

Eleventh International Conference on the Analytic Element Method, June 1 and June 2, 2024, Princeton

Maeder Hall (close to Friend Center MODFLOW)

The conference schedule and other information will be available at the website:

<https://igwmc.princeton.edu/modflow/courses-and-more/>

Presentations are 40 minutes long, followed by 10 minutes of discussion.

Day 1, Saturday, June 1 - Morning Sessions

8:30-8:31 **Otto D.L. Strack** Welcome

Session 1: Analytic Solutions

Chairs: Steve Kraemer and Wim de Lange

- 8:31-9:10 **Erik Anderson**: An Analytical Model of a Coastal Recharge Barrier.
GW Engineer INTERA, GB Wisc, MS CEE U. Wisconsin
PhD CE U. Minn
- 9:10-9:20 Discussion
- 9:20-10:00 **Mark Bakker**: Interface Upconing Below a Horizontal Well in a Coastal Aquifer.
researcher, TU Delft
Professor dr. ir. CE TU Delft
PhD CE U. Minn
- 10:00-10:10 Discussion
- 10:10-10:40 Break
- 10:40-11:20 **Mark Bakker**: Capture Zone Envelopes for an Arbitrary Number of Wells in Uniform Flow.
- 11:20-11:30 Discussion
- 11:30-12:10 **Otto Strack**: An Exact Solution for Flow from Horizontal Drains.
Professor, civil, Env, Geo Eng. U. Minnesota
M.S. CE Delft TU
PhD E Delft TU
- 12:10-12:20 Discussion

12:20-13:30 Lunch

Day 1, Saturday, June 1, 2024 - Afternoon Sessions

Session 2: New Developments of the Analytic Element Method

Chairs: Mark Bakker and Erik Anderson

- 13:30-14:10 **Anton Koehler, James Craig, Prabhas Yadav, and Rudolf Liedl**: An Analytic Element Method Solution for Multispecies Reactive Contaminant Transport
- 14:10-14:20 Discussion
- 14:20-15:00 **Otto Strack and Erik Toller**: An Analytic Element Model for Fractured Flow in Impermeable Rock

- 15:00-15:10 Discussion
- 15:10-15:40 Break
- 15:40-16:20 **Erik Toller and Otto Strack**: Implementation and Application of an Analytical Model for Fractured Flow in Crystalline Rock
- 16:20-16:30 Discussion

Day 2, Sunday, June 2, 2024 - Morning Sessions

Session 3 Application and Implementation of Analytic Elements

Chairs: Erik Toller and Otto Strack

- 8:30-9:10 **Charlie Fitts**: Details of AnAqSims Variant of the Analytic Element Method
- 9:10-9:20 Discussion
- 9:20-10:00 **Wim de Lange**: Recent Applications of Analytic Element Modeling in The Netherlands
- 10:00-10:10 Discussion
- 10:10-10:40 Break
- 10:40-11:20 **Huite Bootsma, Joeri van Engelen and Frans Roelofsens**: QGIS-Tim: Current Capabilities and Applications
- 11:20-11:30 Discussion
- 11:30-12:10 **David Brakenhoff and Mark Bakker**: Getting Rid of the Grid: Coupling Analytic Elements with Finite Difference Models
- 12:10-12:20 Discussion

12:20-13:30 Lunch

Day 2, Sunday, June 2, 2024 - Afternoon Sessions

Session 4: Analytic Solutions

Chairs: Steve Kraemer and ~~Charlie Pitts~~ ^{B.M. Olsen}

- 13:30-14:10 **Wim de Lange**: Recent Development in Advective Transport Modeling
<sup>owner Fitts Geo Solutions, retired Prof. U. Southern Maine
MS CE U. Minnesota
PhD. CE U. Minnesota (Strack)
retired Deltares</sup>
- 14:10-14:20 Discussion
^{NAGROM}
- 14:20-15:00 **Huite Bootsma**: Effective Parametrization of groundwater-Surface Water Interaction in Low-Resolution Modeling of Dense-Drainage Networks
^{MS PhD Delft TU (Strack)}
- 15:00-15:10 Discussion
<sup>GW specialist, Deltares,
dewatering party</sup>
- 15:10-15:40 Break
- 15:40-16:20 **Otto Strack**: Unconfined Groundwater Flow to Gravity Retaining Walls with Infiltration
^{Bike Friday}
- 16:20-16:30 Discussion

16:30-17:00 General Discussion; Moderator: Mark Bakker

Conference proceedings

Conference proceedings will be made available to participants in electronic form, and include extended abstracts. The presentations will be e-mailed to the participants after the conference.

Committees

Organizational committee

- Otto Strack

Technical committee

- Erik Anderson
- Mark Bakker
- Steve Kraemer
- Otto Strack
- Erik Toller