# Continuous-time Markov decision processes with the finite horizon

**Xianping Guo**, *Sun Yat-Sen University, PRC*, E-mail: mcsgxp@mail.sysu.edu.cn
Xiangxiang Huang, *Sun Yat-Sen University, PRC*
Yonghui Huang, *Sun Yat-Sen University, PRC*

**Abstract**: This talk focuses on the *finite horizon optimality* for continuous-time Markov decision processes within the class of all randomized *history-dependent* policies, for which some unsolved problems are raised by A.A. Yushkevich (*Theory Probab. Appl.* **22**, *215-235,1977*). In this talk, we will report our progress on the finite horizon optimality, and show our solutions to some of the unsolved problems.