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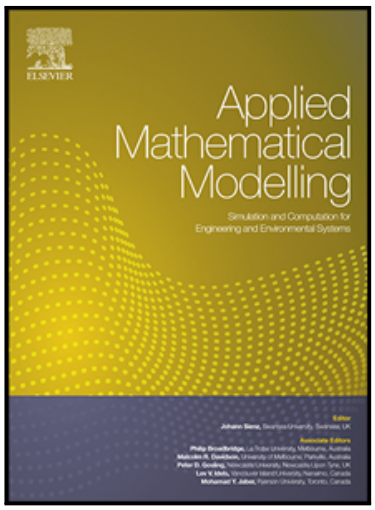

Identification of release sources in advection-diffusion system by machine learning combined with Green's function inverse method

Valentin G. Stanev, Filip L. Iliev, Scott Hansen, Velimir V. Vesselinov, Boian S. Alexandrov

PII: S0307-904X(18)30122-7
DOI: 10.1016/j.apm.2018.03.006
Reference: APM 12197

To appear in: *Applied Mathematical Modelling*

Received date: 5 April 2017
Revised date: 21 February 2018
Accepted date: 8 March 2018

Please cite this article as: Valentin G. Stanev, Filip L. Iliev, Scott Hansen, Velimir V. Vesselinov, Boian S. Alexandrov, Identification of release sources in advection-diffusion system by machine learning combined with Green's function inverse method, *Applied Mathematical Modelling* (2018), doi: 10.1016/j.apm.2018.03.006

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Highlights

- Novel inverse method for advection-diffusion equation with unknown number of sources is proposed
- Observational data containing mixtures of unknown number of release sources is decomposed
- Proposed method combines machine learning techniques with Greens function inverse analysis
- Sets of synthetic contamination sources in a two dimensional aquifer are identified
- Method can be extended to complex release sources and applied with different Green's functions

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