Dmitrijs Celinskis

 LinkedIn

Education

PRESENT	Ph.D. in Biomedical Engineering, **Brown University**, Providence, Rhode Island | Advisors: Prof. Christopher Moore (neuroscience) and Prof. David Borton (neuroengineering)
MAY 2015	M.Sc. in Biomedical Engineering, **Arizona State University**, Tempe, Arizona Thesis: "Investigation of Ultrasonically Powered Implantable Microdevices for Wireless Tissue Impedance Measurements" | Advisor: Prof. Bruce Towe
FEBRUARY 2013	B.Sc. in Medical Physics and Physical Technologies in Medicine, **Riga Technical University**, Riga, Latvia Summa cum laude Thesis: "Photogrammetric System for Mobile Telemedicine Screening Complex" | Advisor: Prof. Aleksejs Katashevs Engineering Design Project: "Medical Gas Supply Network for Pauls Stradins Clinical University Hospital" | Advisor: Uldis Jaspers
SPRING 2011	Exchange studies at **Norwegian University of Science and Technology**, Trondheim, Norway

Peer-Reviewed Publications & Abstracts

- D. Celinskis, J. Murphy, N. Shaner, U. Hochgeschwender, D. Lipscombe, C. Saab, C. I. Moore, D. A. Borton, Imaging the cortex and spinal cord using bioluminescent calcium indicators and miniaturized microscopy, Society for Neuroscience Meeting, 2021.

- N. Shaner, D. Celinskis, E. Ikefuama, E. D. Petersen, E. F. Murphy, A. Bjorefeldt, J. Murphy, M. Prakash, A. I. More, L. G. Budet, Bioluminescent Activators and Indicators in Neuroscience, Society for Neuroscience Meeting, 2021.

- D. Celinskis, J. Murphy, N. Shaner, U. Hochgeschwender, D. Lipscombe, C. I. Moore, D. A. Borton, Next generation tools for imaging in the cortex and spinal cord, 14th Canadian Neuroscience Meeting, 2021.

- A. Barrios-Anderson, D. Celinskis, C. Black, C. Saab, D. A. Borton, Calcium imaging of neurons in the dorsal horn of the lumbar spinal cord in awake behaving mice, 7th BRAIN Initiative© Investigators Meeting, 2021.

- D. Celinskis, N. Friedman, M. Koksharov, J. Murphy, M. Gomez-Ramirez, D. Borton, N. Shaner, U. Hochgeschwender, D. Lipscombe, C. I. Moore, Miniaturized Devices for Bioluminescence Imaging in Freely Behaving Animals, 2020 42nd Annual International Conference of the IEEE Engineering in Medicine Biology Society (EMBC), 2020.

- D. Celinskis, M. Gomez-Ramirez, D. A. Borton, C. I. Moore, Miniaturized devices for bioluminescence imaging of brain and spinal cord, Society for Neuroscience Meeting, NeuroNex Investigator Meeting, 2019.

- J. W. Murphy, N. G. Friedman, M. Prakash, D. Celinskis, R. St. Laurent, D. Lipscombe, N. C. Shaner, U. Hochgeschwender, C. I. Moore, Cell-Target Specific BioLuminescent-OptoGenetic Synaptic Signaling in vivo: BioLumInescent Trans-Emitters (B-LiTE), Society for Neuroscience Meeting, NeuroNex Investigator Meeting, 2019.

- Dmitrijs Celinskis, Arto Nurmikko, Wearable Ultrasound Sensor for Detection of Embolic Events,

40th International Conference of the IEEE Engineering in Medicine and Biology Society, 2018.

- Dmitrijs Celinskis, Mark D. Grabiner, Claire F. Honeycutt, Bilateral early activity in the hip flexors associated with Falls in Stroke Survivors: Preliminary evidence from laboratory-induced falls, In Clinical Neurophysiology, 2017.

- D. Celinskis, B. C. Towe, Wireless ultrasonically-powered neurostimulators with bioimpedance measurement capacity, Society for Neuroscience, 95.03 / KKK63, 2016.

- D. Celinskis and B. C. Towe, "Characterization of the implantable neurostimulator-based wireless bioimpedance measurement technique," 2016 IEEE EMBS International Student Conference (ISC), Ottawa, ON, 2016, pp. 1-4.

- D. Celinskis, M. D. Grabiner, C. F. Honeycutt, Role of stretch and startle reflexes in falls following stroke: Insights from treadmill induced balance perturbations, Society for Neuroscience, 610.18/P23, 2015.

- D. Celinskis, "Investigation of Ultrasonically Powered Implantable Microdevices for Wireless Tissue Impedance Measurements," Thesis, 2015, pp. 1-113.

- D. Celinskis and B. C. Towe, "Wireless impedance measurements for monitoring peripheral vascular disease," 2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, IL, 2014, pp. 6937-6940.

