
Références bibliographiques

- ABABOU, R., D. MCLAUGHLIN, L.W. GELAR & A.F.B. THOMSON. 1989. Numerical simulation of three-dimensional saturated flow in randomly heterogeneous porous media. *Transport in Porous Media*, **4**(6), 549-565.
- ABBASPOUR, K., V. MATTA, P. HUGGENBERGER & C.A. JOHNSON. 2000. A contaminated site investigation : comparison of information gained from geophysical measurements and hydrogeological modeling. *Journal of Contaminant Hydrology*, **40**, 365-380.
- AHMED, S., G. DE MARSILY & A. TALBOT. 1988. Combined use of hydraulic and electrical properties of an aquifer in a geostatistical estimation of transmissivity. *Ground Water*, **26**(1), 78-86.
- ALABERT, F.G. 1987. The practice of fast conditional simulations through the LU decomposition of the covariance matrix. *Mathematical Geology*, **19**(5), 369-386.
- ANDERSON, M.P. 1997. Characterization of geological heterogeneity. *Subsurface flow and transport : a stochastic approach (International Hydrology Series)*, edited by Dagan and Neuman, 23-43.
- ANDERSON, M.P. & W.W. WOESSNER. 1992. Applied groundwater modeling. Simulation of flow and advective transport. *Academic Press*, 381 p.
- ARCHIE, G.E. 1942. The electrical resistivity log as an aid in determining some reservoir characteristics. *American Institute of Mining, Metallurgical and Petroleum Engineers, Transactions*, **146**, 54-62.

- BAIR, E.S., C.M. SAFREED & E.A. STASNY. 1991. A Monte Carlo-based approach for determining traveltime-related capture zones of wells using convex hulls as confidence regions. *Ground Water*, **29**(6), 849-855.
- BAKR, M.I. & A.P. BUTLER. 2002. Worth of head data in well capture zone design. *A Calibration and reliability in Groundwater Modelling, Proceedings of the International Conference ModelCARE'2002, IAHS Publ. (in press)*.
- BARKER R.D. 1992. A simple algorithm for electrical imaging of the subsurface. *First Break*, **10**(2), 53-62.
- BEAR, J. & M. JACOBS. 1965. On the movement of water bodies injected into aquifers. *Journal of Hydrology*, **3**, 37-57.
- BEAR, J. & A. VERRUIJT. 1987. Modeling groundwater flow and pollution. *Theory and applications of transport in porous media, volume 2, J. Bear (ed.), D. Reidel Publishing Company, Dordrecht, Holland*, 414 p.
- BELLIN, A., P. SALANDIN & A. RINALDO. 1992. Simulation of dispersion in heterogeneous porous formations : statistics, first-order theories, convergence of computations. *Water Resources Research*, **28**(9), 2211-2227.
- BEVEN, K.J. & A.M. BINLEY. 1992. The future of distributed models : model calibration and uncertainty prediction. *Hydrological Processes*, **6**, 279-298.
- BHATT, K. 1993. Uncertainty in wellhead protection area delineation due to uncertainty in aquifer parameter values. *Journal of Hydrology*, **149**, 1-8.
- BIERKENS, M.F.P. 1994. Complex confining layers : a stochastic analysis of hydraulic properties at various scales. *PhD thesis, University of Utrecht, The Netherlands*, 263 p.
- BOLLE, A. 2000. Etude et prise en compte de la variabilité spatiale. *Revue Française de Géotechnique*, **93**, 55-66.
- CARRERA, J. & S.P. NEUMAN. 1986a. Estimation of aquifer parameters under transient and steady state conditions : 1. Maximum likelihood method incorporating prior information. *Water Resources Research*, **22**(2), 199-210.
- CARRERA, J. & S.P. NEUMAN. 1986b. Estimation of aquifer parameters under transient and steady state conditions : 2. Uniqueness, stability, and solution algorithms. *Water Resources Research*, **22**(2), 211-227.
- CARRERA, J. & S.P. NEUMAN. 1986c. Estimation of aquifer parameters under transient and steady state conditions : 3. Application to synthetic and field data. *Water Resources Research*, **22**(2), 228-242.
