



**PDPM INDIAN INSTITUTE OF INFORMATION TECHNOLOGY,  
DESIGN & MANUFACTURING, JABALPUR**  
(An Institute of National Importance established by an Act of Parliament, Government of India)

**National Conference on Smart Cities**  
**November 25-26, 2016**



**In Association with**

A two day National Conference on Smart Cities (NCSC 2016) was jointly organized by PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur (PDPM IIITDMJ) and Indian Institute of Technology Delhi (IITD) during November 25-26, 2016 in association with [Think India Forum](#), [Jabalpur Smart City Limited](#), and [EU-India FI-MEDIA project](#). The conference was hosted in the premises of [PDPM IIITDM Jabalpur](#). The event was organized under the leadership of Prof. P. K. Jain, Director PDPM IIITDM Jabalpur as patron, and guidance of Prof. M. P. Gupta, Head, Department of Management Studies, EU-India FI-MEDIA partner, IIT Delhi as Conference chair. The conference was organized by Dr. Pritee Khanna, Associate Professor CSE and Dr. Vinod Kumar Jain, Assistant Professor CSE as Conference Co-chair.



NCSC 2016 was organized in accordance with the Government of India's vision of developing over 100 smart cities across the country. It aimed to target issues and challenges faced in the development of smart cities and come up with solutions that lead to development of economically vibrant, environment-friendly cities that conserves heritage and provides better amenities to its citizens.

Eminent speakers were invited not only from India but also abroad. The exhaustive list of speakers includes Mr. James Clarke (EU Strategic Liaison Manager, Coordinator of the EU-INDIA FI-MEDIA project, Telecommunications Software & Systems Group, Waterford Institute of Technology, Ireland), Mr. Abhishek B. Sharma (Managing Director, Beyond Evolution Tech Solutions Pvt. Ltd., Gurgaon), Prof. M. P. Gupta (IIT Delhi), Prof. Kapil Gupta (IIT Bombay), Prof. Gopal R. Patil (IIT Bombay), Prof. M. Parida and Prof. Kazmi (IIT Roorkee), Mr. Rahul Tomar (CTO Smart Cities Lab, Germany) and Mr. Peter Muryshkin (Fraunhofer IAIS, Germany).

Entries were invited throughout the country to present ideas/papers on this theme. An exhibition cum contest and a panel discussion was also organized under Smart City Challenges. In the exhibition, the participants were encouraged to present their ideas on smart city through prototype/ model/ concept poster etc. There was no bar on age, profession or background of an

individual/team to participate in the conference. Each entry was judged by a panel of experts based on creativity, innovation, and originality and the two best entries were felicitated in the valedictory function. The conference was marked by an exhilarating participation of 340 students, research scholars, and faculty members from various schools & colleges of Jabalpur and institute of national importance from neighboring cities like Indore, Bhopal, Raipur, Nagpur, Mumbai etc.

#### Highlights, Day 1 - November 25, 2016

The inauguration ceremony began with the lamp lighting and Saraswati pooja by the Chief Guest Dr. Swati Godbole, Mayor Municipal Corporation Jabalpur, Guest of Honor Mr. James Clarke, Prof. P. K. Jain Director IIITDM Jabalpur, Prof. M. P. Gupta, Dr. Pritee Khanna and Dr. Vinod K. Jain. An exhibition on “Smart City Challenges” was inaugurated by the Chief Guest Dr. Swati Godbole just after the inaugural session.

Twenty three models and thirty posters were displayed on issues relevant to smart cities development like ‘Traffic control and smart roads development’, ‘Sewage Management’, ‘Energy Conservation’, ‘Green Revolution’, ‘Natural Resources utilization and management’ etc. The exhibition received a fervent response by all the guests and participants.

The first day also witnessed informative talks by 5 speakers, i.e., Mr. Clarke on BENEFITS OF EU-INDIA CLUSTERING, Mr. Abhishek B Sharma on IOT AS TECHNOLOGY AND ITS ROLE IN SMART CITIES, Prof. M. P. Gupta on DIGITAL TO SMART VILLAGES, Prof. Kapil Gupta on TOWARDS DISASTER RESILIENT AND SUSTAINABLE SMART CITIES, and Mr. Rahul Tomar on PREPARE YOUR CITY FOR FUTURE WITH FIWARE, OPEN APIs FOR OPEN MINDS. In addition, a presentation was made by Jabalpur Smart City Limited representative.