- D. Celinskis, Katashev A. "On Criteria for Wide-Angle Lens Distortion Correction for Photogrammetric Applications," International Symposium on Biomedical Engineering and Medical Physics, 10-12 October, 2012, Riga, Latvia.

Honors & Awards

2020-2022	GRADUATE COMMUNITY FELLOWSHIP (Providence, RI, USA) • Created a peer-to-peer mentorship program to support new international students at Brown • Moderated a panel for newly admitted international students on tips and tricks of thriving at Brown University and academia during the pandemic • Organized virtual and in-person socials for the international students to promote well-being, peer support and cross-disciplinary connections • Collaborated with the administrative teams from the Graduate School and Global Brown Center • Managed a budget for the international student community events
2018	FELLOWSHIP to attend the ETH-Wyss-Brown "Translational Neuroscience and Neural Engineering" workshop (Newport, RI, USA)
2015	BEST STUDENT'S PRESENTATION AWARD at the 2nd IEEE EMBS International Summer School of Neural Engineering (Shanghai, China)
2015	TRAVEL AWARD for participation in the 2nd IEEE EMBS International Summer School of Neural Engineering (Shanghai, China)
2014	Graduate school TRAVEL AWARD to support the attendance of IEEE EMBS 2014 conference

2013	FULBRIGHT SCHOLARSHIP AWARD in support of Master studies at Arizona State University
2013	GOLDEN FUND AWARD acknowledging exceptional academic performance, Riga Technical University, Riga, Latvia
2011	ERASMUS EXCHANGE PROGRAM AWARD in support of exchange studies at Norwegian University of Science and Technology
2009-2013	ACADEMIC ACHIEVEMENT stipend recipient at Riga Technical University

TEACHING

Mentor

SPRING 2021	ADRIEL BARRIOS-ANDERSON - medical student supported by the BRAIN initiative fellowship **Brown University, Borton Laboratory**, Providence, RI

- Provided training on spinal and brain surgical techniques, fluorescent labeling techniques for vasculature and neurons, implant design and fabrication processes, animal handling and behavior, miniature microscopy imaging, image analysis and good experimental documentation practices
- Submitted a conference abstract for BRAIN initiative meeting titled "Calcium imaging of neurons in the dorsal horn of the lumbar spinal cord in awake behaving mice"

Instructor

SUMMER 2018	ENGINEERING DESIGN STUDIO (middle school) **Brown University School of Professional Studies**, Providence, RI

- Led and organized workshops and guest lectures on the topics ranging from nature inspired design to empathy and project planning
- Managed a team of two teaching assistants
- Continuously adapted course content following the direction of student curiosity
- Advised students and their parents on career trajectories

SUMMER 2017	ENGINEERING BIOMEDICAL SYSTEMS (pre-college) **Brown University School of Professional Studies**, Providence, RI

- Performed in-class anatomy, medical device and brain machine interface demonstrations
- Organized field trips to fMRI research facility, cardiovascular tissue engineering lab and neuroengineering lab
- Guided students through the labs on electrophysiological recording, wet-lab techniques and 3D printing
- Organized guest lectures by diverse speakers with a focus on contemporary research and career advice
- Managed a team of two teaching assistants

Teaching Assistant

SPRING 2019 | C2S NEUROTECH: FROM CONCEPT TO STARTUP- TRANSLATING NEUROTECHNOLOGY (mixed undergraduate and graduate)
Brown University, Providence, RI
Instructor: Dr. John Donoghue

- Organized in-class demonstrations of anatomical speciments, neural recording, stimulation and robotic devices
- Coordinated industrial, clinical and patient guest lectures
- Judged and assessed student project presentations and white papers
- Facilitated the smooth transition of the course to remote learning due to the onset of the COVID-19 pandemic

SUMMER 2019 | THE HEART OF THE MATTER – DESIGNING IMPLANTABLE DEVICES FOR THE CARDIOVASCULAR SYSTEM (pre-college)
Brown University School of Professional Studies, Providence, RI
Instructor: Dr. Farah Laiwalla

- Guided students through the cardiovascular dissection labs
- Led the discussion on the implantable devices and vascular disease

FALL 2017/18 | BIOINSTRUMENTATION DESIGN (mixed undergraduate and graduate)
Brown University, Providence, RI
Instructor: Dr. David Borton

- Guided students through the bioinstrumentation labs teaching the hardware operations, coding and electrophysiology techniques
- Organized in-class bioinstrumentation demonstrations and gave guest lectures
- Corrected the quizzes, evaluated students' experimental results and knowledge via oral examination
- Maintained lab equipment by performing the repairs, purchasing new parts and arranging service work
- Managed the team of six undergraduate teaching assistants

SPRING 2017/18 | NEUROENGINEERING (mixed undergraduate and graduate)
Brown University, Providence, RI
Instructors: Drs. Leigh Hochberg and Arto Nurmikko