- CASSIANI, G. & M.A. MEDINA. 1997. Incorporating auxiliary geophysical data into ground-water flow parameter estimation. *Ground Water*, **35**(1), 79-91.
- CASTANY, G. 1963. *Traité pratique des eaux souterraines*. Dunod, Paris, 657 p.
- CASTANY, G. 1982. *Principes et méthodes de l'hydrogéologie*. Bordas, Paris, 233 p.
- CERTES, C. & G. DE MARSILY. 1991. The pilot point method : theory and applications. *Advances in Water Resources*, **14**(5), 284-300.

-
- CHAUVET, P. 1992. Traitement des données à support spatial : la géostatistique et ses usages. *Rapport N-28/93/G, Octobre 1992, Centre de Géostatistique, Ecole des Mines de Paris.*
- CLIFTON, P.M. & S.P. NEUMAN. 1982. Effects of kriging and inverse modeling on conditional simulation of the Avra Valley aquifer in southern Arizona. *Water Resources Research*, **18**(4), 1215-1234.
- COLE, B.E. & S.E. SILLIMAN. 1997. Capture zones for passive wells in heterogeneous unconfined aquifers. *Ground Water*, **35**(1), 92-98.
- COOLEY, R.L. 1977. A method of estimating parameters and assessing reliability for models of steady state groundwater flow : 1. Theory and numerical properties. *Water Resources Research*, **13**(2), 318-324.
- COOLEY, R.L. 1979. A method of estimating parameters and assessing reliability for models of steady state groundwater flow : 2. Application of statistical analysis. *Water Resources Research*, **15**(3), 603-617.
- COOLEY, R.L. 1982. Incorporation of prior information on parameters into nonlinear regression groundwater flow models : 1. Theory. *Water Resources Research*, **18**(4), 965-976.
- COOLEY, R.L. 1983. Incorporation of prior information on parameters into nonlinear regression groundwater flow models : 2. Applications. *Water Resources Research*, **19**(3), 662-676.
- COPTY, N., Y. RUBIN & G. MAVKO. 1993. Geophysical-hydrological identification of field permeabilities through bayesian updating. *Water Resources Research*, **29**(8), 2813-2825.
- DAGAN, G. 1989. Flow and transport in porous formations. *Springer-Verlag*, 465 p.
- DASSARGUES, A. 1991. Paramétrisation et simulation des réservoirs souterrains. *Thèse de doctorat, Faculté des Sciences Appliquées, Université de Liège*, 313 p.
- DAVIS, M. 1987. Production of conditional simulations via the LU decomposition of the covariance matrix. *Mathematical Geology*, **19**(2), 91-98.
- DELHOMME, J.P. 1979. Spatial variability and uncertainty in groundwater flow parameters : a geostatistical approach. *Water Resources Research*, **15**(2), 269-280.
- DE MARSILY, G. 1978. De l'identification des systèmes hydrogéologiques. *Thèse de doctorat d'état en sciences naturelles, Université Pierre et Marie Curie, Paris VI.*
- DE MARSILY, G. 1986. Quantitative hydrogeology. *Groundwater hydrology for engineers. Academic Press, Inc.*, 440 p.
- DE MARSILY, G., F. DELAY, V. TELES & M.T. SCHAFMEISTER. 1998. Some current methods to represent the heterogeneity of natural media in hydrogeology. *Hydrogeology Journal*, **6**, 115-130.
- DE MARSILY, G., J.-P. DELHOMME, F. DELHAY & A. BUORO. 1999. Regards sur 40 ans de problèmes inverses en hydrogéologie. *Comptes rendus de l'Académie des Sciences. Série II- Fascicule A. Sciences de la Terre et des Planètes*, **329**(2), 73-87.

- DEROUANE, J. 1994. Etude hydrogéologique du site de captage de Vivegnis (Plaine alluviale de la Meuse). Détermination des zones de protection. *Travail de fin d'études, Faculté des Sciences Appliquées, Université de Liège*, 172 p. (non publié).
