INSTITUTE OF MEDICAL SCIENCES

BANARAS HINDU UNIVERSITY

ECR/Bhu/Inst/UP/2013/Re-registration-2017 dt. 31.01.2017

No. Dean/2018/EC/ 339 Dated: 02.01.2018

The Head
School of Biomedical Engg.
Indian Institute of Technology
Institute of Medical Sciences
Banaras Hindu University

Dear Sir,

The Ethical Committee meeting was held on 02.01.2018 at 3.00 PM in the Chamber of the Dean, Faculty of Medicine, IMS for Ethical clearance of the MD/MS/DM/M.CH/Ph.D/synopsis/Projects submitted by the following::

Name of the Student	Alok Prakash
Study Title	Development of EMG controlled Prosthetic limb for transradial amputee
Suggestions	
Remarks	The Study is approved by the Institute Ethical Committee

This is for your information and necessary action at your end.

(JAI PRAKASH)
DEAN & COORDINATOR

Yours sincerely,
V M Gupta

(Dr. V M GUPTA)
CHAIRPERSON OF THE ETHICAL COMMITTEE

LIST OF PUBLICATIONS

Journals:

1. **Prakash, Alok,** Neeraj Sharma, and Shiru Sharma. 2021. "An Affordable Transradial Prosthesis Based on Force Myography Sensor." Sensors and Actuators A: Physical 325 (July): 112699. https://doi.org/10.1016/j.sna.2021.112699.
2. **Prakash, Alok,** and Shiru Sharma. 2021. "Single-Channel Surface Electromyography (SEMG) Based Control of a Multi-Functional Prosthetic Hand." Instrumentation Science & Technology: 1–18. https://doi.org/10.1080/10739149.2021.1880933.
3. **Prakash, Alok,** and Shiru Sharma. 2021. "A Low-Cost Transradial Prosthesis Controlled by the Intention of Muscular Contraction." Physical and Engineering Sciences in Medicine 44 (1): 229–41. https://doi.org/10.1007/s13246-021-00972-w.
4. **Prakash, Alok,** Ajay Kumar Sahi, Neeraj Sharma, and Shiru Sharma. 2020. "Force Myography Controlled Multifunctional Hand Prosthesis for Upper-Limb Amputees." Biomedical Signal Processing and Control 62 (September): 102122. https://doi.org/10.1016/j.bspc.2020.102122.
5. Sharma, Neeraj, **Alok Prakash,** Ajay Kumar Sahi, Neeraj Sharma, and Shiru Sharma. 2021. "Multimodal Sensor to Measure the Concurrent Electrical and Mechanical Activity of Muscles for Controlling a Hand Prosthesis." Instrumentation Science & Technology 49 (2): 146–63. https://doi.org/10.1080/10739149.2020.1804932.
6. **Prakash, Alok,** and Shiru Sharma. 2020. "A Low-Cost System to Control Prehension Force of a Custom-Made Myoelectric Hand Prosthesis." Research on Biomedical Engineering 36 (3): 237–47. https://doi.org/10.1007/s42600-020-00064-w.

7. **Prakash, Alok,** Neeraj Sharma, and Shiru Sharma. 2020. “Novel Force Myography Sensor to Measure Muscle Contractions for Controlling Hand Prostheses.” Instrumentation Science & Technology 48 (1): 43–62. https://doi.org/10.1080/10739149.2019.1655441.
8. **Prakash, Alok**, Shiru Sharma, and Neeraj Sharma. 2019. “A Compact-Sized Surface EMG Sensor for Myoelectric Hand Prosthesis.” Biomedical Engineering Letters 9 (4): 467–79. https://doi.org/10.1007/s13534-019-00130-y.
9. **Prakash, Alok,** Bindu Kumari, and Shiru Sharma. 2019. “A Low-Cost, Wearable SEMG Sensor for Upper Limb Prosthetic Application.” Journal of Medical Engineering & Technology 43 (4): 235–47. https://doi.org/10.1080/03091902.2019.1653391.
10. **Prakash, Alok,** and Shiru Sharma. 2020. “Development of an Affordable Myoelectric Hand for Transradial Amputees:” International Journal of Biomedical and Clinical Engineering 9 (1): 1–15. https://doi.org/10.4018/IJBCE.2020010101.

Patent applications:

1. **Prakash, Alok,** Bindu Kumari, Shiru Sharma and Neeraj Sharma "EMG sensor for prosthetic hand control," Indian Patent: 201811016601, May 2, 2018 (**status-published**).
2. **Prakash, Alok,** Shiru Sharma & Neeraj Sharma "FMG sensor for hand prosthesis application,” Indian Patent: 201911043042, October 23, 2019 (**status- filed**).

Conferences:

1. **Prakash, Alok,** and Shiru Sharma "A low-cost force myography sensor for upper limb prosthesis application" ICBME 2019, 9-12th December 2019, NUS Engineering, Singapore.
2. **Prakash, Alok,** and Shiru Sharma "Development of an Affordable Myoelectric Prosthetic Hand" IEEE EMBS International Student Conference (ISC 2018), 19-21th December 2018, Ramaiah Institute of Technology, India, 2018.
3. **Prakash, Alok,** and Shiru Sharma "Low cost sEMG sensing module for myoelectric hand prosthesis" National Conference on Disability and Social Inclusion- The Role of Technology , 10-11th January 2019, Indian Institute of Technology, Guwahati, India, 2019.

Awards and achievements:

1. Awarded **Gold Medal** for Best Project titled: "Development of low-cost EMG controlled prosthetic hand" in Institute Day held from 16-18 February, 2018 conducted by Indian Institute of Technology (BHU).
2. Demonstrated the Project Prototype in Festival of Innovation and Entrepreneurship, 2018 held at **Rashtrapati Bhawan, New Delhi**.