ATELIER
« MÉTHODES DE CALCUL POUR LE TRANSPORT OPTIMAL
18—22 JUILLET 2016

WORKSHOP
"COMPUTATIONAL OPTIMAL TRANSPORTATION"
JULY 18—22, 2016

Meshfree finite difference methods for the Monge-Ampere equation

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We describe a framework for constructing monotone approximations of the Monge-Ampere equation on unstructured point clouds. These schemes easily handle complex geometries and non-uniform distributions of discretisation points. The optimal transportation boundary condition can also be approximated within this framework, which leads to an effective numerical method for the optimal transportation problem.

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