

GUJARAT TECHNOLOGICAL UNIVERSITY

GTU RESEARCH GROUP FOR SMART CITIES OF NEXT GENERATION

Minutes of Google Hangout Meeting: 9th January 2015

GTU Center for Infrastructure, Transportation and Water Management

Background

Gujarat Technological University has set up 14 Postgraduate Research Centres to foster research activities. The GTU Post-graduate Research Centre for Infrastructure, transportation and Water Management is one of the 14 research centres.

The Post-graduate Research Centres work as catalysts for infusing the spirit of innovation and research among the GTU community, through actively involving Faculty Members of Engineering, Architecture, Planning and Management and post-graduate students in research and development. The Centres are supposed to encourage Faculty Members and research students to apply for research grants and establish research laboratories. The Centres are to establish active linkages with the industry and research institutions in India and abroad.

The Centres also aim to become institutional 'public intellectuals' or independent think-tanks to which scholars of the whole world should be invited and where they would like to come to expound their ideas to a receptive, knowledgeable but critical audience.

The Research Center for Infrastructure, transportation and Water Management (CITWM)

In year 2001, about 286 million persons were living in 5161 urban areas of India and in year 2011, about 377 million people are living in 7933 urban areas. The High Powered Expert Committee (HPEC) for estimating the investment requirement for urban infrastructure services has projected that India's urban population, as presently defined, will be close to 600 million by 2031, more than double that in 2001.

Cities are engines of economic growth and urbanization has become an important part of economic progress. At the same time, urbanisation is also perceived to be correlated with pollution, congestion and inferior quality of life. The need for up-gradation and development of urban infrastructure and urban services cannot be overstated. The present levels of urban infrastructure are grossly inadequate to meet the demand of the existing urban population.

A number of reports have been prepared in the recent past on the funding requirements for urban infrastructure. The India Infrastructure Report (1996) of the Rakesh Mohan Committee had estimated Rs. 56,000 crore at 1995-96 prices over a 10-year period for the four urban sectors of water supply, sewerage, solid waste management and urban roads. More recently, the 'Report on Indian Urban Infrastructure and Services' (2011) of the High Powered Expert Committee of the Government of India (HPEC) and 'India's Urban Awakening' (2010) report by global management consultants McKinsey and Company, have independently estimated the requirement for urban infrastructure services. The investment estimate, projected by the HPEC, has been accepted by the working group on financing urban infrastructure. It is Rs.39.2 lakh crore for the 20-year period from 2012-13 to 2031-32.

The huge investment in the Infrastructure sector in India in the coming years, calls for institutions like Center for Infrastructure, Transportation and Water Management (CITWM) at GTU to take the opportunity in taking active part in knowledge management related to Infrastructure development so as to generate valuable resources which can be utilized for betterment of the Indian Cities by conducting workshop, seminars and carrying out research projects according to the need of the hour.

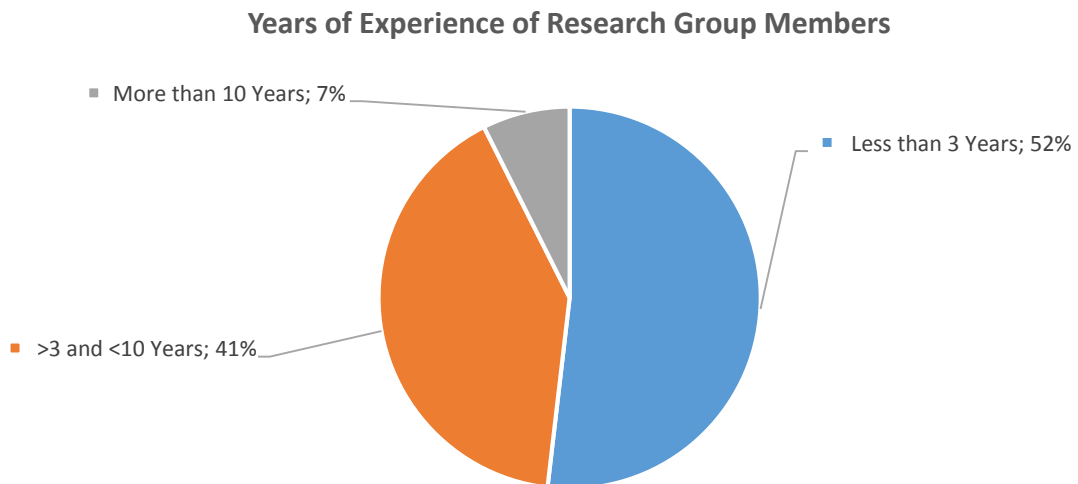
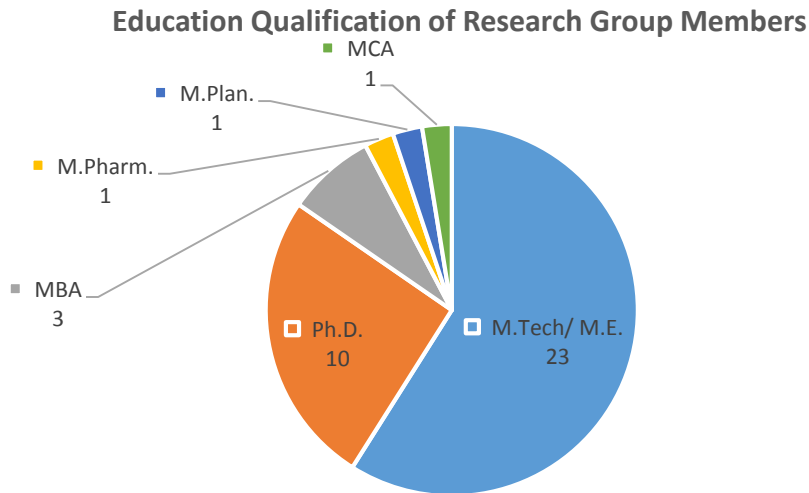
Activities at the Center

