ADDRESS BY THIRU BANWARILAL PUROHIT, HON'BLE GOVERNOR OF TAMIL NADU AT THE INTERNATIONAL CONFERENCE ON COMPUTING SCIENCES (ICCS 2018-2019) ORGANISED BY LOYOLA RESEARCH INSTITUTE OF MATHEMATICS AND COMPUTING SCIENCES AT BERTRAM HALL, LOYOLA COLLEGE, CHENNAI ON 16.11.2018 AT 9.30 AM

Anaivarukkum Kaalai Vanakkam

Rev. Fr. A. M. Jayapathy Francis S.J,
Rector, Loyola College,

Padmashri Thiru. Nalli Kuppuswami Chetty,
Chairman, Nalli

Thiru. Gennadii Rogalev,
Vice Consul, Russian Consulate, Chennai

Rev. Dr. D. Selvanayakam S.J,
Secretary & Correspondent,
Loyola College.

Rev. Fr. Albert William S.J,
Secretary, ICCS 2018-2019

Dr. S. Vincent,
Dean of Research,
Loyola College

Distinguished Invitees

Ladies & Gentlemen

It is a matter of happiness to be here today at the Loyola College for the inauguration of the International Conference on Computing Sciences. Mathematics and Computing Sciences have brought pride and glory to India and so also Loyola College. Linking up with these two prestigious symbols of glory is a matter of pride for all of us assembled here.

Mathematics and Computing sciences have always been an area of focussed study in India. In the classical period of Indian mathematics (400 AD to 1200 AD), important contributions were made by scholars like Aryabhata, Brahmagupta and Bhaskara. The decimal number system in use today was discovered by Indian

mathematicians. Indian mathematicians also made early contributions to the study of the concept of zero as a number, negative numbers, arithmetic and algebra. In addition, trigonometry was advanced in India, and in particular, the modern definition of sine and cosine were developed here. These mathematical concepts were transmitted to the Middle East, China and Europe and led to further developments that now form the foundations of many areas of mathematics.

A later landmark in Indian mathematics was the development of the series expansions for trigonometric functions by mathematicians in the 15th century CE. Their remarkable work, completed two centuries before the invention of calculus in Europe, provided what is now considered as the first example of a power series.

Even in recent years, the Indian geniuses who have made revolutionary changes in the world of mathematics have covered themselves with glory and brought fame and honour to the nation. Of them the most out standing is Srinivasa Ramanujam who hails from Tamil Nadu.

He is most famously known for his contribution in analytical theory of numbers, continued fractions and infinite series. He was invited to England on his set of 120 theorems that he sent to Cambridge. He has been the inspiration of many mathematicians, not just in India but all over the world.

The most famous female Indian mathematician of all time, Shakuntala Devi, was more commonly known as the human computer. She was so called because of her incredible talent to solve calculations without using any calculator. In Dallas she even competed with a computer to give the cube root of 188138517 faster and she won! She went ahead to compete with UNIVAC the world's fastest computer to solve the 23rd root of a 201 digit number and she won that too.

Dattathreya Ramchandra Kaprekar made contributions towards various topics such as magic squares, recurring decimals, integers with special properties and much more.

Narendra Karmarkar is best known for his work in inventing polynomial algorithms for linear programming. This fine mind created an overlap between international technology and mathematics to give birth to algorithms.

C.R. Rao is a mathematical statistician is most famous for theory of estimation. He is also known for his contribution in discovering Cramer-Rao bound and the Rao-Blackwell theorem.

C.S.Seshadri's main contributions are in algebraic geometry. Along with his contributions in geometry he also invented the Seshadri constant and the Naraisham-seshadri constant.

Sathyendranath Bose another famous Mathematician in collaboration with Albert Einstein laid the foundation for Bose-Einstein statistics in quantum machanics.

Thus India's contributions in Mathematics and Computing Sciences have been remarkable and outstanding all through the ages. Such a flair for computing sciences was what led to India becoming the world leader in Computer Software. And among the leading states engaged in the generation of Computer Software, Tamil Nadu ranks very high. It is therefore most appropriate that an international conference on Mathematics and Computing Sciences is held at Chennai.

Loyola College, which was founded in 1925, has distinguished itself as a portal of learning and has been ranked No.2 at the All India level of the National Institutional Ranking framework of 2017. It has also acquired an international reputation as a World class centre for socially relevant research.

This international conference at Loyola College will present a great opportunity for research scholars. I am happy to know that 25 scientists from around the world have been invited to participate and that more than 300 quality research papers will be presented at the conference. I congratulate the Loyola Research Institute of Mathematics and Computing Sciences for this feat.

The ability to think differently and creatively, innovate and adopt interdisciplinary approach is the hall mark of genuine research. Collecting enough and more information on the area of research gives the researcher confidence and much required direction.

The originality of any research is determined by the systematic way in which the research problem is identified and churned by literature review.

Recent years have seen major striking examples of ideas and results from one field of core mathematics imported to establish important results in other fields. An example is the resolution of the Poincare conjecture, the most famous problem in

topology, by using ideas from geometry and analysis along with results about a class of abstract metric spaces.

There are also connections recently discovered between commutative algebra and statistics. These have importance in the statistics of medium-sized data sets – for example, contingency tables – where classical methods give wrong answers. Hence instead of the classical methods of elimination theory, the modern technique of Groebner based method is now often used.

I am sure that a number of such useful ideas will be expressed at the conference and that there will be a free exchange of views by the experts.

Tamil Nadu has always had great role models in scholarly integrity as personified by Nakkeerar. Tiruvalluvar has a separate chapter on 'impartiality' or 'Naduvu Nilamai' (**நடுவு நிலமை**).

May those greatest traditions of scholarship and wisdom guide you all in your vibrant exchanges. My best wishes to all of you for the success of this International Conference on Computing Sciences.

Nandri Vanakkam

Jai Hind