

# Special Issue

## Study on Convergence of Nonlinear Dynamical Systems

### Message from the Guest Editors

Achieving convergence is a critical objective in control theory. Control algorithms aim to guide a system towards a desired state, and ensuring convergence ensures that the system settles into the desired configuration accurately and efficiently. For instance, in autonomous vehicle control, convergence guarantees that the vehicle's trajectory converges to the desired path, enhancing safety and precision. In dynamical systems, convergence analysis helps in understanding the long-term behavior of systems. Chaos theory, for example, explores the behavior of chaotic systems and examines whether they strongly depend on initial conditions or eventually converge to certain attractors. In conclusion, the convergence of nonlinear systems is a fundamental concept in dynamical systems and control theory. It underpins the stability and predictability of complex systems, facilitating their control and manipulation. Researchers and engineers continue to explore and develop sophisticated techniques to ensure convergence, enabling advancements in various fields and technologies.

### Guest Editors

Prof. Dr. Gerard Olivar-Tost

Prof. Dr. Enric Trullols-Farreny

Dr. Deissy Milena Sotelo Castelblanco

### Deadline for manuscript submissions

closed (31 October 2024)



## Mathematics

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