IUCRC BRAIN Symposium – August 4, 2023

09:00 AM – 12:00 Noon

MD Anderson Library
Elizabeth D. Rockwell Pavilion
4333 University Dr

Program:

09:00 AM – 10:00 AM	Review of the program and post assessment
	Pepe Contreras-Vidal, Parikh Pranav, Stuart Long, Jenny Fula
10:00 AM – 11:00 AM	REU and REM Trainees poster presentations
11:00 AM – 12:00 PM	NSAP Trainees and BRAIN-France Polytechnic America Program

Poster session

Poster #	Program	Presenter	Authors	School/ Affiliation	Project	Faculty Advisor/ Graduate mentors
1	REU	Joy Agus	Joy Agus, Jeff Feng, Jose Contreras-Vidal	Arizona State University	Electroencephalogram Validation With Virtual Reality-Based Vestibular Ocular Motor Screening for Concussion Detection	Jeff Feng
2	REU	Max Bluhm,	Max Bluhm, David Mayerich	Middlebury College	Full Automation of MUVE: Milling With Ultraviolet Excitation	David Mayerich
3	REU	Abigail Clement	Abigail Clement, Saba Yazdekhasti, Stacey Gorniak	University of Kansas	Evaluating the effects of sports bra design on postural control in exercise	Stacey Gorniak
4	REU	Al Gardner	Alexander Gardner, Alexander Steele, Shahin Alipour, Amir Faraji, Jose Contreras-Vidal	Columbia University	Support Vector Machine to Map Sensorimotor Networks in Lower Limbs	Jose Contreras-Vidal
5	REU	Premal Gorroochurn	Premal Gorroochurn, Julien Leclerc, Yitong Lu, Aaron Becker	Columbia University	Implementation of an In-Vitro Pulmonary Artery Model and Control of Robotic Magnetic Swimmer	Aaron Becker
6	REU	Alyssa Holloway	Alyssa Holloway, Pranav Parikh, Komal Kukkar	Austin College	The Changes in Sample Entropy Between Stroke and Healthy Patients During a Continuous Balance Task	Pranav Parikh
7	REU	Charles Hong,	Charles Hong, Yitong Lu, Aaron Becker, Julien Leclerc	Georgia Institute of Technology	Detection of Magnetic Swimmers Using Ultrasonography and Real-Time Data Transfer for Automated 3D Navigation	Aaron Becker
8	REU	Amy Lam	Amy Lam, Nanki Chugh, Anthony Brandt, Jose Contreras-Vidal	Rice University	Mobile Brain-Body Imaging Data Collection during the World Premiere of "Diabelli 200"- an Interdisciplinary Exploration of Neuroscience, Music, and the Arts	Jose Contreras-Vidal
9	REU	William Lau	William Lau, Xin Fu, Xuqing Wu, Jiefu Chen	University of Houston	Deploying a Convolutional Neural Network on a Mobile Computing Platform	Xin Fu
10	REU	Natalie Linde	Natalie Linde, Alana Maluszczak, Sydney Jeffcoat, Michelle Patrick Kreuger, Jose Contreras-Vidal	University of Houston	Assaying Neural Individuality and Variation in Freely Behaving Children Based on qEEG	Jose Contreras-Vidal
11	REU	Alana Maluszczak	Alana Maluszczak, Jose Contrares-Vidal, José Gonzalez-España	Arizona University	Real-time C++ Implementation of H infinity Algorithm for Removal of Ocular Artifacts of Electroencephalography for Brain-Machine Interface Application	Jose Contreras-Vidal
12	REU	Jacob Jose Mendez-Araque	Jacob Jose Mendez-Araque, José Gonzalez-España, Jose Contreras-Vidal	University of Central Florida	Choosing the Right Protocol: A Critical Examination of Bluetooth and Wi-Fi Power Efficiency in IoT	Jose Contreras-Vidal

