



TECIS (TC 9-5) Committee Meeting: Report Prepared by Dr. Larry Stapleton, TC Chair

Venue: Sozopol on Friday, September 25th at 1.15 – 3.00pm in Hotel Villa Conference Centre

Minutes

1. **Welcome:** everyone was welcomed to the meeting. New members welcomed to the technical committee including Bulgaria, UK, Italy and China. Bulgarian IFAC members especially thanks for their efforts and hospitality. Special thanks to Professor Andon Topalov and Prof. Mincho Hadjiski of Sofia Technical University, Prof. Kosta Boshnakov and all Bulgraian IFAC members who contributed to TECIS 2015.
2. **Agenda Review:**
The chair reviewed the meeting agenda which was agreed with the meeting members, with a additional other business item (see below). Agenda proposed and seconded (E. Hadjrizi and P Groumos).
3. **Review Minutes of last meeting in form of Technical Committee Report from IFAC World Congress 2014 in South Africa (Cape Town).** The chairperson summarised the meeting and World Congress report and the main outcomes were

- a. **Proposal for TECIS Conference in Bulgaria for 2015**
- b. **Expressions of interest for TECIS 2016 in Albania and Poland**

(postscript: following some engagement from the TECIS chair and vice-chairs with Poland members Poland did not follow through with a formal proposal for an IFAC event)

4. **New members and member countries**
 - a. **In the last year we have some new members from South America (Argentina), Italy, China and Bulgaria. These new memberships reflect the expanding community of TECIS and interest in our work. They include new countries from which we have not previously had members, especially South America.**

5. **Updates and Review**

- a. **CC 9 Updates: CC 9 Chair Professor Lamnabhi-Lagarrigue**
CC9 chair's apologies for her inability to attend the event were expressed through the chair.

There was a proposal to organise a teleconference/skype session but the logistics locally proved too difficult to manage. However, the chair briefed the committee on some developments in CC9 that relate to TC 9-5, especially in the area of cost oriented automation and social networks, which have been added to the scope of the TC (see elsewhere in this report)

It was announced through the chair that TC9-2 is being re-invigorated, a development strongly supported by TC 9-5 (see elsewhere in this report).

- b. **Review of IFAC World Congress Session Cape Town**
Prof. Peter Kopacek, vice-chair of TC 9-5, provided an extensive review of TC 9-5 contribution to the congress.

Summarising, TECIS TC 9-5 had one invited session incorporating several papers and two other papers in other sessions at the congress. These subsequently have appeared in the proceedings and were well received.

c. Working Group Updates

i. Ethics WG

Dr. Hersh, vice-chair and WG leader, set out some important developments since the WG was first set up in the early 2000s, plus a working group vision of future work in the Technical Committee. The major output, besides TECIS papers at IFAC events, has been a book organised and edited by Dr. Hersh, with contribution by WG members. The book was published by Springer this year (2015). The title of this publication is: "Ethical Engineering for International Development and Environmental Sustainability".

The book was launched recently and includes contributions from TECIS and the international "Scientists for Global Responsibility" NGO. Royalties from the book have been donated to SGR on behalf of the editor.

The success of this book, and the securing of a major academic publisher for a TECIS publication at this level, was very encouraging. Dr. Hersh was warmly congratulated and thanked for managing this project to such a successful outcome.

Following lengthy discussions the TC meeting noted that a number of contributions had convergent ideas which might provide the basis for a second volume. Consequently, the Working Group will explore the formulation of a second proposal for a new volume in control and automation engineering and ethics.

Developments to be announced at next TC meeting.

ii. End of Life Management

The WG had two papers in Cape Town and two papers here in TECIS 2015 representing constantly developing work in relation to environmental sustainability, a key area for international stability and control.

The WG also has papers appearing in sessions at TECIS 2015 and continues to make very significant contributions to the work of this and other TCs in IFAC. There is an intention to include EoL contribution to future special journal issues emanating from the technical committee, as well as a possible special session at TECIS 2016 (see below).

iii. Non-Technical Aspects of ICT and Automation

This Working Group has continued to develop since it was recently established. The main output has been journal papers in the area, for example, of inter-cultural exchange using computational solutions (e.g. automated music learning support).