- DEUTSCH, C.V. & A.G. JOURNEL. 1992. GSLIB : Geostatistical Software Library and User's Guide. *Oxford University Press, New York*, 340 p.
- DOHERTY, J., L. BREBBER & P. WHYTE. 1994. PEST – Model-independent parameter estimation. User's manual. *Watermark Computing, Corinda, Australia*, 122 p.
- DOVETON, J.H. 1994. Theory and applications of vertical variability measures from Markov Chain analysis. *Stochastic modeling and geostatistics. Principles, methods and case studies*, J.M. Yarus and R.L. Chambers (editors), *AAPG Computer Applications in Geology*, **3**, 55-64.
- DUNCUN, A.J. 1986. Quality control and industrial statistics. *Irwin editions, 5th edition*, 1123 p.
- EMSELLEM, Y. & G. DE MARSILY. 1971. An automatic solution for the inverse problem. *Water Resources Research*, **7**(5), 1264-1283.
- EVERS, S. & D.N. LERNER. 1998. How uncertain is our estimate of a wellhead protection zone? *Ground Water*, **36**(1), 49-57.
- FEYEN, L. 2002. Stochastic delineation of well capture zones. *PhD thesis, Hydrologie 39, Vrije Unniversiteit Brussel, Belgium*, 234 p.
- FEYEN, L., K.J. BEVEN, F. DE SMEDT & J. FREER. 2001. Stochastic capture zone delineation within the generalized likelihood uncertainty estimation methodology : conditioning on head observations. *Water Resources Research*, **37**(3), 625-638.
- FEYEN, L., P.J. RIBEIRO JR., J.J. GÓMEZ-HERNÁNDEZ, K. BEVEN & F. DE SMEDT. 2002. The worth of transmissivity and head data in the prediction of well capture zones. *Calibration and reliability in Groundwater Modelling, Proceedings of the International Conference ModelCARE'2002, IAHS Publ. (in press)*.
- FRANZETTI, S. & A. GUADAGNINI. 1996. Probabilistic estimation of well catchments in heterogeneous aquifers. *Journal of Hydrology*, **174**, 149-171.
- FREEZE, R.A. 1975. A stochastic-conceptual analysis of one-dimensional groundwater flow in nonuniform homogeneous media. *Water Resources Research*, **11**(5), 725-741.
- FROHLICH, R.K. & W.E. KELLY. 1985. The relation between hydraulic transmissivity and transverse resistance in a complicated aquifer of glacial outwash deposits. *Journal of Hydrology*, **79**, 215-229.
- GALLI, A., D. GUÉRILLOT, C. RAVENNE & HERESIM Group. 1990. Combining geology, geostatistics and multiphase fluid flow for 3D reservoir studies. *In : Proceedings of the 2nd European Conference on the Mathematics of Oil Recovery, Guérillot and Guillon (editors) and editions Technip, Paris*, 11-19.
- GAVALAS, G.R., P.C. SHAH & J.H. SEINFELD. 1976. Reservoir history matching by Bayesian estimation. *Soc. Petrol. Eng. Journal*, **16**(6), 337-350.
- GELHAR, L.W. 1993. Stochastic subsurface hydrology. *Prentice Hall*, 390 p.

-
- GELHAR, L.W. & C.L. AXNESS. 1983. Three-dimensional stochastic analysis of macrodispersion in aquifers. *Water Resources Research*, **19**(1), 161-180.
- GELHAR, L.W., C. WELTY & K.R. REHFELDT. 1992. A critical review of data on field-scale dispersion in aquifers. *Water Resources Research*, **28**(7), 1955-1974.
- G.M.S. 1996. Groundwater Modeling System – Reference manuel. *Engineering Computer Graphics Laboratory of Brigham Young University, Provo, Utah 84602*.
- GÓMEZ-HERNÁNDEZ, J.J. & E.F. CASSIRAGA. 1994. Theory and practice of sequential simulation. *Geostatistical Simulations*, M. Armstrong and P.A. Dowd (editors), Kluwer Academic Publishers, Dordrecht, 111-124.
