IEEE Technical Committee on Variable Structure and Sliding Mode Control

TC Chair: Sarah Spurgeon s.k.spurgeon@kent.ac.uk

Since the previous report submitted in May 2010, the Variable Structure and Sliding Mode Control community has accomplished:-

1. The 11th International Workshop on Variable Structure Systems (VSS 2010) took place from 26th to 28th June 2010 in Mexico. The Workshop included Plenary and Semi-Plenary lectures, panel discussion and poster sessions as well as the usual conference presentations.
2. Material for a book entitled “Sliiding mode theory: present and future” representing a series of tutorials from the 11th International Workshop on Variable Structure Systems (VSS 2010) has been drafted.
3. Calls for papers for two Journal Special Issues have been circulated. The first is a Special Issue of the Journal 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. The second is 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. The new TC website has been launched to support and disseminate at all levels within the community.

Forthcoming plans involve:

1. Planning is already underway for the twelfth international workshop on variable structure systems will be held in Mumbai from 20-23 January 2012. Professor Bijnan Bandyopadhyay has been elected the general Chair.
2. Jian-Xin Xu, Xinhuo Yu and Asif Sabanovic are organizing a special session entitled Variable Structure Control and Industrial Applications within the 36th Annual Conference of the IEEE Industrial Electronics Society, 7-10 November 2010, Glendale, USA.
3. The Committee will hold its annual TC meeting at the 49th IEEE CDC, Atlanta, Georgia, USA, December 2010.
4. Special sessions with the theme “Variable Structure and Sliding Mode Control: State of the Art” have been organised for the IFAC World Congress in Milan, 2011 by Professor Vadim Utkin.