The Hong Kong Polytechnic University
Department of Applied Mathematics

Control Seminar Series

Infinite Horizon Optimal Control Problems

By

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Abstract

In this talk, we present some infinite horizon linear-quadratic optimal control problems. After some general discussions, we concentrate on the problem with a kind of ergodic cost functional. The main feature of the problem is that the state equation contains a persistent constant drift and a persistent constant diffusion term. They prevent the state process from having a limit as time goes to infinity. Invariant measure is used to describe the ergodic cost functional. By some careful analysis, we obtain the optimal control for such a problem, which is represented by an algebraic Riccati equation.

Bibliography

Jiongmin Yong currently is a professor at University of Central Florida. He had a BS degree from Fudan University and a PhD degree from Purdue University. His main research interests include optimal control, stochastic differential/integral equations and mathematical finance. He has authored over 10 books and 160 journal papers. He is an associate editor of several journal, including ESAIM COCV, Mathematical Control and Related Fields. He was an ICM 45-minute invited speaker in 2014.

Date : 13 May 2021 (Thursday)
Time : 20:00-21:00 (Hong Kong Standard Time GMT +8)
Venue : Online Talk via Zoom (Meeting ID: 991 5629 8700, Passcode: 0513)
Speaker : Prof. Jiongmin Yong, University of Central Florida
Host : Prof. Xun Li, The Hong Kong Polytechnic University
Click to join :
https://polyu.zoom.us/j/99156298700?pwd=N1lUaFNaWHFOUCtOaTlYaXhOTlQ4dz09

Click to join (Zoom)

* * * ALL ARE WELCOME * * *

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