- GÓMEZ-HERNÁNDEZ, J.J. & A.G. JOURNEL. 1993. Joint sequential simulation of multi-Gaussian fields. In : *Proceedings of the 4th Annual International Geostatistical Congress, Geostatistics Tróia'92, volume 1*, A. Soares (editor), Kluwer Academic Publishers, Dordrecht, 85-94.
- GÓMEZ-HERNÁNDEZ, J.J., A. SAHUQUILLO & J.E. CAPILLA. 1997. Stochastic simulation of transmissivity fields conditional to both transmissivity and piezometric data. 1. Theory. *Journal of Hydrology*, **203**, 162-174.
- GÓMEZ-HERNÁNDEZ, J.J. & R.M. SRIVASTAVA. 1990. ISIM3D : an ANSI-C three-dimensional multiple indicator conditional simulation program. *Computers & Geosciences*, **16**(4), 395-440.
- GOOVAERTS, P. 1997. Geostatistics for natural resources evaluation. *Applied Geostatistics Series*, Oxford University Press, New-York, 483 p.
- GORELICK, S.M. 1997. Incorporating uncertainty into aquifer management models. *Subsurface flow and transport : a stochastic approach*, International hydrology series, G. Dagan & S.P. Neuman (editors), Cambridge University Press, 101-112.
- GUADAGNINI, A. & S. FRANZETTI. 1999. Time-related capture zones for contaminants in randomly heterogeneous formations. *Ground Water*, **37**(2), 253-260.
- GUADAGNINI, A. & M.G. TANDA. 1990. Pollution capture by pumping wells : sensitivity analysis and influence of hydrodynamic dispersion. *Calibration and reliability in Groundwater Modelling, Proceedings of the International Conference ModelCARE'90*, K. Kovar (editor), Poster paper, IAHS Press, Wallingford, 160-178.
- GUTJAHR, A.L. 1989. Fast Fourier transform for random field generation. *Project Report for Los Alamos Grant, Contract number 4-R58-2690R*, Department of Mathematics, New Mexico Inst. of Min. and Technol., Socorro.
- GUTJAHR, A.L., B. BULLARD, S. HATCH & L. HUGHSON. 1994. Joint conditional simulations and the spectral method approach for flow modeling. *Stochastic Hydrology and Hydraulics*, **8**(1), 79-108.
- GUYOT, F. 2000. Application d'une modélisation hydrogéologique inverse au captage S.W.D.E. de Vivegnis. *Travail de fin d'études, Faculté des Sciences Appliquées, Université de Liège*, 78 p. (non publié).
- HADAMARD, J. 1952. Lectures on Cauchy's Problem in linear partial differential equations. *Dover, Mineda, New York*.

- HADDOUCHI, B. 1987. Etude géologique et hydrogéologique de la plaine alluviale de la Meuse en Belgique. *Thèse de doctorat, Faculté des Sciences Appliquées, Université de Liège*, 310 p. (non publié).
- HALDORSEN, H.H. & D.M. CHANG. 1986. Notes on stochastic shales : from outcrop to simulation model. *Reservoir characterization, L.W. Lake & H.B. Carrol (editors), Academic Press, New-York*, 152-167.
- HILL, M.C. 1992. A computer program (MODFLOWP) for estimating parameters of a transient, three-dimensional groundwater flow model using nonlinear regression. *U.S. Geological Survey, Open-File Report 91-484*, 358 p.
- HILL, M.C. 1998. Methods and guidelines for effective model calibration. *U.S. Geological Survey, Water Resources Investigations Report 98-4005*, 90 p.
- HOEKSEMA, R.J. & P.K. KITANIDIS. 1984. An application of the geostatistical approach to the inverse problem in two-dimensional groundwater modeling. *Water Resources Research*, **20**(7), 1003-1020.
- HOEKSEMA, R.J. & P.K. KITANIDIS. 1985. Analysis of the spatial structure of properties of selected aquifers. *Water Resources Research*, **21**(4), 563-572.
