



Numerical Analysis and Optimization

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Message from the Guest Editors

Dear Colleagues,

We prepare a collection of papers in applied mathematics regarding its two essential subject matters: numerical analysis and optimization. These two areas are the forerunners of the mathematical modeling and the numerical simulations. Mathematical modeling tools allow us to transform a physical reality into adequate abstract models on which we can further apply relevant calculations. Correspondingly, numerical simulation presents the process through which we calculate the solutions of the mathematical models on a computer, thus allowing us to simulate physical reality. Topics include but are not limited to:

- unconstrained optimization
- constrained optimization
- optimization methods
- iterative processes
- gradient-descent methods
- projection methods
- line search
- convergence rate
- hybrid methods
- linear matrix equations
- nonlinear system of equations