13	REU	Cailey Varnell	Cailey Varnell, Hana Kabak, Shantanu Sankar, Jose Contreras-Vidal	Austin College	A Soft Pediatric Wearable Exosuit For Gait Diagnosis, Assistance, and Rehabilitation	Jose Contreras-Vidal
14	NSAP	Amr Alshatnaw	Amr Alshatnawi, Manuel Portilla, Jinsook Roh	University of Chicago	A Comparative Study on Neurorehabilitation Gamification: Measuring Engagement, Motivation, and Perceived Challenge	Jinsook Roh
15	NSAP	Nanki Chugh	Nanki Chugh, Amy Lam, Anthony Brandt, Jose Contreras-Vidal	Rice University	Investigating Neural Dynamics Between Conductor and Pianist During Live Music Performance	Jose Contreras-Vidal
16	NSAP	Leah Karels	Leah Karels, Stacey Gorniak, Sally Kenworthy	Baylor College of Medicine (BCM)	Establishing Trailing Limb Angle in Healthy Older Adults	Stacey Gorniak
17	NSAP	Julia Kramer	Julia Kramer, Talukdar Raian Ferdous, Zain Jamjoom, Luca Pollonini	Arizona State University	Testing of Multimodal Neuroimaging Device for Objectively Assessing Brain Activity	Luca Pollonini
18	NSAP	Megan Anne Lauzon	Megan Anne Lauzon, Anna Linnea Rives, Shuo-Hsiu Chang	University of Colorado Boulder	Developing a wearable IMU-based device for spasticity assessment and	Shuo-Hsiu Chang
19	NSAP	Kennedy Leonard	Kennedy Leonard, Komal Kukkar, Pranav Parikh	Johns Hopkins University	Investigating Multiscale Entropy in Stroke Patients During Challenging Balance Task	Pranav Parikh
20	NSAP	Danny Magruder	Robert 'Danny' Magruder, Mansoor Mughal, Komal Kukkar, Pranav Parikh, Jose Contreras-Vidal	Carnegie Mellon University	Cross-Task Electroencephalographic Sources of Activation for Balance Control in Healthy and Stroke Individuals	Jose Contreras-Vidal & Pranav Parikh
21	NSAP	Megan Merrow	Megan Merrow, William Amonette, Brock Futrell, Charles Layne	University Of Houston- Clear Lake	Kinematic and metabolic effects of a stand-up paddleboard exercise device	Charles Layne
22	NSAP	Anna Linnea Rives	Anna Linnea Rives, Megan Anne Lauzon, Shuo-Hsiu Chang	University of Colorado Boulder	Clinical applications of a wearable IMU to measure spasticity in patients with acquired brain injuries	Shuo-Hsiu Chang
23	NSAP	Amir Srour,	Amir Srour, Pravnav Parikh, Komal Kukkar	Stevenson University	Time-frequency analysis to assess dynamic changes during balance control	Pranav Parikh
24	REM	Adaeze Nnadi,	Adaeze Nnadi, Joy Agus, and Sarah Wong	Clear Lake High School	VR Development in Unity for Improved Sideline Assessment of Concussions	
25	REM	Patrick Hoang, Ryan Lorente	Patrick Hoang, Ryan Lorente, Shahin Alipour	Clear Lake High School	VR & Gamified Systems for Rehabilitation	Shahin Alipour
26	REM	Sydney Jeffcoat, Surya Fincke	Sydney Jeffcoat, Alex Daube, Natalie Linde, Surya Fincke, Michelle Patrick Krueger	Clear Falls High School, Clear Lake High School	Assaying the Effects of Nature on Brain Activity and Well-Being	Michelle Patrick Krueger
27	REM	Ryan Noorbakhsh	Ryan Noorbakhsh, David Mayerich	Clear Creek High School	Neural Network to Segment Brain Vessels	David Mayerich
28	BRAIN-France Polytechnic America	Louise Manson	Louise Manson, Ayman Alamir, Hamsa Mousa & Jose Contreras-Vidal	Polytech Sorbonne	Current spikes investigation in pediatric exoskeleton for rehabilitation and mobility	Jose Contreras-Vidal
29	BRAIN-France Polytechnic America	Hana Kabak	Hana Kabak, Cailey Varnell, Shantanu Sarkar, Jose Contreras-Vidal	Polytech Tours	EXOSuit - Shaping and activating Nitinol's shape memory capacity	Jose Contreras-Vidal
30	BRAIN-France Polytechnic America	Hamsa Mousa	Hamsa Mousa, Ayman Alamir, Louise Manson, Jose Contreras-Vidal	Polytech Sorbonne	Modeling Torque Sensing for Assist-As-Needed Control	Jose Contreras-Vidal
31	BRAIN-France Polytechnic America	Jeremie Noel	Jeremie Noel, José Gonzalez-España Jose Contreras-Vidal	Nantes University	Power supply of the NeuroExo project	Jose Contreras-Vidal