- HUBBARD, S.S. & Y. RUBIN. 2000. Hydrogeological parameter estimation using geophysical data : a review of selected techniques. *Journal of Contaminant Hydrology*, **45**, 3-34.
- HUGGENBERGER, P., M. RAUBER & F. STAUFFER. 1994. Integration of geophysical and sedimentological information in the stochastic description of inhomogeneities in fluvial gravel deposits. *Transport & reactive processes in aquifers, Dracos & Stauffer (eds), Balkema, Rotterdam*, 177-181.
- HYNDMAN, D.W., J.M. HARRIS & S.M. GORELICK. 2000. Inferring the relation between seismic slowness and hydraulic conductivity in heterogeneous aquifers. *Water Resources Research*, **36**(8), 2121-2132.
- ISATIS. 2000. Isatis Software Manual. *Géovariances & Ecole des Mines de Paris*. 585 p.
- JOHANSON, M.G. 1992. Delineation of time-related capture zones with estimates of uncertainty using conditional simulation of hydraulic conductivity and numerical modeling. *M.S. thesis, Department of Geology, University of New Orleans, Louisiana*.
- JOURNAL, A.G. & F.G. ALABERT. 1989. Non-Gaussian data expansion in the earth sciences. *Terra Nova*, **1**, 123-134.
- JOURNAL, A.G. & F.G. ALABERT. 1990. New method for reservoir mapping. *Journal of Petroleum Technology*, **42**(2), 212-218 (SPE paper 20781).
- JOURNAL, A.G. & J.J. GÓMEZ-HERNÁNDEZ. 1993. Stochastic imaging of the Wilmington clastic sequence. *SPE Formation Evaluation*, 33-40.
- JOURNAL, A.G. & C.J. HUIJBREGTS. 1978. Mining geostatistics. *Academic Press*, 600 p.
- KELLY, W.E. 1977. Geoelectrical sounding for estimating aquifer hydraulic conductivity. *Ground Water*, **15**(6), 420-425.

-
- KINZELBACH, W., M. MARBURGER & W-H. CHIANG. 1992. Determination of groundwater catchment areas in two and three spatial dimensions. *Journal of Hydrology*, **134**, 221-246.
- KINZELBACH, W., S. VASSOLO & G-M. LI. 1996. Determination of capture zones of wells by Monte Carlo simulation. *Calibration and reliability in Groundwater Modelling, Proceedings of the International Conference ModelCARE'96, IAHS Publ. n°237*, 543-550.
- KITANIDIS, P.K. & E.G. VOMVORIS. 1983. A geostatistical approach to the inverse problem in groundwater modeling (steady state) and one-dimensional simulations. *Water Resources Research*, **19**(3), 677-690.
- KOLTERMANN, C.E. & S.M. GORELICK. 1996. Heterogeneity in sedimentary deposits : a review of structure-imitating, process-imitating, and descriptive approaches. *Water Resources Research*, **32**(9), 2617-2658.
- KUNSTMANN, H. & W. KINZELBACH. 2000. Computation of stochastic wellhead protection zones by combining the first-order second-moment method and Kolmogorov backward equation analysis. *Journal of Hydrology*, **237**, 127-146.
- KUPFERSBERGER, H. & G. BLÖSCHL. 1995. Estimating aquifer transmissivities on the value of auxiliary data. *Journal of Hydrology*, **165**, 85-99.
- LANGSHOLT, E., N-O. KITTEROD & L. GOTTSCHAK. 1998. Development of three-dimensional hydrostratigraphical architecture of the unsaturated zone based on soft and hard data. *Ground Water*, **36**(1), 104-111.
- LAROCQUE, M. 1997. Intégration d'approches quantitatives de caractérisation et de simulation des aquifères calcaires fissurés. Application à l'aquifère karstique de La Rochefoucauld (Charente, France). *Thèse de doctorat de l'université de Poitiers*, 233 p.
- LAVENUE, A.M. 1998. A new pilot point inverse method in hydrogeology : generating an ensemble of conditionally-simulated transmissivity fields. *Thèse de doctorat de l'Ecole Nationale Supérieure des Mines de Paris*.
