THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

Seminar

Prof. Jinyun Yuan

Dongguan University of Technology, China

Topic

Inexact Newton Methods for Solving Generalized Equations on Riemannian Manifolds

Date| Time

2 October 2024 (Wednesday) | 15:30 – 16:30 (HK Time)

Venue

Y306, Main Campus

Abstract:

The convergence of inexact Newton methods is studied for solving generalized equations on Riemannian manifolds by using the metric regularity property, which is also explored. Under appropriate conditions and without any additional geometric assumptions, local convergence results with linear and quadratic rates, as well as a semi-local convergence result, are obtained for the proposed method.

Finally, the theory is applied to the problem of finding a singularity for the sum of two vector fields. In particular, the KKT system for the constrained Riemannian center of mass on the sphere is explored numerically.

ALL ARE WELCOME