

List of Publications of C.J. van Duijn

1. A class of similarity solutions of the nonlinear diffusion equation, *Nonlinear Analysis T.M.A.* **1**, 223-244 (1977), with L.A. Peletier.
2. Asymptotic behaviour of solutions of a nonlinear diffusion equation, *Arch. Rat. Mech. Anal.* **65**, 363-377 (1977), with L.A. Peletier.
3. Downstream development of velocity profiles behind flat plates. In: *Differential Equations and Applications*, eds. W. Eckhaus & E.M. de Jager, 141-160, North Holland Publishing Company (1978).
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5. Regularity properties of solutions of an equation arising in the theory of turbulence, *J. Differential Equations* **33**, 226-238 (1979).
6. *Nonlinear Diffusion Problems*, Thesis University Leiden (1979).
7. Some fundamental properties of the simultaneous flow of fresh and salt groundwater in horizontally extended aquifers. In: *Flow and Transport in Porous media*, eds. A. Verruijt & F.B.J. Barends, 83-90, A.A. Balkema (1981).
8. On the continuity of the free boundary arising in a problem of porous media, *Delft Progress Report* **6**, 83-87 (1981).
9. Nonstationary filtration in partially saturated porous media, *Arch rat. Mech. Anal.* **78**, 173-198 (1982), with L.A. Peletier.
10. Nonstationary filtration in partially saturated porous media: continuity of the free boundary, *Arch. Rat. Mech. Anal.* **79**, 262-265 (1982).
11. The flow of two immiscible fluids through a porous medium, *Nonlinear Analysis T.M.A.* **8**, 353-367 (1984), with Q.X. Ye.
12. The interface between fresh and salt groundwater in horizontally extended aquifers. In: *Free Boundary Problems, Application and Theory*, eds. A. Bossavit, A. Damlamian and M. Fremond, 287-293, Pitman (1985), *Research Notes in Mathematics*, vol. **120**, with D. Hilhorst.
13. Transverse dispersion from an originally sharp fresh-salt interface caused by shear flow, *Journal of Hydrology* **84**, 55-79 (1986), with G. de Josselin de Jong.

14. Solute transport parallel to an interface separating two different porous materials, *Water Res. Research* **22**, 1779-1789 (1986), with S.E.A.T.M. van der Zee.
15. A mathematical analysis of density dependent dispersion in fresh-salt groundwater flow. In: *Proc. of 9th S.W.I.M.*, Eds. R.H. Boekelman et al., 317-329 (1986), Water Management Group, Department of Civil Engineering, Delft University of Technology.
16. A doubly nonlinear diffusion equation in hydrology, *Nonlinear Analysis T.M.A.* **11**, 305-333 (1987), with D. Hilhorst.
17. Limiting profiles in contaminant transport through porous media, *SIAM J. Math. Anal.* **18**, 728-743 (1987), with J.M. de Graaf.
18. An Elliptic-Parabolic Problem with a nonlocal boundary condition, *Arch. Rat. Mech. Anal.* **99**, 61-73 (1987), with J. Hulshof.
19. L1-semigroup theory of nonlinear diffusion. In: *One-Parameter Semigroups*, Ph. Clement, H.J.A.M. Heijmans et al., Chapter 4, CWI Monographs 5, North-Holland (1987).
20. Regularity properties of a doubly degenerate equation in hydrology, *Comm. P.D.E.* **13**, 261-321 (1988), with Zhang Hongfei.
21. On a class of similarity solutions of the equation $ut=3D(|u|^{m-1}u_x)x$ with $m > -1$, *IMA J. Applied Math.* **41**, 147-163 (1988), with S.M. Gomes and Zhang Hongfei.
22. Regularity of the free boundary in a doubly degenerate parabolic equation, *Comm. P.D.E.* **14**, 391-412 (1989) with M. Bertsch, J.R. Esteban and Zhang Hongfei.
23. The interface between fresh and salt groundwater: a numerical study, *IMAJ. Applied Math.* **42**, 209-240 (1989), with J.R. Chan Hong, D. Hilhorst and J. van Kester.
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25. Flow through porous media II. In: *Free Boundary Problems, Applications and Theory*, eds. K.H. Hoffman and J. Sprekels, 406-437, Pitman Research Notes in Mathematics **185** (1990).
26. *Toegepaste Analyse in Poreus Perspectief: Van zandkorrel tot vrije rand*. Inaugurele rede - Rijksuniversiteit Leiden, 30 november 1990.
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28. Sharp interface modeling for steam drive recovery of oil, report of Delft University of Technology, May (1990), with J. Bruining and C.T.S. Palmgren.

29. Solute transport through porous media with slow adsorption. In: Free Boundary Problems, Application and Theory, eds. K.H. Hoffman and J. Sprekels, 375-388, Pitman Research Notes in Mathematics, **185** (1990), with P. Knabner.
30. The fresh-salt water interface in a semi-pervious aquifer, *Applicable Analysis* **38**, 69-96 (1990), with R.E. Grundy.
31. Solute transport in porous media with equilibrium and non-equilibrium multiple site adsorption: Travelling waves. *Journal für die reine und angewandte Mathematik*, **415**, 1-49 (1991), with P. Knabner.
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41. Free boundary problems in fresh-salt groundwater flow. In: Xiao Shutie (ed.), *Flow and Transport in Porous Media*, World Scientific Publishing Co, ISBN 99 71-50-934-2, Singapore, 293-363 (1992).

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43. On the analysis of brine transport in porous media, *European J. Appl. Math.* **4**, 271-301 (1993), with L.A. Peletier and R.J. Schotting.
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62. Asymptotic behaviour of solutions of a nonlinear transport equation, *Journal für die Reine und Angewandte Mathematik* **495**, 77-98 (1996), with M.A. Peletier.
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