- LAVENUE, A.M. & J.F. PICKENS. 1992. Application of a coupled adjoint sensitivity and kriging approach to calibrate a groundwater flow model. *Water Resources Research*, **28**(6), 1543-1569.
- LAVENUE, A.M., B.S. RAMARAO, G. DE MARSILY & M.G. MARIETTA. 1995. Pilot point methodology for automated calibration of an ensemble of conditionally simulated transmissivity fields : 2. Application. *Water Resources Research*, **31**(3), 495-516.
- LERNER, D.N. 1992. Well catchments and time-of-travel zones in aquifers with recharge. *Water Resources Research*, **28**(10), 2621-2628.
- LEVY, J. & E.E. LUDY. 2000. Uncertainty quantification for delineation of wellhead protection areas using the Gauss-Hermite quadrature approach. *Ground Water*, **38**(1), 63-75.
- LGIH. 1995. Prise d'eau Prieuré à Anseremme. Essais de traçage et modélisation dans le cadre de l'étude des zones de prévention. Phase 2 : Modélisation. *Laboratoires de Géologie de l'Ingénieur et d'Hydrogéologie, Rapport SWDE/958, Faculté des Sciences Appliquées, Université de Liège*, 42 p. (non publié)
- MANTOGLOU, A. & J.L. WILSON. 1982. The turning bands method for simulation of random fields using line generation by a spectral method. *Water Resources Research*, **18**(5), 1379-1394.

- MATHERON, G. 1967. Eléments pour une théorie des milieux poreux. *Masson, Paris*.
- MATHERON, G. 1970. La théorie des variables régionalisées et ses applications. *Les cahiers du centre de morphologie mathématique de Fontainebleau, Fascicule 5*, 212 p.
- MATHERON, G. 1973. The intrinsic random functions and their applications. *Advances in Applied Probability*, **5**, 439-468.
- MATHERON, G., H. BEUCHER, C. DE FOUQUET, A. GALLI, D. GUÉRILLOT & C. RAVENNE. 1987. Conditional simulation of the geometry of fluvio-deltaic reservoirs. *Society of Petroleum Engineers, SPE Tech. Pap. 16753*.
- MATHERON, G. & G. DE MARSILY. 1980. Is transport in porous media always diffusive? : a counter example. *Water Resources Research*, **16**(5), 901-917.
- MAZÁC, O., M. CISLEROVA, W.E. KELLY, I. LANDA & D. VEHNODOVA. 1990. Determination of hydraulic conductivities by surface geoelectrical methods. *S.H. Ward (editor), Geotechnical and Environmental Geophysics*, **2**, 125-131.
- MAZÁC, O., W.E. KELLY & I. LANDA. 1985. A hydrogeophysical model for relations between electrical and hydraulic properties of aquifers. *Journal of Hydrology*, **79**, 1-19.
- MCDONALD, M.G. & A.W. HARBAUGH. 1988. MODFLOW, a modular three-dimensional finite-difference ground-water flow model. *U. S. Geological Survey Techniques of Water-Resources Investigations, Book 6, Chapter A1*, 586 p.
- MCKENNA, S.A. & E.P. POETER. 1995. Field example of data fusion in site characterization. *Water Resources Research*, **31**(12), 3229-3240.
- MCLAUGHLIN, D. & L.R. TOWNLEY. 1996. A reassessment of the groundwater inverse problem. *Water Resources Research*, **32**(5), 1131-1161.
- MONJOIE, A., P. ANTONUS & A. LOX. 1987. Etude hydrogéologique de la nappe alluviale de la Meuse en aval de Liège (barrage de Lixhe) et des écoulements souterrains en provenance du Canal Albert et des canaux de Campine. *Rapport LGIH : MTP/871 pour le Ministère des Travaux Publics (Administration des Voies Hydrauliques)* (non publié).
- NELSON, R.W. 1960. In-place measurement of permeability in heterogeneous media : 1. Theory of a proposed method. *Journal of Geophysical Research*, **65**(6), 1753-1760.
