Urban Planning and Management using Remote Sensing and GIS

Overview

India has experienced rapid growth in population and urbanization since 1970s. Urban centers have better living conditions, economic activities, and facilities. Therefore, people gradually started migrating from rural to urban areas. This has caused urban centers to sprawl and population pressure is being felt on all facilities and infrastructure. Slums also grew in cities where poorer segment of society live without adequate sanitation and safety measures. The traffic in almost all the cities has become a major problem. This has caused serious problems of quality of life. This in many ways is affecting the human activities, health and security.

An inclusive approach of studying urban environment using remote sensing data in the platform of Geographic Information Systems (GIS) need to be adopted to understand the issues of urban ecology, landscape and to support planning and management. Remote sensing technologies have rapidly developed in last 2 decades with very high resolution sensors. This can support developing time series maps for urban mapping. Land cover and land use changes need to be monitored regularly to ensure planned development and better management of urban facilities and infrastructure.

Geographic Information Systems (GIS) have the capability of integrating varied sources of data and analyzing them for generating useful information for decision making. Data come from maps, satellite imagery, field survey questionnaires, tabular record, and global positioning system (GPS) data capture. This course will address with dealing these data using the tools in GIS. Skills of information retrieval and mapping through open source software will be developed. This course will also train in the techniques for remote sensing data processing and analysis using opens source software.

Course participants will learn these topics through lectures and hands-on experiments. Also case studies and assignments will be shared to stimulate research motivation of participants.

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<th>Date</th>
<th>July 25th to August 4th, 2016</th>
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| Who can attend| Students at all levels (BTech/MSc/MTech/PhD) or Faculty from academic institutions and technical institutions  
> Executives, engineers and researchers from service and government organizations including R&D laboratories |
| Fees           | The participation fees for taking the course is as follows:  
> Students from host institution : Free  
> Students from academic Institutions : Rs. 1000/-  
> Faculty from academic Institutions : Rs. 3000/-  
> Industry/ Research Organizations : Rs. 5000/-  
> Participants from abroad : US $250  
The above fee includes all instructional materials and laboratory usage charges. |
| Number of participants for the course will be limited to fifty. |
The Faculty

Dr. Nitin Kumar Tripathi is a Professor of Geoinformatics in School of Engineering and Technology in Asian Institute of Technology (AIT), Thailand. His research focus is on studying environmental, social and development issues using satellite remote sensing data and existing tools of geo-information technology. He has conducted sponsored international research projects from various organizations. He has been recently awarded the prestigious ERASMUS + Project from EU in collaboration with University of Salzburg, Austria. He is Editor-in-Chief of peer reviewed “International Journal of Geoinformatics” which is the only International Journal in the field of Geoinformatics from Asia and being indexed by Elsevier, Scopus, British Library, Geoscience Australia and some more. He is also associated with a number of international journals as a reviewer and guest editor. With over 27 years of experience in geospatial technologies, teaching, research and consultancies, he has supervised 28 Doctoral and 102 Masters researches and have 161 publications in books, book chapters, international journals (90), and conferences of repute. His research output shows Scopus H-Index of 14 with 520 citations and Google Scholar H-Index of 17 with 1012 citations. He is recipient of prestigious awards such as DAE YOUNG SCIENTIST AWARD – 1994 (The Dept. of Atomic Energy, India), AICTE CAREER AWARD FOR YOUNG TEACHER – 1996, OCU Distinguished Scientist Award – 2007, Osaka City University, Japan and 9 best paper awards alongwith his team in International conferences.

Dr. P. Nanjundaswamy is a Professor of Civil Engineering in Sri Jayachamarajendra College of Engineering (SJCE), Mysuru, India. His research interests are in the areas of Earthquake engineering and Highway Engineering. He has Conducted sponsored research projects from AICTE, India. He has supervised 14 Masters and over 25 undergraduate thesis. Presently supervising 2 doctoral and 3 M.Sc. (Engg) by research candidates. He has published over 25 research articles in various reputed conferences and peer reviewed journals. He is nominated as a member of the M-TRAC committee to assist Mysuru city traffic police department in implementing the project for control and management of city traffic. He is meber of several professional organisations.

Course Co-ordinator

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