It was proposed that this WG pay particular attention to developments in TC 9-2 and coordinate with and support the work of that TC. The initial proposal for TC 9-2 event in 2016 was also discussed in this context and warmly supported. TC 9-5 have supported this event proposal as co-sponsors. The proposed event is entitled: "First IFAC Cyber-Physical & Human-Systems Conference - 1st CPHS, 2016"

[post-script 14/10/15– the event has been formally supported by IFAC as a conference and will take place in Florianopolis, Brazil from December 07-09, 2016).

d. Scope Issues:

i. Cost Oriented Automation (COA)

TECIS 2015 original proposal was specially focussed on cost-oriented automation to reinvigorate work in this important area. Whilst the scope was subsequently broadened a

special session on COA was organised and this has attracted papers from various NMOs, plus other papers elsewhere in the event have related directly or indirectly to COA. Furthermore, there was extensive discussion on the fringes of TECIS 2015 of COA-related developments.

As a result it was formally proposed at the meeting to explore the establishment of a new Working Group in Cost-Oriented Automation in TC 9-5. The Chairperson of TC 9-5 enthusiastically supported this development and communicated to the forum that he believed this would have the support of the CC9 chair with whom he has been already coordinating on scope issues relating to TC 9-5.

Following extensive discussions it was formally proposed to formulate a proposal for a new COA WG. The proposal is to be coordinated by Prof. Kopacek as vice-chair working particularly with the NMOs in Bulgaria and Kosovo. This proposal will be formally submitted to IFAC TB in due course.

ii. Social Networks

Social networks is in TC 9-5 scope. The rationale is that these are relevant to international stability and inter-cultural exchanges and papers have been presented since SWIIS 2012 on this issue. Larry Stapleton briefed the forum on a submission from TECIS to an IFAC document on social networks.

A number of members queried why this document was being developed at IFAC level and were unclear on IFACs vision for this work and, whilst it was clear that this was a topic for TC 9-5, queried how it related to control and automation research in other TCs so that it necessitated such a report. The chair was unable to answer all questions and said he would take these views to the CC chair for clarification.

6. TC 9-5 promoted events for 2015/16

TECIS is promoting and cosponsoring a number of other IFAC events in the coming triennium and these were set out by the CC chair, including other CC9 events. TC9-4 and TC9-2 events were especially reviewed as they are under the CC9 umbrella of activities.

7. TC9-5 Special Journal Issue Updates

a. 2014 quarterly journal issue in Computer Science: *"Artificial Intelligence and Society: Journal of Knowledge, Culture and Communication"*

The first special issue is now in print and has been well received. This has successfully expanded the audience of IFAC work in this domain to the artificial intelligence, technology and society community. The TC chair thanked everyone who contributed and especially the efforts of Professor Gill, who is both a member of TC 9-5 and senior editor of the AIS journal, and has been very supportive in opening up the journal and helped shape the TC 9-5 special issue proposal. Details of the special issue were set out and have been recorded elsewhere in TC 9-5 correspondence. Papers included general submissions from the TC membership plus papers from two working groups (Ethics and Non-Technical Aspects of ICT and Automation).

b. 2016 quarterly journal issue in Computer Science: *"Artificial Intelligence and Society: Journal of Knowledge, Culture and Communication"* (forthcoming)

Following the success of the first special issue a second special issue proposal was submitted by the TC 9-5 chair and eventually accepted by the senior editors and publishers. This is now online (in mid-2015) and will be in print in 2016.

This special issue included five academic papers from TECIS committee members. It also included a new interdisciplinary student forum with papers from TECIS partner organisations which are

European student networks MITRA and ESTIEM. The entire special issue spanned to ten papers plus editorial material.

The TC chair again thanked all contributors, including young members who coordinated the student forum (Amy Stapleton and Natalia Kobza) and the efforts of Professor Gill, who is both a member of TC 9-5 and senior editor of the AIS journal, and has been very supportive in opening up the journal and in the shaping of the TC 9-5 special issue proposal.

Details of the special issue were set out and have been recorded elsewhere in other TC 9-5 correspondence, especially to authors.

8. TC 9-5 Student Forum (Proposal)

At the 2013 conference in Kosovo the MITRA (European “Médiation Interculturelle” academic network) and European Industrial Engineering Management (ESTIEM) communities presented a series of young researcher papers at special sessions. The papers were well received, expanded and adapted into a second special journal issue of TC 9-5 special forum for young member contributions.

From a TC 9-5/CC9 perspective these developments were designed to meet the IFAC objectives of

- i. encouraging more young members to actively join IFAC/CC9 and TC 9-5
- ii. creating a space for emerging, cross-disciplinary work related to TC 9-5 scope and objectives within IFAC
- iii. Contribute to rebalancing gender through encouragement of more female IFAC participation

Building on the success so far, the TECIS 2015 Conference has included a special session organised by young IFAC members with mentoring support of more experienced TC members. The coordinators were Ms. Amy Stapleton (MITRA/University of Lille, France) and Ms. Natalia Kobza (ESTIEM, Poland). The session has attracted a number of papers which were accepted by the TECIS 2015 IPC and appear in the proceedings.