#### Highlights, Day 2 - November 26, 2016.

The second day began with the research paper presentations by the participants. The conference included 15 research paper presentations by research scholars from renowned institutions on topics like “IoT based interactive smart home automation system”, “IoT based facial recognition security system for smart cities”, “Piezoelectricity: a smart solution for a smart city”, “Road transportation redefined”, “Waste as a Resource”, “Public transportation: up gradation of bus network for sustainable mobility” etc.

Informative talks were again hosted by Mr. Prem Narayan, Chief Material Manager, Stores Department, Indian Railways Jabalpur on “SMART CITY- A NEW URBAN FORM FOR SUSTAINABLE DEVELOPMENT”, Prof. Gopal R. Patil on SMART TRANSPORTATION FOR SMART CITIES, Prof. Absar Ahmad Kazmi on SEWAGE TREATMENT IN INDIA-TOWARDS ENERGY EFFICIENT SYSTEM, and Prof. M. Parida on URBAN MOBILITY STRATEGIES FOR SMART CITIES.

A special panel discussion session was also organized where a brainstorming discussion was held among Mr. Ved Prakash (Commissioner, Municipal Corporation Jabalpur), Mr. Nagesh, (Additional Commissioner, Municipal Corporation Jabalpur and CEO-SPV of Jabalpur Smart City Ltd.) and distinguished speakers including Mr. James Clarke, Mr. Abhishek Sharma, Mr. Rahul Tomar, Prof. M. P. Gupta, Prof. Patil, Prof. M. Parida, Prof. Kazmi and Prof. P. K. Jain. The agenda included issues like Public transport and investment in projects through PPP mode in the context of Jabalpur. Another point of discussion included Development of Jabalpur as “Gateway to Ethnic and Spiritual Tourism, City of Festivals and Events, and Garment City”. The crowd present there also participated in the discussion and come up with valuable suggestions.

The second day of the Conference also witnessed a simultaneously organized full day event organized by FI-MEDIA C2C partner, [Smart Cities Lab India](#), entitled “Cluster 2 Cluster (C2C) partnership workshop on FIWARE Technology in the India smart cities context”. The hands-on training event was organized to understand FIWARE Generic Enablers (GEs) and how to use it in development of Smart Cities and Internet of Things (IoT) Applications. An initiative was also taken to launch and develop a dedicated FIWARE Lab facility at PDPM-IIITDM Jabalpur with the EU-India FI-MEDIA C2C participants. The full day event was attended by around 90 participants including the EU C2C participants, including Dr. Bhargav Dave from Aalto University, Finland. The workshop covered four important topics, i.e., *Handling Authorization & Access control to APIs Understanding Keyrock Generic Enabler FIWARE* which brings a powerful framework to setup Authorization and Access Control policies based on widely adopted Security Standards (OAuth, XACML), *Development of Context-Aware Applications using FIWARE Orion Context Broker* which allows one to model, manage gather context information at large scale enabling context-aware application, *Connection to the Internet of Things*, which allows IDAS IoT Agents to easily gather context specific information from sensors or actuate upon physical objects, and *Real time processing of Media Streams* which allows to process multimedia information in real-time so that one can incorporate extended sensing capabilities based on cameras or microphones (detecting faces, crowds, plates) into applications. A full report of the EU-INDIA FI-MEDIA C2C / [Smart Cities Lab India](#) workshop on 26 Nov. can be downloaded from [http://bic-fimedia.eu/content/pages/C2C-Fiware-Workshop-Report\\_231386202569.pdf](http://bic-fimedia.eu/content/pages/C2C-Fiware-Workshop-Report_231386202569.pdf).

The conference was concluded through a valedictory ceremony with Prof. M. Parida as Chief Guest. Model/poster competition is won by students of Ryan International School, Jabalpur for their model on “Microbial Fuel Cell”. “Smart Bike” model from Satya Prakash Public School, Jabalpur stood runner up.

In a nutshell, NCSC 2016 succeeded in providing a platform to students, academia, and industry professionals working in this area for exchanging knowledge and improving their skills and also enabled valuable India – EU collaborations in areas related to smart cities, including IoT technologies.

*Authors: Dr. Pritee Khanna, Dr. Vinod K. Jain, and contributions from Mr. James Clarke, FI-MEDIA*