June 3, 2014

To the editors of Journal of Visualized Experiments,

We are pleased to be submitting the following manuscript, entitled “Functional near infrared spectroscopy of the sensory and motor brain regions with simultaneous kinematic and EMG monitoring during single- and multi-joint movements” for your consideration in JoVE’s Neurological section.

Functional near infrared spectroscopy has several characteristics that make it uniquely suited for studying brain activity during the performance of everyday functional tasks such as walking, reaching, or cycling a bike. Although the body of literature using this technique is growing in the study of healthy adults, reports of brain activity during motor tasks in people with neurological disorders is still lacking. We believe this is in part due to the steep learning curve associated with data collection in fNIRS. There are challenges of concurrently monitoring both brain activity and actual movements that participants make, and several options for trying to match performance between those with and without neurological injury. In this manuscript, we present a protocol that solves many of these problems, and can be applied to additional disorders, studied movements, and scientific questions. The unique format of video that JoVE offers will clearly illustrate the various components of the setup, and demonstrate the dynamic and multisensory nature of the experimental protocol.

Dr. Nandita Singh has coordinated with us in the submission process of this manuscript. All authors have contributed to the conceptual design, IRB procedures, preliminary data collection/analysis, and manuscript preparation. The first two authors will be much less available in the fall, so if the article is accepted, filming by the end of August would be greatly appreciated.

We suggest the following peer reviewers:

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Thank you in advance for your consideration of our manuscript.

Kind regards,

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