

Teaching / Educational Assistant, Center for Pre-College Programs, NJIT (NJ, USA) Worked as Teaching Assistant for the Robotics Program. Jan-Aug
2015

Worked on updating the Medical Robotics professional development course called 'Virtual Medibotics', designed for high-school and middle-school teachers.

**Research
Publication**

2021

Rao, A.Z.; Hasan, M.A. Evaluation of a Chair-Mounted Passive Trunk Orthosis: A Pilot Study on Able-Bodied Subjects. *Sensors* 2021, 21, 8366. <https://doi.org/10.3390/s21248366> **2019**
Muhammad Nabeel, Muhammad Sumaid Mukhtar, Ahmad Zahid Rao, Syed Muhammad Haider Raza, Ali Baig, Muhammad Abul Hasan. A Quality monitor for Cardio-Pulmonary Resuscitation (CPR). In 34th All Pakistan IEEE Students Seminar, 12th January 2019, Karachi, Pakistan.

2018

Tahira Tayyaba, Jouhar Rizwan, Ghani Huwaina Abd, Ahmed Naseer, Rao Ahmad Zahid, Jamil Sara, The Effect of Mineral Trioxide Aggregate as a Direct Pulp Capping Agent in Permanent Teeth. *Journal of International Oral Health* 2018, 10, 6, 310-313.

2016

Ahmad Zahid Rao. (MS Thesis) Realization of Dynamixel Servo Plant Parameters to Improve Admittance Control for a Compliant Human-Robot Interaction. MS Thesis, New Jersey Institute of Technology, NJ, USA. 2016 (accessible at <http://archives.njit.edu/vhlib/etd/2010s/2016/njit-etd2016-020/njit-etd2016-020.php>)

**Academic
Software
Proficiency**

3D Printing (Makerbot, FlashForge), Finite Element Analysis (ANSYS), Graphical/Programming (MATLAB, Simulink, LabVIEW, Visual C#, C language, Unity3D), Circuit Designing and Simulation (Proteus ISIS and ARES), Computer Aided Drawings (SolidWorks, Creo, Pro/Engineer, Fusion360), Microcontrollers (Arduino, PIC, 8051), Gait Lab Data Analysis, 3D motion capture and Electromagnetic position sensors.

**Industry
Experience**

Biomedical Engineer, *The Indus Hospital (Karachi, Pakistan)*

Looking after the *Rehabilitation Department* for proper training, operating and maintenance of the rehabilitation diagnostic and therapeutic equipment. Trained by manufacturer on:

- Audiometry equipment by MAICO Diagnostics GmbH, Germany
- Functional Electrical Stimulation (FES) machine by Restorative Therapies Inc., USA.

Also managed the monthly Planned Preventive Maintenance (PPM) for the entire hospital's medical equipment in coordination with department engineers, and the monthly Progress Report from the Biomedical Department of all campuses of the Indus Hospital network.

Biomedical Engineer, *Medinostic Healthcare, Pvt Ltd (Karachi, Pakistan)*

Worked with the Critical Care division in providing live demonstrations, trainings, testing, installations and troubleshooting of the Patient Monitors and Anesthesia Machines. Jan-May
2014

Played key role in developing the monthly e-newsletter for the same division with a marketing and biomedical engineering point of view in consultation with the specialists.

Biomedical Engineer, *Noor International, Pvt Ltd (Karachi, Pakistan)*

Assisted with diagnosis, troubleshooting and testing of various Critical Care medical equipment including Ventilators, Anesthesia Machines, Patient Monitors, Syringe and Infusion Pumps, Diathermy units, OT lights and tables. Jul-Nov
2013

**Volunteer
Experience**

MATLAB Tutor, Graduate Biomedical Engineering Society, NJIT (NJ, USA)

President, Graduate Biomedical Engineering Society, NJIT (NJ, USA)

Assisted the Duchenne Muscular Dystrophy patients for research studies, NJIT (NJ, USA)
Event Supervisor, New Jersey Science Olympiad (NJ, USA)

Volunteer, Pakistan Society of Anesthesiologists (Karachi, Pakistan)