

## Tentative Outline

### Special Thematic Issue for Current Environmental Engineering

#### Environmental Quality and Sustainable Transformation

*Guest Editors: Dr. Jyotishmoy Borah*

#### Aims & Scope:

Environmental Engineering is an interdisciplinary area of Science and Technology which relates the knowledge from a wide range of subjects. People who have careers in environmental engineering often study, provide solutions and implement strategies concerning the quality of air, water and land resources; transport, use and disposal of waste and hazardous materials; water and wastewater treatment; and recycling of water using modern and different unique technologies. Environmental engineers are involving in multidisciplinary projects addressing complex issues and changing technologies that are required for sustainable development in the globe.

In the present scenario, this branch of science and technology has undertaken many research themes.

#### Subtopics:

The subtopics to be covered within this issue are listed below:

- **Environmental Health Engineering:** Environmental Health Engineering focuses on identifying, evaluating, and rectifying environmental problems that have a discernable impact on public health. The central idea is that many threats to human health are related to the environment, and the most effective way to alleviate the threat is to prevent or remediate the underlying environmental problem.
- **Sustainable Energy and Materials:** Sustainable Energy and Materials focuses on innovative ways to provide energy and material resources to the society in a sustainable and environmentally responsible way. The central idea is to construct and design the energy and industrial infrastructure of the 21st century. Many projects focus on treating the inefficiencies and by-products of traditional production in novel ways, such as carbon sequestration, zero-emission coal, catalysis, and recycling technologies.
- **Water Recourses and Climate Risks:** Water Resources and Climate Risks focuses on the movement, availability, and quality of water throughout the Earth ranging from particular region of rivers and watersheds to the entire globe. Specific projects ranging from the management of available supplies to forecasting future availability to underlying scientific mechanisms and span a number of disciplines such as hydrology, hydroclimatology, water resources engineering, atmospheric dynamics and land-atmosphere interaction.
- **Sustainable Engineering of Urban Systems:** Today More than half the world's people and about 80% of those in developed nations live in cities and urban areas. These vast urban populations consume a majority of the world's resources, contribute to environmental degradation locally, regionally, and globally; and simultaneously are highly vulnerable to the consequent impacts of such changes (e.g., climate change). Developing environmentally sustainable cities is one of society's grand challenges in the coming decades. In the era of a climate-constrained world, where all future population growth will be in urban areas, cities will be increasingly contributing to global energy use and GHG emissions. The need for transformative changes in urban systems in the long-term while accelerating incremental changes in the very near term are essential.
- **Environmental Biotechnology:** Environmental biotechnology, by contrast, deals with far less apparently dramatic topics and though their importance, albeit different, may be every bit as great, their direct relevance is far less readily appreciated by the bulk of the population. Cleaning up contamination and dealing rationally with wastes is, of course, in everybody's best interests, but for most people, this is simply addressing a problem which they would rather have not existed in the first place. Even for industry, though the benefits may be noticeable on the balance sheet, the likes of effluent treatment or pollution control are more of an inevitable obligation than a primary goal in themselves.

- **Environmental Nanotechnology:** Environmental applications of nanotechnology mainly concentrate on the development of solutions to the existing environmental problems, preventive measures for future problems resulting from the interactions of energy and materials with the environment and any possible risks that may be posed by nanotechnology itself..

#### **Schedule:**

- ✧ Manuscript submission deadline: August 15, 2018
- ✧ Peer Review Due: September 15, 2018
- ✧ Revision Due: October 15, 2018
- ✧ Announcement of acceptance by the Guest Editors: November 15, 2018

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