- Developed a computational neuroscience assignment sequence implemented in Jupyter Notebooks using NEURON packages
- Wrote homework and exam questions based on lectures and reading assignments
- Led weekly office hours, corrected homework assignments and exams
- Maintained website with announcement, lecture and homework postings
- Led student visits to fMRI research facility, Rhode Island Hospital and Veterans Affairs Medical Center

SUMMER 2017/18 | ENGINEERING BIOMEDICAL SYSTEMS I (pre-college)
Brown University School of Professional Studies, Providence, RI

- Facilitated group discussions and guided students through the lab experiments
- Organized medical device demonstrations and lectured on graduate level research in neuroscience and neuroengineering
- Provided introductory training on rapid prototyping techniques

SUMMER 2017 | INTRODUCTION TO ENGINEERING (pre-college)
Brown University School of Professional Studies, Providence, RI

- Demonstrated the applications of electrophysiology for control of computer hardware
- Facilitated group discussions, and guided students through the design and fabrication process

Certification / Workshops

JULY 2020 | NEUROMATCH ACADEMY: AN ONLINE SCHOOL FOR COMPUTATIONAL NEUROSCIENCE
Organized by a worldwide community of computational enthusiasts

- Learned a wide range of computational techniques such as machine learning, dimensionality reduction, reinforcement learning and deep learning, and their applications in computational neuroscience
- Implemented our own analysis of Neuropixel electrophysiology data as part of the final project team work
- Practiced discussed computational techniques using Python notebooks running on Google Colab

FALL 2019,
Spring / Fall 2018 | TEACHING CONSULTANT PROGRAM
Sheridan Center for Teaching and Learning, Brown University, Providence, RI

- Developed and refined the skills in peer observation and feedback, leadership, and discussion facilitation
- Facilitated workshops on inclusive teaching, feedback in STEM courses and good teaching portfolio design practices
- Co-facilitated a semester-long workshop on reflective teaching

SPRING 2019 | DEALING WITH CONFLICT
University Ombuds Office, Brown University, Providence, RI

- Learned the essentials of conflict dynamics and resolution
- Practiced skills for more constructive and effective conflict resolution and management
- Learned and practiced conversation facilitation and conflict mediation techniques

SPRING 2019	**COURSE DESIGN SEMINAR** **Sheridan Center for Teaching and Learning**, Brown University, Providence, RI

- Explored integrated course design principles with primary emphasis on backward course design, inclusive teaching and engaged student learning practices
- Designed two course syllabi, scaffolded assignment sequences and assessment rubrics
- Collaborated with teaching community at Brown on sharing and receiving feedback on designing learning experiences in different disciplines

SPRING 2018	**EFFECTIVE PERFORMANCE: COMMUNICATION AND IMPROVISATION TECHNIQUES FOR GRADUATE STUDENTS** **Trinity Repertory Theater and Brown University**, Providence, RI

- Worked on discovering a story behind the research
- Explored theater techniques, experimenting with play, spontaneity, and connecting to the audience
- Developed comfort and confidence in making an engaging research statement

FALL 2016	**REFLECTIVE TEACHING** **Sheridan Center for Teaching and Learning**, Brown University, Providence, RI

- Developed and refined fundamental teaching and assessment strategies and communication skills based on how students learn
- Explored the importance of supporting the diverse students in their efforts to learn by creating inclusive and respectful learning environments

WORK EXPERIENCE

2017-2018	Volunteer data analyst at DISCOVERYENGINE, Providence, RI
2014-2015	Research assistant at Human Mobility Lab, ARIZONA STATE UNIVERSITY, Tempe, AZ
2014-2015	Equipment safety assistant at Biomaterials Lab, ARIZONA STATE UNIVERSITY, Tempe, AZ
2012-2014	Medical engineer at NMS ELPA, Riga, Latvia
2012-2013	Clinical engineer at cardiovascular surgical department, PAULS STRADINS CLINICAL UNIVERSITY HOSPITAL, Riga, Latvia
2011-2012	Research assistant at bioinstrumentation lab, RIGA TECHNICAL UNIVERSITY, Riga, Latvia
SUMMER 2012	Summer medical physics intern at linear accelerator department, DAUGAVPILS REGIONAL HOSPITAL, Daugavpils, Latvia

SOCIETY MEMBERSHIPS

- Canadian Association for Neuroscience (2021 - present)

- Society for Neuroscience (2015 - present)
- American Association for the Advancement of Science (2015 - 2018)
- IEEE Engineering in Medicine and Biology Society (2014 - present)
- IEEE – Institute of Electrical and Electronics Engineers (2014 - present)
- IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society (2016 - present)
- IEEE - Eta Kappa Nu (active since 2014)
- Tau Beta Pi - The Engineering Honor Society (active since 2014)
- Alpha Eta Mu Beta - National Biomedical Engineering Honor Society (active since 2015)