

Valay A Shah, PhD

Postdoctoral Associate
Neuromotor Behavior Laboratory
University of Florida
valayshahlab@gmail.com



EDUCATION

University of Florida , Gainesville, USA	Present
<u>Postdoctoral Research Training</u> : Neural correlates of mobility function in aging adults	
Marquette University , Milwaukee, USA	May 2020
<u>Doctor of Philosophy</u> – Biomedical Engineering: Rehabilitation Bioengineering	
Dissertation Topic: <i>Neural mechanisms supporting vibrotactile feedback integration during sensory substitution for post-stroke motor rehabilitation of the arm</i>	
Marquette University , Milwaukee, USA	
<u>Bachelor of Science</u> – Biomedical Engineering: Biomechanics	May 2015

AWARDS

T32 Fellowship – College of Medicine	Fall 2020 – Present
– University of Florida, Gainesville, USA	
Research Assistantship – NIH R15-HD093086	Fall 2018 – Spring 2020
– Marquette University, Milwaukee, USA	
Erasmus + KA 107 action Mobility award	Summer 2019
– Marquette University (Milwaukee, USA) + University of Genova (Genova, Italy)	
Whitaker International Program Fellowship	Fall 2017 – Fall 2018
– Whitaker International Program, New York, USA	
Teaching Assistantship – College of Engineering	Fall 2016 – Spring 2017
– Marquette University, Milwaukee, USA	
Research Leaders Fellowship – College of Engineering	Fall 2015 – Spring 2016
– Marquette University, Milwaukee, USA	

PEER-REVIEWED PUBLICATIONS

Shah, V. A., Casadio, M., Scheidt, R. A., & Mrotek, L. A. (2019). Vibration propagation on the skin of the arm. *Applied Sciences*, 9(20), 4329. <https://doi.org/10.3390/app9204329>

Iandolo, R., Carè, M., **Shah, V. A.**, Schiavi, S., Bommarito, G., Boffa, G., ... Casadio, M. (2019). A two alternative forced choice method for assessing vibrotactile discrimination thresholds in the lower limb. *Somatosensory & Motor Research*, 36(2), 162-170. <https://doi.org/10.1080/08990220.2019.1632184>

Risi, N., **Shah, V.**, Mrotek, L. A., Casadio, M., & Scheidt, R. A. (2019). Supplemental vibrotactile feedback of real-time limb position enhances precision of goal-directed reaching. *Journal of Neurophysiology*, 122(1), 22-38 <https://doi.org/10.1152/jn.00337.2018>

Shah, V. A., Casadio, M., Scheidt, R. A., & Mrotek, L. A. (2019). Spatial and temporal influences on discrimination of vibrotactile stimuli on the arm. *Experimental Brain Research*. <https://doi.org/10.1007/s00221-019-05564-5>

Shah, V. A., Risi, N., Ballardini, G., Mrotek, L. A., Casadio, M., & Scheidt, R. A. (2018). Effect of Dual Tasking on Vibrotactile Feedback Guided Reaching – A Pilot Study. In *Haptics: Science, Technology, and Applications* (pp. 3–14). https://doi.org/10.1007/978-3-319-93445-7_1

Krueger, A. R., Giannoni, P., **Shah, V.**, Casadio, M., & Scheidt, R. A. (2017). Supplemental vibrotactile feedback control of stabilization and reaching actions of the arm using limb state and position error encodings. *Journal of NeuroEngineering and Rehabilitation*, 14(1), 36. <https://doi.org/10.1186/s12984-017-0248-8>

Pending

Shah V. A., Thomas, A., Ballardini, G., Casadio, M., Scheidt, R. A., & Mrotek, L. A. (2020, *In Preparation*) Practice Improves Accuracy and Efficiency in Vibrotactile Feedback Guided Reaching. *Full draft available upon request.*

CONFERENCE PRESENTATIONS

Poster – Neuroscience 2019, *Society for Neuroscience*, Chicago, USA

- Impact of extended training on vibrotactile feedback guided reaching

Poster - Neuroscience 2018, *Society for Neuroscience*, San Diego, USA

- Vibrotactile feedback guided reaching during single- and dual-task conditions

Poster - EuroHaptics 2018, *EuroHaptics Society*, Pisa, Italy

- Effect of dual tasking on vibrotactile feedback guided reaching – a pilot study

Poster - Whitaker Enrichment Seminar, *Whitaker International Program*, Budapest, Hungary

- Vibrotactile Feedback of Hand Position to Guide Reaching with Divided Attention

Poster - Neuroscience 2016, *Society for Neuroscience*, San Diego, USA

- Vibrotactile perception in the upper extremities of healthy humans

Podium Talk - 6th American Conference on Human Vibrations, *Marquette University*, Milwaukee, USA

- Vibrotactile discrimination in the upper extremities of healthy humans

Poster - Sigma Xi Poster Symposium, *Marquette University*, Milwaukee, USA

- Vibrotactile discrimination in the upper extremity of healthy human subjects

RELEVANT EXPERIENCES

Milwaukee I-CORP Program, UWM/MU/MCW, Milwaukee, USA

Summer 2016

Project: Development of rehabilitative technology for stroke patients

Health and Human Performance, NASA Johnson Space Center, Houston, USA

Summer 2017

Project: Testing and Validation of airbag transport system for Human Research Facility Centrifuge

TEACHING EXPERIENCE

Biomedical Engineering, Marquette University, Milwaukee, USA

Teaching Assistant, Biomechanics Lab 1

Fall 2016

Teaching Assistant, Biomechanics Lab 2

Spring 2017

PROFESSIONAL AFFILIATIONS (Memberships)

IEEE

Society for Neuroscience

Biomedical Engineering Society

American Geriatrics Society

PROFESSIONAL REFERENCES

Leigh Ann Mrotek, PhD

Research Professor

Dept. Biomedical Engineering

Marquette University

Olin Engineering Center, Rm 206

1515 W. Wisconsin Ave

Milwaukee, WI USA 53233

leigh.mrotek@marquette.edu

414-288-6292

Robert A Scheidt, PhD

Professor

Dept. Biomedical Engineering

Marquette University

Olin Engineering Center, Rm 206

1515 W. Wisconsin Ave

Milwaukee, WI USA 53233

robert.scheidt@marquette.edu

414-288-6124

Maura Casadio, PhD

Associate Professor

DIBRIS

University of Genova

Via Opera Pia, 13

Genova, Italy 16145

maura.casadio@unige.it

(+39) 01033 - 52749