- The Center had organized a Half-day Seminar on Affordable Housing On Saturday, 3rd August, 2013.
- A preparatory Meeting and a half-day Seminar was organised on Saturday, 10th August 2013 on Solid Waste Management systems.
- One-day seminar on “SMART CITIES-QuoVadis?” was organized by the Center to bring in the national & international experts and emerging issues related to smart city for Post Graduate Students, Professors, Principals, and Industry Experts. The aim of the seminar was to foster fruitful dialogues on the effective and efficient planning and development of smart cities in Indian context.
- The Research Group for Smart Cities of the Next Generation has been formed, associated with this Center. The Group is designed to involve researchers and Faculty Members in all the Colleges to work on ideas related to smart cities and subsequently carry out research activities.
- A national workshop was organized on 19th Jan, 2015 at GTU for Dissemination of Indigenous Technologies of Water, Wastewater & Solid Waste Treatment developed by the Bhabha Atomic Research Centre (BARC) under Swachh Bharat Abhiyan. It also aimed to bridge the GAP between research and practical application.
-

Research Group for Smart cities of next generation

The extraordinary level of urbanization and consequent growth in size and numbers of cities in India present both challenges and opportunities. The phenomenal growth in urban population challenges traditional approaches to city management. To address challenges of Urbanization and Urban Growth, Government of India has initiated Smart City program. This initiatives is directed at how the respective cities can transform themselves in different policy areas such as the use of alternative or renewable energy, use and management of natural resources, waste reduction and management, carbon emission, green areas, to desired sustainable socio-economic outcomes.

GTU Research Centre for Infrastructure, Transportation and Water Management has formed a Research Group for conducting research activities related to smart cities. GTU has invited Faculty Members from various institutions to take part in the Research Group. A total of 39 Faculty Members showed interest to join the Research Group. As many as 12 Faculty Members from V.V.P Engineering College showed interest to contribute to the research activities.



Google Hangout Meeting

The meeting was organized after inviting the Faculty Members to join this research group through GTU circular no.: GTU/Research groups/ 9006. The meeting was scheduled via Google hangout dated 09/01/2015 between 1:00 pm to 2:00pm

Agenda

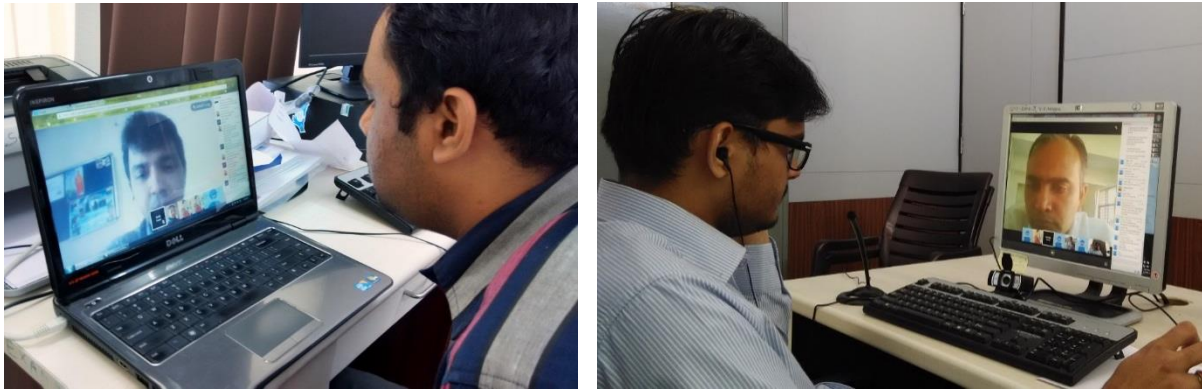
The Agenda of the meeting was to discuss potential research activities, related to smart cities. Prof. Jatin Thakrar and Mr. Vimal Sharma from Gujarat Technological University coordinated the meeting.

Discussion

Starting with the introduction of group members and their current activities, the group discussed about the present problems in infrastructure. The group members also gave their opinion on what a smart city should consist of.

The main focus of the group was on up gradation of infrastructure and use of technology for better service delivery. Ideas were discussed to improve traffic management using RFID and CCTV cameras. The group also debated about water supply and drainage system monitoring using information and

communication technologies. As the concept of smart city proposes use of information and communication technologies, the group emphasised on Wi-Fi enabled cities.



Conclusion

The members appeared to be very much enthusiastic to be part of the Research Group and presented innovative ideas. The subsequent step would be to recognise the potential in each idea and identify research projects with the involvement of students at engineering and technology institutes.

Through Research Groups, GTU is providing a platform where Faculty Members and researchers can work and discuss relevant research in different areas of Engineering and Technology.

Contact us to participate in the research activities of CITWM:

- Vimal Sharma,
Research Associate, GTU
Email: ra_ah@gtu.ac.in
- Jatin Thakrar,
Assitant Professor, GTU
Email: ap_jatin@gtu.ac.in