TEQIP–II Sponsored

International Conference on

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(ICCCS-2014)

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Editors
Dr. Satvir Singh
Dr. Vishal Sharma
Dr. Krishan Saluja
Dr. Monika Sachdeva

Shaheed Bhagat Singh State Technical Campus
Moga Road (NH–95), Ferozepur-152004, Punjab, India

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Foreword

Shaheed Bhagat Singh State Technical Campus (Formerly, known as SBS College of Engineering & Technology), Ferozepur was established in 1995 by the Government of Punjab. Institute is serving our nation by producing quality engineers and researchers. Well qualified, self-motivated and experienced faculty is always busy in their research, teaching and overall development of students.

SBS State Technical Campus, Ferozepur is covered under World Bank assisted Technical Education Quality Improvement Programme, Phase-II (TEQIP-II) by the MHRD and Government of Punjab. In contrast, three department, viz. Electronics & Communication Engineering, Computer Science & Engineering and Electrical Engineering have collectively taken an initiative to conduct this first ever International Conference on Communication, Computing and Systems (ICCCS–2014) to encourage young researchers.

During the project, a web based conference management system is developed. Every received paper has been assigned a paper identification number, authors registered themselves, and final camera ready papers are collected through same software. Emails are also sent from time to time so as to share information among large group of authors.

More that hundred research papers were received from various domains of research. Originally, we had a plan of publishing only fifty papers. Therefore, review process was very rigorous involving three blind reviews and an online plagiarism check. However, during the review process, our reviewer could not limit them to only fifty papers.

Numerous paid journals on various topics have been established in the market as business. Many of them do not bother about the quality and contents of the research paper, except fee. Our Conference Team does not want to promote this business, therefore, not associated any paid journal with this conference. However, all research papers published in this Conference Proceeding will also be made available online at www.sbsstc.ac.in/icccs2014. Any researcher can download any paper, free of cost, to study and refer in their present research. This will also increase citations of published papers in conference proceeding.

Conference Team has done its job with best possible efforts. Suggestions from the readers and authors are always welcome. We will definitely take care in future.

With Best Wishes

Conference Team

Acknowledgments

Shaheed Bhagat Singh State Technical Campus has taken a historical leap to conduct a first ever *International Conference on Communication, Computing and Systems–2014* (ICCCS–2014). This is culmination of joint efforts of three departments, viz. (1) Electronics & Communication, (2) Computer Sc. & Engineering and (3) Electrical Engineering.

SBS State Technical Campus, Ferozepur is covered under World Bank assisted Technical Education Quality Improvement Programme, Phase-II (TEQIP-II) by the MHRD and Government of Punjab. This conference is a sincere effort of all our faculty members, students and contributing researchers toward improving our educational and research standards in contrast to the TEQIP-II Project.

Our sincere thanks are due to National Project Implementation Unit (NPIU) for inclusion of our institute in World Bank assisted project of TEQIP. Our gratitude to Sh. B. Purushartha IAS, Director and Sh. Mohanbir Singh, Additional Director, DTE&IT and State Project Facilitation Unit (SPFU) Punjab who gave us necessary guidelines from time to time. We also want to acknowledge Dr. Anand K. Tyagi, TEQIP-II Coordinator and his TEQIP Team who supported us financially from TEQIP funds in organizing this event.

We could never reach at this end without the support of Dr. Tejinder Singh Sidhu, Director, Shaheed Bhagat Singh State Technical Campus, Ferozepur, Punjab. He motivated and pushed us with unconditional support to provide all the facilities from the institute.

Conference Team wants, on the behalf of all our colleagues, to thank Sh. Dinesh Lakra, Chairman, Board of Governors, SBS State Technical Campus, Ferozepur for his valuable suggestions and sustained support to organize such activities those can earn name and fame for our institute.

We want to acknowledge our contributing authors and co-authors. Their unexpected huge response in the form of research papers increased our excitement. From total received research papers, due to organizational and publication constraints, about 40% papers were required to be dropped. This is why only the best research papers were selected, after three blind reviews and aplagiarism check, for publication in the Conference Proceedings. It was a difficult job for Review Team. We feel sorry for non-acceptance of some of papers although they were good.

Finally, we must thank GOD for giving us the environment to organize this event, people to help, opportunities to encash and potential to succeed.

Conference Team

Message

I am very happy to be a part of this International event being organized at Shaheed Bhagat Singh State Technical Campus, Ferozepur. I humbly accept the honor of being the Chief Guest in the *International Conference on Communication, Computing Systems (ICCCS–2014).*

The students, researchers, scientists and giants in industry will share their knowledge and findings with their counterparts and discuss on this excellent platform. The Conference will be a step forward to achieve self-reliance and be a country of innovators.

I hope that the SBS state campus will set the ball rolling and will organize more such conferences from time to time and it will be a periodic feature of this great SBS state campus. The Researchers, Developers and people involved in Industries will share their experiences on the platform being provided henceforth here.

This type of activities will encourage the students to become JOB providers rather than JOB seekers. I wish the Conference a great success, and some useful results so attained here will be conveyed to quarters concerned for implementation.

