Crick Partnership Master Conference, Crick Institute, June 2019

**Poster Presentation:** “Optimization of clathrin coated vesicle purification from bovine brain tissue.”

Authors: Danielle Kurtin, Dr. Scott Stagg

*Presented at:* 2017 Undergraduate Research Symposium, Florida State University, March 2017 • Research Day, Cells/NUSA, March 2017.

## Lectures and Speaking Events

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**Lecture:** “Emergent Systems: Art and the Brain”

*Presented at:* Meeting of the Minds, Imperial College London, January 2020

**Lecture:** “Understanding the Physiological Effects of Stimulation”

*Presented at:* Dementia Research Symposium Imperial College London, July 2019.

**Panel Member:** “Careers Panel”, Imperial College London, UK, July 2019

**Interview:** “Art and Neuroscience.” The Arts Freak, London, May 2019. Subject.

**Lecture:** “Transcranial Direct Stimulation and its therapeutic potential in Traumatic Brain Injury patients.”

*Presented at:* Neuroscience Society Seminars, Imperial College London, February 2019.

**Lecture:** “Optimization of clathrin coated vesicle purification from bovine brain tissue.”

*Presented at:* Seminars in Biological Frontiers, Florida State University, May 2017.

## Leadership

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<b>Monthly Mini Hacks</b> , University of Surrey, UK <i>HackMaster</i>	November 2019 – Present
<b>Conference Committee</b> , Meeting of the Minds, Imperial College London, London, UK <i>Art Director</i>	June 2019 – Present
<b>OxBridge Brain Hackathon</b> , Cambridge, UK <i>Project Leader</i>	November 2019
<b>MSc Translational Neuroscience</b> , Imperial College London, UK <i>Neurotutor</i>	October 2019 – December 2019
<b>Board of Education</b> , Faculty of Medicine, Imperial College London, London, UK <i>Postgraduate Representative</i>	November 2018 – October 2019
<b>MSc Translational Neuroscience</b> , Imperial College London, London, UK <i>Class Representative</i>	September 2018 – September 2019

## Awards and Scholarships

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<b>Emergency First Aid</b> , QualSafe Awards, Surrey, UK <i>Level 3 Award</i>	February 2020 – February 2023
<b>Introduction to Good Clinical Practice</b> , NHS, UK <i>4 CPD Credits</i>	November 2018 – Present
<b>Summer School on Open and Reproducible Science</b> , University of Oxford, Oxford, UK <i>Scholarship</i>	September 2019
<b>Vice-Chancellors Award</b> , University of Surrey, Surrey, UK <i>Studentship</i>	July 2019
<b>People’s Choice Art in Neuroscience Award</b> , Meeting of the Minds, Imperial College London, UK	January 2019

<i>Award</i>	<b>British Neuropsychiatry Association Annual General Meeting</b> , London, UK	January 2019
<i>Student Grant</i>	<b>IHS Learning Liberty Seminar</b> , Pennsylvania, Philadelphia	June 2017
<i>Scholarship</i>	<b>Academic Leadership Award</b> , College of Arts and Sciences, Florida State University, Tallahassee, Florida	April 2017
<i>Award</i>	<b>First Place Presentation</b> , Research Day 2017, Cells/NUSA, Florida State University, Tallahassee, Florida	March 2017
<i>Nominee</i>	<b>Presidential Humanitarian Undergraduate Service</b> , Florida State University, Tallahassee, Florida	February 2017
<i>Certification</i>	<b>National Incident Management Systems (NIMS)</b> , FEMA, USA	September 2017
<i>Certification</i>	<b>Introduction to Incident Command System</b> , FEMA, USA	August 2017

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## Selected Employment History

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<b>Student Shaper</b> , Imperial College London, UK	January 2020 – Present
<i>Online course developer</i>	
<b>University of Surrey</b> , UK	October 2019 – Present
<i>Graduate Teaching Assistant</i>	
<b>Medical illustration artist</b>	October 2017 – October 2018
<i>Content Creator</i>	

## Volunteering

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<b>Surrey Reproducibility Society</b> , University of Surrey, Guildford, UK	September 2019 – Present
<i>Member</i>	
<b>Neuroscience Society</b> , Imperial College London, London, UK	February 2019 – Present
<i>Member</i>	
<b>Medical Reserve Corp</b> , Martin County Health Department, Stuart, Florida	August 2017 – August 2018
<i>Volunteer</i>	
<b>Donate Love ToTally</b> , Tallahassee, Florida	January 2016 – August 2017
<i>Founder</i>	
<b>Red Cross</b> , Capital Circle Chapter, Tallahassee, Florida	August 2016 – December 2017
<i>Volunteer</i>	
<b>Florida State University</b> , Tallahassee, Florida	January 2016 – August 2017
<i>Student leader</i>	
<b>McKnight Brain Institute</b> , University of Florida, Gainesville, FL	August 2017
<i>Shadowing</i>	
<b>Port. St. Lucie Medical Center</b> , Port St. Lucie, Florida	August 2013 – August 2017
<i>Shadowing</i>	

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