**IEEE Technical Committee on Variable Structure and Sliding Mode Control: Autumn 2011 Report**

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Since the previous report submitted in May 2011, the Variable Structure and Sliding Mode Control community has been involved with the following activities:-

1. The current major activity of the TC is organising the twelfth international workshop on variable structure systems which will be held in Mumbai from 12th-14th Jan 2012. Professor Bijnan Bandyopadhyay is the general Chair. The call for papers was launched at CDC in Atlanta and the conference website is at

http://www.sc.iitb.ac.in/~vss2012/venue.php.

Both CSS and IES are co-sponsoring the event. We received 109 submissions and 87 papers have been accepted. The postgraduate student support provided as part of the TC’s bid for support for activity is advertised at:

http://www.sc.iitb.ac.in/~vss2012/student\_schol.php

1. The book entitled “Sliding Modes after the first Decade of the 21st Century” representing a series of tutorials from the 11th International Workshop on Variable Structure Systems (VSS 2010), which is the flagship meeting of the TC has been published in the Springer Lecture Notes in Control and Information Sciences, Vol. 412.
2. A Journal Special Issue of the Franklin Institute entitled “Advances in Guidance and Control of Aerospace Vehicles using Sliding Mode Control and Observation Techniques” which will be guest edited by Professor Yuri B. Shtessel, Dr. Christian H. Tournes and Professor Leonid Fridman is in progress
3. Papers have been submitted for a Special Issue of the IMA Journal of Mathematical Control and Information entitled ‘Lyapunov methods for Second Order Sliding Modes’ which will be guest edited by Professor Jaime Moreno.
4. Special sessions with the theme “Variable Structure and Sliding Mode Control: State of the Art” were presented at the IFAC World Congress in Milan, 2011 and chaired by Professor Vadim Utkin.
5. A Special Session on” Lyapunov Methods for Second Order Sliding Modes" organised by Leonid M. Fridman and Jaime A. Moreno has been accepted for presentation at the 50th IEEE Conference on Decision and Control and European Control Conference, Orlando, FL, USA in 2011. Six papers will be presented.
6. Two special sessions entitled ‘Variable Structure Control Systems and Its Applications’ were organised at the 37th Annual Conference of the IEEE Industrial Electronics Society (IECON 2011) held from 7-11 November 2011 in Melbourne, Australia. A total of twelve papers were presented.