**IEEE Technical Committee on Variable Structure Systems and Sliding Modes**

**Notes of the Technical Committee Meeting held on December 14th 2012   
at the IEEE CDC, Maui, Hawaii**

Present: Igor Boiko, Chris Edwards, Antonella Ferrara, Alain Glumineau, Gianluca Ippoliti, Franck Plestan, Leonid Fridman, Arie Levant, Sarah Spurgeon

1. The Chair welcomed members to the meeting.

2. The Chair tabled the six-monthly report of recent TC activity submitted to the Chair of Technical Activities Board, Professor Francesco Bullo and attached to these notes as Appendix 1. It was noted that the book arising from the VSS 2012 Workshop had now been finalised and would be submitted to the publisher before Christmas. A pdf version of the manuscript was available at the meeting for viewing by TC members.

3. The IEEE Control Systems Society was keen for there to be some standardisation of the TC webpages. The Chair has undertaken the training and ported the information from the old TC webpages to the new format. The site is available at <http://variable-structure.ieeecss,org/> and was viewed during the meeting. Those TC members present were pleased with the new site. The Chair requested that individuals keep her updated with content to maximise the visibility of our activities.

4. Professor Vadim Utkin was unable to attend the meeting but had requested that the Committee Meeting consider involving Michael Basin directly in the TC activities. All those present welcomed the suggestion. It was noted that Michael, through his involvement with the Journal of the Franklin Institute, had done a tremendous amount for the subject area via the recent special issues. Those TC members present looked forward to working more closely with Michael in the future.

5. Professor Franck Plestan made a presentation on the development of the VSS 2014 Workshop. The pdf file of the presentation will be circulated to all TC members with the meeting notes. TC members discussed the breakdown of the programme paying particular attention as to how to ensure group updates were incorporated in the meeting. Various suggestions were made including having a poster session at which any group could display a poster detailing current projects etc. The meeting decided that the final format for this element of the event should be left at the discretion of the conference organisers. Franck agreed to provide some material for display on the TC website as soon as possible.

6. Professor Antonella Ferrara provided an update from the IEEE TAC Editorial Board Meeting. Antonella reported that Professor Maria Letizia Corradini had now taken over the role of editorial board member with special responsibility covering the technical areas of our TC. Sarah Spurgeon reported that Maria Letizia had been invited to the TC meeting but was unable to attend. Antonella reported that a very hard line would be taken in future at any attempts to manipulate impact factors or where any evidence of plagiarism was found. This latter element could include attempting to publish material presented at a conference within a journal paper.

Antonella also reported frustration that some members of the community, particularly those at an early career stage, were consistently refusing to undertake any reviewing work. She asked colleagues to emphasize to Postdocs and Research Fellows the importance of the review process to the health of the subject and the need for everyone to be actively engaged in it as a service to the community.

Antonella, an outgoing member of the Board of Governors, reported that the IEEE CSS was pulling out of the Multiconference from 2017.

The Chair thanked Antonella for all her past work in keeping the TC aware of the situation with regard to developments within IEEE Trans AC. TC members will look forward to working with Maria Letizia Corradini in this role in the future

7. TC members raised the issue of the keywords for our subject area which had been missing from the IFAC list of key words for the previous World Congress. The Chair reported that this matter has already been discussed earlier this week at the joint meeting of the IEEE TC on Nonlinear Systems and Control and the IFAC TC on Nonlinear Control Systems which she had attended. Professor Xiaohua Xia noted the previous problems and requested that the current chair, Professor Lorenzo Marconi, ensure the problem was rectified and that IFAC did not revert to the old list. Lorenzo undertook to ensure the key words were circulated so that everyone can check there are no problems.

8. Professor Leonid Fridman raised the issue of difficulty in getting all the work of the community into one workshop held every two years and suggested that it may be time to consider having an annual workshop. Those TC members present suggested that this was a large step to contemplate and that, if a decision was made to move to an annual workshop, all TC members needed to commit to it. It was decided that Leonid would write to all members of the TC with a proposal for debate.

9. Professor Leonid Fridman commented that although members of the community had been successful in attaining FIEEE through the Industrial Electronics Society, no members of the community had received FIEEE through the Control Systems Society. It was felt by the TC that this was unfortunate for the standing of the community within CSS. The issue of IFAC Fellowship was also discussed. The TC discussed the difficulties in getting such nominations underway when, for example, for IEEE Fellow it is desirable to have letters of support for a candidate from eight current CSS members with Fellow status. Whilst the community has no FIEEE holders within CSS, this is not trivial and requires coordinated action and effort to obtain the required letters. The TC agreed that it was a good idea to embark on a more organised campaign to seek to promote cases for both IEEE and IFAC Fellowship from within our subject domain. Follow-up work would take place by email.

S.K. Spurgeon

14 December 2012

Appenndix 1

**IEEE Technical Committee on Variable Structure and Sliding Mode Control: December 2012 Report**

***TC Chair: Sarah Spurgeon*** [***s.k.spurgeon@kent.ac.uk***](mailto:s.k.spurgeon@kent.ac.uk)

Since the previous report submitted in April 2012, the Variable Structure and Sliding Mode Control community has been involved with the following activities:-

1. Following the twelfth international workshop on variable structure systems which was held in Mumbai from 12th-14th Jan 2012 an edited collection will now be published by Springer Verlag on 'Advances in Sliding mode control-Concepts, Theory and Implementation' . This collection will mainly contain the expanded version of the plenary talks and invited papers presented in VSS 2012 together with some papers which received high review scores.
2. The TC is already involved in planning our next workshop which will be held in Nantes, France in 2014. The TC Chair visited Nantes in June to confirm the local arrangements. The conference will take place from July 1st to July 4th 2014 and will be hosted by Institut de Recherche en Communications et Cybernétique de Nantes – IRCCyN, Ecole Centrale de Nantes. It has been scheduled to dovetail with ECC 2014.
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. Members of the TC are involved in the development of a Special Issue of Elsevier's Journal MATCOM on “Discontinuous Dynamical Systems: Theory and Numerical Methods” (http://www.maths.nuigalway.ie/~piiroinen/matcom/).
5. TC members have organised an invited session within CDC 2012 in the area of sliding modes for hybrid and impulsive systems. Six papers will be presented.
6. We are organising an invited session on variable structure systems for the IFAC Joint Conference (5th Symposium on System Structure and Control, 11th Workshop on Time-Delay Systems, 6th Workshop on Fractional Differentiation and its Applications), which will take place in Grenoble, France in February 2013 (<http://www.gipsa-lab.fr/SSSC2013/>). The session will contain both theory and application results and the preliminary title is "Recent results on Variable Structure Systems".