|  |  |  |  |
| --- | --- | --- | --- |
| **Title:** | A Low Cost Surface Electromyogram (sEMG) Signal Guided Automated Wheel Chair for the Disabled | | |
| **Author(s) Name:** | Taslim Reza, S.M.Ferdous, Md. Nayeemul Hasan, Md. Rokonuzzaman, Kazi Firoz Ahmed, A.Z.M.Shahriar Muttalib | | |
| **Contact Email(s):** | k.firoz@aiub.edu | | |
| **Published Journal Name:** | International Journal of Scientific & Engineering Research, | | |
| **Type of Publication:** | Journal | | |
| **Volume:** | 3 | Issue | 2 |
| **Publisher:** | International Journal of Scientific & Engineering Research, | | |
| **Publication Date:** | **February 2012** | | |
| **ISSN:** | 2229-5518 | | |
| **DOI:** |  | | |
| **URL:** | http://www.ijser.org/onlineResearchPaperViewer.aspx?A-Low-Cost-Surface-Electromyogram-sEMG-Signal-Guided-Automated-Wheel-Chair-for-the-Disabled.pdf | | |
| **Other Related Info.:** |  | | |
|  | | | |

|  |  |
| --- | --- |
| **Abstract:** |  |
| — This paper discusses the exploratory research of a simple, effective and low cost design of a microcontroller based wheelchair using the sEMG signal collected from the neck muscles w hich w ill allow a disabled person to control the wheelchair only by using the movement of his neck. Among the different neck muscles, upper trapezius muscle has been chosen for collection of the sEMG signals which are used to move, control and navigate the wheel chair. The main purpose of the work is to design a cost-effective, easily affordable and accessible w heel chair for the disabled general masses where advanced attachments like on board computer, digital cameras , sophisticated sensors etc. are not being used, rather concentration has been paid on designing a more practical and simple but effective system using an electrically controlled differential drive with only two wheels. | |