

Report to the CSS Outreach Fund

Fifth Indian Control Conference

9–11 January 2019

M. Vidyasagar, IIT Hyderabad

September 9, 2019

1 Introduction

The Fifth Indian Control Conference (ICC-5) was held during January 9–11, 2019 on the campus of the Indian Institute of Technology Delhi (Fig. 1). The previous four ICCs were held at IIT Madras (January 2015), Mahindra Ecole Centrale in Hyderabad (January 2016), IIT Guwahati (January 2017), and IIT Kanpur (January 2018). The Outreach Program of the IEEE Control Systems Society made a generous award of \$7,080 (including India’s Goods and Services Tax of \$1,080) to facilitate student participation in ICC-5. This report gives details of how the funds were utilized.

2 Technical Co-Sponsorship and Proceedings Acquisition

As in all previous years, the event received technical co-sponsorship from the IEEE Control Systems Society. After an initial waiting period of one year, the ICC Proceedings have also been included in IEEE Xplore starting with the Second ICC.

For ICC-5, a total of 177 papers were submitted, including 149 regular papers and 28 invited papers. Out of these, a total of 91 papers were accepted. The acceptance ratio of just above 50% indicates that rigorous standards were enforced.

3 Financial Sponsorships

ICC-5 received Gold Sponsorship from Mathworks, and Silver Sponsorships from ABB, Tata Consultancy Services, and Quanser. In addition, ICC-5 received support from the Defence Research and Development Organisation (DRDO), Government of India agencies. The total sponsorship amount was Rs. 600,000, or about \$8,000.

4 Technical Program

A total of 91 papers were accepted, organized into fifteen sessions. There were three plenary speakers, namely: Andrew Alleyne (Illinois), Subhasis Chaudhury (IIT Bombay) and Mustafa Khammash (ETH Zurich). There were nearly 150 registrants.



Figure 1: Prof. Andrew Alleyne giving his plenary talk



Figure 2: Prof. Mustafa Khammash was a plenary speaker but here he is asking a question



Figure 3: A photo of the audience at a plenary lecture

5 Student Participation

A total of 50 students were supported using the IEEE CSS Outreach funds. These comprised 35 students from outside Delhi and 15 IIT Delhi student volunteers. The 35 students from outside Delhi consisted of 19 authors, and 16 non-authors. The 19 student authors received full support by way of travel, free registration, and accommodation. The remaining 16 non-authors received free registration and accommodation, but no travel support. Given that internal travel within India can be quite cheap, this did not deter these students from participating, and everyone who was chosen for support accepted it. There were no no-shows. The 15 local students from IIT Delhi were given only free registration.

6 Best Student Paper Prize

A total of three papers were short-listed for the Best Student Paper prize, namely:

- Zap Q-Learning – A Users Guide by Adithya M. Devraj, Ana Bušić and Sean Meyn
- Analysis of an Integrated Reformer-Membrane Fuel-Cell System with Battery Backup and Switching Control: Start-Up Case, by Pravin P.S., Sharad Bhartiya and Ravindra D. Gudi
- Identification of Output-Error (OE) Models Using Generalized Spectral Decomposition, by Deepak Maurya, Arun K. Tangirala and Shankar Narasimhan

Adithya Devraj was the winner.



Figure 4: Group Photo of the Recipients of Student Support



Figure 5: Adithya Devaraj receiving the Best Student Paper Award



Figure 6: Banquet dinner

7 Conclusion

The organizers of ICC-5 (Control Society and IIT Delhi) are enormously grateful to the support provided by the IEEE CSS Outreach program. With a grant of \$6,000 (after GST), we could facilitate the participation of 50 students, for an average cost per student participant of just \$120. We believe that supporting the successive ICCs has been one of the best investments made by the IEEE CSS over the years. Moreover, we would not be able to support students at this level without CSS support. We look forward to the continued support of the CSS for future Indian Control Conferences as well.