- NELSON, R.W. 1961. In-place measurement of permeability in heterogeneous media : 2. Experimental and computational considerations. *Journal of Geophysical Research*, **66**(8), 2469-2478.
- NELSON, R.W. 1968. In-place determination of permeability distribution for heterogeneous porous media through analysis of energy dissipation. *Soc. Petrol. Eng. Journal*, **8**(1), 33-42.
- NEUMAN, S.P. 1973. Calibration of distributed parameter groundwater flow models viewed as a multiple-objective decision process under uncertainty. *Water Resources Research*, **9**(4), 1006-1021.
- NEUMAN, S.P. 2002. Accounting for conceptual model uncertainty via maximum likelihood bayesian model averaging. *Calibration and reliability in Groundwater Modelling, Proceedings of the International Conference ModelCARE'2002, IAHS Publ. (in press)*.

-
- NUNES, L.M. & L. RIBEIRO. 2000. Permeability field estimation by conditional simulations of geophysical data. *Calibration and reliability in Groundwater Modelling, Proceedings of the International Conference ModelCARE'99, IAHS Publ. n°265*, 117-123.
- OLSTHOORN, T.N. 1995. Effective parameter optimization for ground-water model calibration. *Ground Water*, **33**(1), 42-48.
- PETERS, V. 1996. Etude hydrogéologique du site de captage d'Amay. Essais de traçage et modélisation du transport de polluant pour la détermination des zones de protection. *Travail de fin d'études, Faculté des Sciences Appliquées, Université de Liège*, 108 p. (non publié).
- POETER, E.P. & M.C. HILL. 1996. Unrealistic parameter estimates in inverse modelling : a problem or a benefit for model calibration? *Calibration and reliability in Groundwater Modelling (Proceedings of the ModelCARE'96 Conference held at Golden, CO, September 1996), IAHS Publ. n°237*, 277-285.
- POETER, E.P. & M.C. HILL. 1997. Inverse models : a necessary next step in ground-water modeling. *Ground Water*, **35**(2), 250-260.
- POLLOCK, D.W. 1989. Documentation of computer programs to compute and display pathlines using results from the U.S. Geological Survey modular three-dimensional finite-difference ground-water flow model. *U.S. Geological Survey Open-File Report 89-381*, 188 p.
- POLLOCK, D.W. 1994. User's guide for MODPATH/MODPATH-PLOT, Version 3 : a particle tracking post-processing package for MODFLOW, the U.S. Geological Survey finite-difference ground-water flow model. *U.S. Geological Survey*.
- PURVANCE, D.T. & R. ANDRICEVIC. 2000. On the electrical-hydraulic conductivity correlation in aquifers. *Water Resources Research*, **36**(10), 2905-2913.
- RAMARAO, B.S., A.M. LAVENUE, G. DE MARSILY & M.G. MARIETTA. 1995. Pilot point methodology for automated calibration of an ensemble of conditionally simulated transmissivity fields : 1. Theory and computational experiments. *Water Resources Research*, **31**(3), 475-493.
- RAZACK, M. & M. SINAN. 1988. Possibilités statistiques de prédiction des propriétés aquifères à l'aide des paramètres géoélectriques en milieu sédimentaire fortement hétérogène, Plaine du Haouz, Maroc. *Journal of Hydrology*, **97**, 323-340.
- RENARD, P. 1997. Modélisation des écoulements en milieux poreux hétérogènes. Calcul des perméabilités équivalentes. *Thèse de doctorat, Centre d'Informatique Géologique, Ecole des Mines de Paris, Mémoires des Sciences de la Terre n°32*, 246 p.
- RENTIER, C. 1996. Etude hydrogéologique du site de captage de Dinant-Anseremme. Essais de traçage et modélisation du transport de polluant pour la détermination des zones de protection. *Travail de fin d'études, Faculté des Sciences Appliquées, Université de Liège*, 160 p. (non publié).
