

Special Issue on
**Mathematical Analysis in Environmental and
Biochemical Processes**

CALL FOR PAPERS

Environmental engineering often involves biochemical processes. Biochemical processes are important in chemical analysis, molecular interactions, toxicology, cellular microbiology, and industrial design. With the development of modern biochemical techniques, advanced environmental and biochemical devices, equipment, programs, and software have been created for effective and efficient process control. These biochemical tools are based on appropriate materials, electrical automation, and system control, where mathematical analysis is a major part of data processing. Therefore, using advanced mathematical tools and methods to improve mathematical analysis is an important way to design environmental and biochemical processes and related devices, equipment, programs, and software.

Generalized mathematical analysis includes differential calculus, integral calculus, real variable function theory, complex variable function theory, approximation theory, ordinary differential equation theory, partial differential equation theory, integral equation theory, differential geometry, variation method, functional analysis, harmonic analysis, etc. In the past, mathematical analysis was based on calculations of many equations, generating practical theories and models for future research. With the development of computer science, information technology was used to improve mathematical analysis. Computer-aided analysis refers to the research work of making statistics, analysis, simulation, and reasoning on the information of specific objects and giving the corresponding statistical analysis results by means of the related computer system. Popular softwares include MATLAB, Maple, MathCAD, SAS, LINDO, etc. Artificial intelligence and deep learning are techniques that have been widely used in applied mathematics in recent years. In addition, the investigation, acquisition, and analysis of data are the basis for effective mathematical analysis.

The aim of this Special Issue is to bring together original research and review articles discussing how mathematical analysis can improve environmental and biochemical processes.

Potential topics include but are not limited to the following:

- ▶ Chemical analysis with mathematical methods
- ▶ Mathematical analysis of molecular interactions
- ▶ Mathematical analysis of clinical toxicology
- ▶ Mathematical analysis of microbial behaviour
- ▶ Mathematical analysis of industrial design
- ▶ Mathematical analysis of environmental and biochemical processes with data processing and artificial intelligence
- ▶ Mathematical models for biochemical analysis
- ▶ Mathematical analysis for smart devices and equipment
- ▶ Development of software, devices, and equipment

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=653215>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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