## GC 2012-5663: AN AGENDA FOR FUTURE DIRECTIONS FOR ENHANCING INTERNATIONAL COLLABORATION AMONG FACULTY, STUDENTS, CURRICULAR, AND LABORATORY DEVELOPMENT

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R Natarajan received his B.E. degree in Mechanical Engineering from the University Visvesvaraya College of Engineering (of the then Mysore University) in 1961. Subsequently he obtained the M.E. degree of the Indian Institute of Science, Bangalore; and the M.A.Sc and Ph.D degrees from the University of Waterloo, Canada. He has worked as a National Research Council Fellow in Canada, and as a Humboldt Research Fellow in Germany.

He served as The Director of the Indian Institute of Technology, Madras from 1995 to 2001, and as the Chairman of The All India Council for Technical Education, a statutory body of the Government of India, from 2001 to 2004.

He was the Vice President of The Indian National Academy of Engineering during 2002-2006, and the Chairman of the Research Council of the Central Fuel Research Institute, Dhanbad during 1995-2005. He is currently the Chairman of the Board for IT Education Standards of Karnataka.

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# INTERNATIONAL COLLABORATION IN CURRICULUM AND LABORATORY DEVELOPMENT

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### **Abstract:**

International collaboration in Higher and Engineering Education has been receiving increasing attention of national governments, international agencies and institutions of higher education during the past few decades, particularly since the general acceptance of globalization worldwide. Among the goals of international collaboration is the addition of an international dimension to the course contents and teaching programs. The formalization of collaboration is essentially through an MoU which sets out the objectives, mechanisms, financial arrangements and IPR issues.

India has a long history of international collaboration with several countries worldwide, also with other Asian countries, such as China, Japan, Korea and Malaysia. Some of the successful collaborations are, for example, through the mechanisms of: India-China Eminent Persons Group, Japan Society for Promotion of Science, Association of Commonwealth Universities Conferences and the Annual Asian University Presidents Conferences. The Indian Society for Technical Education participated in the India-China Dialogue during the GEDC Conference in Beijing last year, where bilateral faculty and student exchanges were discussed as a means of benefiting from the collaboration.

The recent initiatives in several countries in Asia to join the Washington Accord have stimulated interest in Outcomes-Based Teaching-Learning (OBTL), which involves the articulation of Program Objectives and Program Outcomes. In addition, Howard Gardner's Theory of Multiple Intelligences and Edgar Dale's Cone of Experience have been responsible for Curriculum and Pedagogy Innovations. There are also significant changes in the objectives and design of Laboratory Instruction and Practices.

There is a number of pre-requisites for achieving success in bilateral international collaboration: commitment at the top, faculty "champions" to undertake and implement the identified tasks with enthusiasm, trust between the partners, mutual benefit for both partners, and strategies for ensuring sustainability.