



The Hong Kong Polytechnic University Department of Applied Mathematics

Seminar

Geometric and algorithmic connections of optimization over diffeomorphic Riemannian manifolds

By

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Abstract

This talk discusses the geometric and algorithmic connections of optimization problems over diffeomorphic Riemannian manifolds. Specifically, we establish an equivalence on the sets of Riemannian FOSPs, Riemannian second-order stationary points (SOSPs), and strict saddles of the underlying problem and its diffeomorphic counterpart. Moreover, we show that gradient flows under the two geometries are closely related. These relations also motivate the construction of new metrics over the underlying Riemannian manifolds.



Click to join

Date: 10 February 2023 (Friday) Time: 10:00-11:00 (Hong Kong Standard Time GMT +8) Venue: Online Talk via Zoom (Meeting ID: 953 5851 5255; Passcode: 0210) Speaker: Dr. Xudong Li, Fudan University Host: Prof. Defeng Sun, The Hong Kong Polytechnic University Click to join: <u>https://polyu.zoom.us/j/95358515255?pwd=Qnk4UWI1Um5Wd2RHY1RjVmU2Qmtkdz09</u>

* * * ALL ARE WELCOME ***