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Shibing is a Professor at the School of Mathematical Sciences, University of Science and Technology of China (USTC). He was a Postdoc fellow at the MSRI (2013), MSI at The Australian National University (2014-2018). He obtained his Ph.D. in 2013 from the Department of Mathematics, University of Toronto, under the supervision of Prof. Robert McCann. Back in 2005 (resp. 2008), he received his B.S. degree (resp. M.S. degree) from the School of Mathematical Sciences, Peking University. His research expertise is in partial differential equations and applications in geometry and optimal transportation.

Title: Singularities in optimal transport

### Abstract:

In the optimal transport problem, singularities may arise when the target domain is non-convex. In this talk, we will discuss some recent results concerning the structure of singularities. In particular, we will show that the singular set is locally a smooth curve away from a finite number of points, provided the target domain is a non-convex polygon. This is based on joint work with Yuanyuan Li and Jiakun Liu.