

Willem A. Schreüder

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Expertise

Mathematical Modeling and Data Analysis; Groundwater Modeling; High Performance Computing.

Education

- 1981 B.Sc University of Stellenbosch. Physics III, Chemistry III, Mathematics III, Applied Mathematics III and Computer Science III.
- 1982 Hons. B.Sc University of Stellenbosch. Applied Mathematics.
- 1984 M.Sc (cum laude) University of Stellenbosch. Applied Mathematics.
- 1986 Ph.D University of Stellenbosch. Applied Mathematics, Computational Fluid Dynamics.
- 1998 MS University of Colorado at Boulder. Computer Science.
- 2005 Ph.D University of Colorado at Boulder. Computer Science, Parallel Systems.

Professional Experience

- 1985 Captain Pilot, Wellington Air Services.
- 1986 Scientific Computing Specialist, Bureau of Mechanical Engineering, University of Stellenbosch.
- 1986-1987 Visiting Assistant Professor of Mathematical Sciences, Rensselaer Polytechnic Institute.
- 1987-1989 Assistant Professor of Mathematics, West Virginia University.
- 1990-1995 Project Engineer, Principia Mathematica Inc.
- 1996-1997 Senior Engineer, Principia Mathematica Division of Terranext
- 1998-2001 Senior Engineer/Scientist, Principia Mathematica Inc.
- 2002-present President and Principal Scientist, Principia Mathematica Inc.
- 2006-2008 Instructor, University of Colorado at Boulder, Computer Science.
- 2008-present Assistant Professor Adjunct, University of Colorado at Boulder, Computer Science.

Selected Professional Activities

- 1989-1992 Senior modeler, Rio Grande Water Conservation District Groundwater Model
- 2002-2003 Primary modeler, Republican River Compact Administration Groundwater Model
- 2000-present Lead modeler, Rio Grande Decisions Support System Groundwater Model

Selected Publications

Schreüder, W.A. and Esbeth van Dyk (1988) **Multidimensional Scaling of Qualitative Pair-wise Comparisons.** *Proceedings of 8'th MCDA Conference*, Manchester, pp. 70-77.

Schreüder, W.A. and J. Prieur du Plessis (1989). **Simulation of Air Flow About a Directly Air Cooled Heat Exchanger.** *Building and Environment*, **24** 1, pp. 223-235.

Schreüder, W.A. J. Prieur du Plessis and Devraj Sharma (1990). **On the Numerical Treatment of Atmospheric Boundaries.** *Numerical Heat Transfer* **17** 2, pp. 171-196.

Schreüder, W.A. and J. Prieur du Plessis (1990) **On the Numerical Treatment of Interior Boundaries.** *Numerical Heat Transfer* **17** 2, pp. 197-215.

Cole, S.E., D. Sharma and W.A. Schreüder (1994) **A Modern, Refined Application of a Ground Water Flow Model to the Arkansas River basin.** *Proc. 1994 Groundwater Modeling Conference*, Fort Collins, Colorado, August 10-12, pp. 385-393.

Schreüder, W.A. and D. Sharma (1994). **Unsaturated Flows Within layered Materials Used as Liners for landfills and Impoundments -Important Concepts and Predicted Results.** *Proc. 1994 Groundwater Modeling Conference*, Fort Collins, Colorado, August 10-12, pp. 469-477.

Schreüder, W.A. (2001) **Accessing Files on Unmounted File Systems.** *Proceedings, Large Installation System Administration Conference*, San Diego, CA, December 2-7, pp. 163--167.

Schreüder, W.A. and Jeffrey .W. Short (2005). **A Method to Prioritize Differences between Chromatograms.** *Engineering Sciences Section, American Academy of Forensic Sciences, Annual Meeting*, New Orleans, Louisiana, February 25.

Schreüder, W.A. (2006) **Uncertainty Approach to the Johnson and Ettinger Vapor Intrusion Model.** *Proceedings of the National Groundwater Association Ground Water and Environmental Law Conference*, Chicago, Illinois, July 6-7, 2006.

Schreüder, W.A. (2009) **Parallel PEST using BeoPEST** *PEST Conference*, Potomac MD, Nov 3, 2009.

Goldstein, W.E. and W.A. Schreüder (2010) **Mathematical model of mold propagation and product formation in building materials, inherent transport phenomena and applications.** In *Sick Building and Related Illness: Prevention and Remediation of Mold Contamination*. CRC Press, 240 pp.

Hunt R.J., J. Luchette, W.A. Schreüder, J.O Rumbaugh, J. Doherty, M.J. Tonkin, and D.B. Rumbaugh (2010), **Using a Cloud to Replenish Parched Groundwater Modeling Efforts.** *Ground Water*, 48(3): 360-365.

Reeves, J. A., R. J. Knight, H. A. Zebker, W. A. Schreuder, P. gram, and T. R. Lauknes (2011), **High quality interferometric synthetic aperture radar data linked to seasonal change in hydraulic head for an agricultural area in the San Luis Valley, Colorado.** *Water Resour. Res.*, in press.