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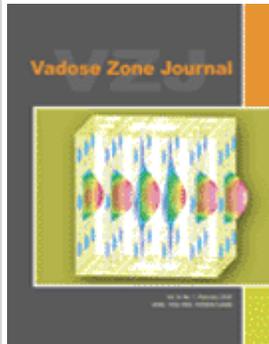
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Journal Interviews : 2009 : Vadose Zone Journal

JOURNAL INTERVIEWS - 2009

April 2009



Vadose Zone Journal

A Featured Journal from *Essential Science Indicators*SM

Late in 2008, *Essential Science Indicators* from Thomson Reuters named Vadose Zone Journal a *Rising Star* in the field of Geosciences. The journal's current record in the database includes 559 papers cited a total of 2,098 times between January 1, 1998 and December 31, 2008.

Vadose Zone Journal was founded in 2002, and is published by the Soil Science Society of America (SSSA), with the cooperation of the Geological Society of America.

Below, ScienceWatch.com talks with Editor Jan Hopmans about the journal's history and citation record.

SW: Did you expect Vadose Zone Journal to become highly cited, or is this surprising to you?

Vadose Zone Journal (VZJ) was launched in 2002, and its first published impact factor rating in 2007 was 1.56—a solid number in the geosciences disciplines—indicating that the scientific community was hungry for high-quality articles addressing gaps in vadose zone research issues. That being said, it was indeed surprising to find out that an impact was made so relatively quickly.

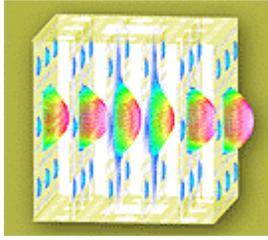
SW: Would you give us a brief history of the journal?

VZJ is published by the Soil Science Society of America (SSSA), with the Geological Society of America (GSA) serving as a collaborator. The first issue appeared in 2002. Its inception and goals were formulated for many years, ultimately convincing the leadership of SSSA to publish a new journal. From the outset, the vision of VZJ was to be an electronic journal, with all activities that come along with publication using the web and email. Since publication of the first issue, many changes to the electronic infrastructure of publishing have been improved, leading to a user-friendly environment for authors, reviewers, and the editorial board.

SW: How would you account for the high citation rate of VZJ?

In addition to the quality articles that we set out to publish, various other important factors have resulted in the high citation rate. First and foremost, I believe that the editorial board, consisting of top internationally known scientists in their respective fields of research, attributed to its success. Second, the SSSA Editorial Office has been very supportive and has closely worked with the Editorial Board towards improving the journal's layout and providing staff assistance in promoting the journal.

About the cover image



Fluid flow through a deterministic Menger Sponge prefractal porous medium model simulated using the Lattice Boltzmann method as described in “Analytical Predictions and Lattice Boltzmann Simulations of Intrinsic Permeability for Mass Fractal Porous Media” by Cihan *et al.* (p. 187–196). Flow is driven by a pressure gradient. Velocity vectors are shown on cross-sectional planes cut perpendicular to the bulk flow direction. Mass flux is constant, but outflow velocities are higher than inflow due to compressibility of Lattice Boltzmann fluid.

+ [View larger image.](#)

Third, the target audience of *VZJ* is broader than that for many other journals, integrating physical, chemical, and biological sciences into an environmental sciences forum that is interesting to read for scientists in different disciplines, including engineering, geology, soil science, and hydrology.

Moreover, in addition to regular articles, *VZJ* has made it a priority to publish special sections on a wide variety of topics, in every issue. The resulting breadth of the journal contents makes it a very attractive journal for a wide audience.

SW: What historical factors have contributed to the success of *VZJ*?

Whereas science was traditionally conducted by disciplines in relatively narrow fields, contemporary science requires interdisciplinary research that molds related disciplines into an integrated context that is relevant to the society as a whole. *VZJ* provides a framework for this new concept, being cautious to not exclude scientific work that might be interesting to the broader community.

SW: Have there been specific developments in the fields served by *VZJ* that may have contributed?

In addition to the increasing need for integrative science in general, the scientific community (i.e., the scientist) is increasingly sensitive to a broader readership that may acknowledge their scientific developments and innovations towards wider applications in environmental sciences.

SW: What, in your view, is this journal's main significance or contribution in the field of Geosciences?

The scientific community has an increasing need for effective dissemination of information about the physical, chemical, and biological processes operating in the vadose zone, the mostly unsaturated zone between the soil surface and the permanent groundwater table. *VZJ* provides a forum for vadose zone research and assessment.

The vadose zone has long been the focus of research and assessment by scientists concerned with soil water flow and the fate and transport of

chemicals stemming from agricultural practices or waste disposal operations. This focus has broadened considerably in recent years. Many industrial, municipal, and engineering activities are known to have an impact on the vadose zone, and hence, indirectly, the entire subsurface environment. As a result, many state and federal agencies, such as EPA, DOE, DOD, NASA, and NSF, are increasingly addressing vadose zone issues, including serving as funding agencies for vadose zone investigations.

The vadose zone is now the active domain of scientists and professionals in a broad range of disciplines. These disciplines include soil physics, geophysics, hydrogeology, geochemistry, soil chemistry, microbiology, terrestrial ecology, environmental engineering, agricultural engineering, and engineering associated with construction, petroleum, and chemical technologies.

SW: How do you see your field(s) evolving in the next few years?

With the increasing interest in the diversity of issues that govern the physical, chemical, and biological processes in the subsurface, impacting air and water quality and the living environment in general, I see no stopping here. I foresee growing interest to explore the science of the vadose zone in an integrative multidisciplinary manner.

SW: What role do you see for your journal?

To enhance integrative science; and for students and professionals to learn that advancing science requires a broad view, and willingness to recognize related sciences. *VZJ* provides for that context and forum, allowing publication of research developments in environmental sciences, as related to the subsurface environment. ■

Vadose Zone Journal
Jan W. Hopmans, Editor

Vadose Zone Journal's current most-cited paper in *Essential Science Indicators*, with 42 cites:

Bradford SA, *et al.*, "Straining and attachment of colloids in physically heterogenous porous media," *Vadose Zone Journal* 3(2): 384-94, May 2004. Source: *Essential Science Indicators* from Thomson Reuters.

KEYWORDS: VADOSE ZONE, ENGINEERING, GEOLOGY, SOIL SCIENCE, HYDROLOGY, ENVIRONMENTAL SCIENCES, SOIL WATER FLOW, CHEMICAL TRANSPORT, AGRICULTURE, INDUSTRY, SOIL SURFACE, GROUNDWATER TABLE, IMPACT FACTOR, ELECTRONIC JOURNAL.

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