With best wishes

Professor (Dr.) Tara Singh Kamal
FIE, FIETE, Life Sr. MIEEE (USA)
Vice President (2001–02), Chairman (1999–2001)
IE (India) Punjab & Chandigarh State Center
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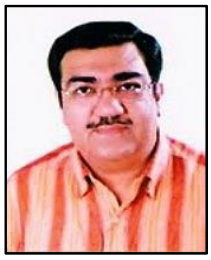
Engineering Sciences Section,
Indian Science Congress Association

Message



We all associates of the SBS State Technical Campus are one family. I being the head of this family congratulate all on this auspicious occasion of first ever *International Conference on Communication, Computing and Systems (ICCCS–2014)* being organized in our campus. This is the beginning of new era in the progressive path of development of our campus and it is a matter of proud for us that after attaining excellence at undergraduate level we are ready to excel in the field of Higher Education and Research.

As this collaborative project of World Bank and Government of India the Technical Education Quality Improvement Programme, Phase-II (TEQIP-II) is being implemented in the campus and its outcomes are getting evident. The volume and quality of research papers received indicate this region has the ability to become the hot bed of research activates.

I expect now onwards, ICCCS will be a periodic event to provide an International Platform for Researchers and Students to present their work.

With Best Wishes

Dinesh Lakra
Chairman BOG
SBSSTC Ferozepur

Message

Shaheed Bhagat Singh State Technical Campus is organizing first *ever International Conference on Communication, Computing and Systems (ICCCS–2014)* and, on this occasion, it gives me immense pleasure to send my greetings to the participants of ICCCS and good wishes to the organizers for the success of the conference.

By organizing this kind of events it seems that this institute is ready to play its role in the field of higher education and research as well. This initiative is in line with the policy of Government of India to spread the higher education at mass level. The research activities like, this conference, are very much essential for upliftment of higher education level in the country. These activities will create a positive environment for research potential of the region to develop.

I am sure that this conference would through up useful ideas on a topic which is important for our present as well as future generations.

I extend my best wishes to the organizers and the participants on this occasion.

Dr. T.S. Sidhu
Director
SBSSTC Ferozepur

Message

It is a matter of great pleasure and proud to me that ICCCS–2014 Conference is being organized at this institute and the proceedings of the same are under published in the form of a book. I offer my congratulations to the participants, speakers, organizing and TEQIP team on this occasion. The aim of ICCCS–2014 is to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of Electrical, Computer, Electronics and Communication Engineering. It also provides the premier interdisciplinary and multidisciplinary forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns, practical challenges encountered and the solutions adopted in the field of Electrical, Computer, Electronics and Communication Engineering.

I am highly thankful to Hon'ble Chairman BOG Sh. Dinesh Lakraji and Worthy Campus Director Prof. T.S. Sidhu ji who had always been very sensitive to the issues concerning the upliftment of this institution, for their valuable cooperation and patronage in organizing this conference. If we are in position to offer this wonderful event today to the academic fraternity, it is simply because of the excellent men and women who have staffed this institution and also who have been trained here all these years. What SBSSTC has done over last more than eighteen years now–"in caritate et justitia", that is, in love and fairness towards all-is to create a culture of excellence and hardwork. SBSSTC has been what we call as "magis", a term meaning a constant and relentless struggle to go beyond, to push further and further the contours of our own limitations. Eighteen years is a crucial period as it signifies the "adulthood" whereas in the life of an institution, it is the time to prove its worth and I feel glad that SBSSTC has made its mark on the state's psyche. I am sure that this conference will positively prove to be a step forward in this direction.

Professor Anand K. Tyagi
TEQIP Coordinator &
Associate Director (Engineering Wing)

Message

I am feeling delighted for being the Convener of this first ever *International Conference on Communication, Computing and Systems (ICCCS–2014)* being organized at Shaheed Bhagat Singh State Technical Campus, Ferozepur. Organizing an international conference for me is like a dream come true. Receiving research papers, managing their reviews, keeping authors informed and publishing accepted research paper in form of Conference Proceeding, etc. are some of very critical activities that I learnt during the process.

This conference is actually resultant of joint efforts of all the faculty members of three department (1) Electronics & Communication Engineering, (2) Computer Science & Engineering and (3) Electrical Engineering. Everyone in the organizing team was propelled by unconditional support from Director and Board of Governors and their contribution made this event a great success.

After attaining excellence at undergraduate level SBSSTC Ferozepur is now ready to push research and innovation standards in the region. This conference is just a beginning and I am sure in future such events will be regular activities of our institute.

Best Wishes

Dr. Satvir Singh
Convener

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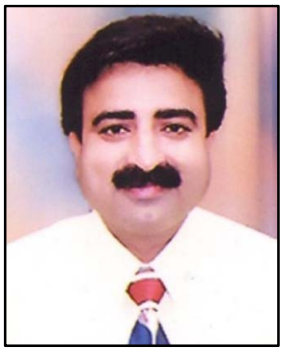

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