



Asian Journal of Control

Call for Papers

Special Issue on “Mean Field Games and Mean Field Control”

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The past 15 years or so mean field game (MFG) theory has been an extraordinarily active branch of noncooperative dynamic game theory. This theory is built upon ideas in statistical physics and provides a powerful machinery to overcome the curse of dimensionality in large population decision problems. Its mathematical analysis has brought novel methodologies into the scene of dynamic games and stochastic control. These methods mainly include dynamic programming and the maximum principle (or related variational analysis) developed in a mean field setting. Significant applications of mean field games have arisen in such areas as communication networks, power systems, economics and finance, and social science, among many others.

Apart from mean field games, the past 10 years also see many research works on other related mean field control problems. They may deal with large population optimal control (or mean field social optimization) where the group shares a social objective. Another variant is the so-called mean field type optimal control problem which involves a single decision maker and mean field terms in the dynamics and/or the cost.

A strong scientific community has formed centering these control problems and their applications. The research on mean field games and mean field control is still in a phase of rapid developments. In the past several reputable journals have successfully organized special issues for mean field games. The objective of this special issue is to bring together researchers to share their new ideas and results. The topics of interest include but are not limited to the following:

- Mean field games and their applications
- Large population mean field optimal control
- Mean field type optimal control
- Filtering in mean field systems
- Mean field reinforcement learning and applications
- Large-scale network systems
- Mean field control with asymmetric information/model uncertainty/major players

We particularly encourage contributions that are suitable for readers with background in control theory and engineering. If you are interested in submitting a survey paper, you are very welcome to do so and in this case please contact the guest editorial board in advance.

Guest Editors

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Special Issue Timeline

April 30, 2022
June 30, 2022
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Aug 30, 2022
November 30, 2022

Deadline for Submissions
Completion of First Review
Completion of Second Review
Receipt of Final Manuscript
Publication (Tentatively Vol. 24, No. 6)

How to submit

Potential authors are encouraged to upload the electronic file of their manuscript (in PDF format) through the journal's online submission website: <http://mc.manuscriptcentral.com/asjc>.

If you encounter any submission problem, please contact the editorial office: asianjcontr@ntu.edu.tw.

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