The Committee members noted that this process has been a kind of experiment to encourage and support young IFAC members. It was designed to provide them a clear vehicle for career development from early stage research through to journal publication via IFAC (TC 9-5), as well as encouraging the kind of cross-disciplinary exchanges that are a feature of the TC.

It was noted that this process and structure has worked well and is a useful template for IFAC.

Following this review the question discussed at the TC meeting was *where from here?*

The success of these initiatives has been clear both in terms of new members and fresh contributions to the life and output of the TC 9-5 community. It also clearly aligns with important IFAC objectives.

It was proposed (M. Hersh, seconded K. Gill) that TECIS TC9-5 establish a “TC 9-5 Young Members Forum” organised and coordinated by young TC members with senior mentor support. The members who have already successfully coordinated the efforts will be invited to continue this work, with senior members support.

9. Event Planning

a. TECIS 2016

A proposal for a conference in Dorres, Albania (“TECIS 2016”) was submitted to IFAC and recently approved. The meeting extended their thanks to all who supported this effort, especially CC9 chairperson, Professor Françoise Lamnabhi-Lagarrigue, and the Technical Board.

The conference is the first of its kind as it is being hosted in a non-member country of IFAC. The initiative is a result of efforts and vision of the Austrian NMO (especially Prof. Peter Kopacek) and the Kosovan NMO (especially Prof. Edmond Hajrizi).

The initiative fits exactly with the strategic role of TC 9-5 in IFAC to reach new member countries in emerging regions, introduce local organisations to IFAC and TC 9-5 and encourage membership and involvement in the IFAC family. Besides the usual goals of such conferences, the additional goal of the event is to provide a basis for the establishment of a new IFAC NMO in Albania.

Representative and chair of the Kosovan NMO, Prof. Hadjrizi, described the area and provided various details of the event and circulated preliminary calls for papers.

b. IFAC WC 2017

IFAC 2017 in France was announced and discussed at some length. An initial proposal for a special/invited session for IFAC WC 2017 was reviewed (see AOB below).

c. IFAC Event Organisation: Papercept costs and other issues arising

Some concern was raised at difficulties using papercept and costs associated with the system, especially for poorer member IFAC NMOs.

Whilst acknowledging these concerns, the chairperson Larry Stapleton explained that, amongst other things, it was important that IFAC establish papercept as a means of demonstrating robust process of academic publication processing, and thereby securing IFAC presence on important citation indices throughout the world. Whilst there were costs and inconveniences the potential benefits were very high.

10. Other Business: World Peace Congress and Related Matters

Following discussions during the plenary sessions TECIS 2015 organised a special meeting on Thursday 24th September at 7.00 pm-9.30 pm in the Sofia Technical University Offices in Sozopol. There were four main agenda items:

- i. Explore how IFAC control and automation thinking can be applied to particular challenges facing humanity, especially in relation to "Peaceful Coexistence and Sustainability"
- ii. Generate a short TC position paper setting out this vision
- iii. Identify a process to submit this position paper to an external international peace forum setting out an IFAC vision of how control and automation engineering can support goals in this area of peace-building
- iv. Establish the basis for a series of special session, beginning at TECIS 2016

The resolutions from this agenda were as follows:

- i. A key area for control thinking in relation to peaceful coexistence and sustainability is the challenge of "inequality". This was identified as a challenge particularly amenable to control thinking.
- ii. Main themes in relation to inequality were unpacked and will appear in the position paper.
- iii. It was decided that the TC Chair tentatively approach the World Peace Congress representatives in Ireland with a view to incorporating the position paper in that forum.
- iv. The special session on Peaceful-Coexistence & Sustainability: The challenge of Inequality" was formally agreed for TECIS 2016 and will not be formulated with submissions from various TECIS members.

Prof Gill proposed a slightly different format for TECIS 2016 involving a reflection plenary at the end of the event. This was discussed at some length and TC member K. Kill and P. Groumpos agreed to submit a proposal to the TC chair for consideration in programme formulation for TECIS 2016.

PostScript:

World Peace Congress Representatives were approached by the TC chair during October 2015. Tentative agreement for an IFAC/TC9-5 Organised Panel Session has been secured on "Unilateral Disarmament: Control and Automation Technology Issues" for the 2016 congress. This panel will formalise a resolution for the United Nations General Secretariat in respect of Unilateral Disarmament and Conflict

11. Close