

## Special Issue

# Heat Diffusion: Dynamical Modelling, Control

### Message from the Guest Editor

Many industries have heat diffusion systems incorporated in their processes. Due to the delay in reaching the desired temperature and the difficulty of maintaining this value, several control algorithms have been developed in the last decades to produce better systems responses. In the previous century, the most common algorithms used in the control of systems were PID controllers, with their tuning parameters based in the Ziegler–Nichols or Cohen–Coon methods. More recently, several other methodologies have been implemented using genetic algorithms, particle swarm optimization, fuzzy control systems, and other algorithms, which were found to be helpful tools for determining the parameters of the controllers, consequently improving this kind of system. These algorithms introduce concepts based on nature, evolution, or human knowledge to better tune the PID parameters. This Special Issue seeks to gather contributions to the control of heat diffusion systems using these suggestions or other methodologies, such as the incorporation of fractional order controllers.

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### Guest Editor

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### Deadline for manuscript submissions

closed (24 September 2021)



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