- RENTIER, C., S. BROUYÈRE & A. DASSARGUES. 1999. Calibration and reliability of an alluvial aquifer model using inverse modelling and sensitivity analysis. *Prepublished edition of the proceedings of the International Conference ModelCARE'99 on calibration and reliability in groundwater modelling. Zurich, Switzerland*, 343-348.
- RIFAI, H.S., L.A. HENDRICKS, K. KILBORN & P.B. BEDIENT. 1993. A geographic information system (GIS) user interface for delineating wellhead protection areas. *Ground Water*, **31**(3), 480-488.

- RIVOIRARD, J. 1995. Concepts et méthodes de la géostatistique. *Rapport C-158, Octobre 1995, Centre de Géostatistique, Ecole des mines de Paris.*
- ROBIN, M.J.L., A.L. GUTJAHR, E.A. SUDICKY & J.L. WILSON. 1993. Cross-correlated random field generation with the direct Fourier transform method. *Water Resources Research*, **29**(7), 2385-2398.
- RUBIN, Y. 1991. Prediction of tracer plume migration in disordered porous media by the method of conditional probabilities. *Water Resources Research*, **27**(6), 1291-1308.
- RUBIN, Y. & G. DAGAN. 1987a. Stochastic identification of transmissivity and effective recharge in steady groundwater flow. 1. Theory. *Water Resources Research*, **23**(7), 1185-1192.
- RUBIN, Y. & G. DAGAN. 1987b. Stochastic identification of transmissivity and effective recharge in steady groundwater flow. 2. Case study. *Water Resources Research*, **23**(7), 1193-1200.
- RUBIN, Y. & G. DAGAN. 1992. Conditional estimation of solute travel time in heterogeneous formations : impact of transmissivity measurements. *Water Resources Research*, **28**(4), 1033-1040.
- RUBIN, Y., G. MAVKO & J. HARRIS. 1992. Mapping permeability in heterogeneous aquifers using hydrologic and seismic data. *Water Resources Research*, **28**(7), 1809-1816.
- SCHAFER, D.C. 1996. Determining 3D capture zones in homogeneous anisotropic aquifers. *Ground Water*, **34**(4), 628-639.
- SHAFFER, J.M. 1987. Reverse pathline calculation of time-related capture zones in nonuniform flow. *Ground Water*, **25**(3), 283-289.
- SRI NIWAS & D.C. SINGHAL. 1981. Estimation of aquifer transmissivity from dar-zarrouk parameters in porous media. *Journal of Hydrology*, **50**, 393-399.
- SRI NIWAS & D.C. SINGHAL. 1985. Aquifer transmissivity of porous media from resistivity data. *Journal of Hydrology*, **82**, 143-153.
- SRIVASTAVA, R.M. 1994. An overview of stochastic methods for reservoir characterization. *Stochastic modeling and geostatistics. Principles, methods and case studies, edited by J.M. Yarus and R.L. Chambers, AAPG Computer Applications in Geology*, **3**, 3-16.
- SUN, N-Z. 1994. Inverse problems in groundwater modeling. *Theory and applications of transport in porous media, volume 6, J. Bear (ed.), Kluwer Academic Publishers, Dordrecht, The Netherlands*, 337 p.
- SUN, N-Z. & W.W-G. YEH. 1985. Identification of parameter structure in groundwater inverse problem. *Water Resources Research*, **21**(6), 869-883.
- SWDE. 1999. Forage de deux puits de reconnaissance (Pr2 et Pr3) à Dinant (Anseremme) Prieuré dans le cadre de la recherche de nouvelles potentialités aquifères. *Société Wallonne des Eaux, Service de protection des ressources et captage, Rapport Technique n°111*, 21 p. (non publié)
- TE STROET, C.B.M. 1995. Calibration of stochastic groundwater flow models. Estimation of system noise statistics and model parameters. *PhD thesis, Faculty of Civil Engineering, Delft University of Technology, The Netherlands*, 208 p.

-
- TEUTSCH, G. & B. HOFMANN. 1990. The delineation of groundwater protection zones using forced gradient tracer tests : a model validation case study. *Calibration and reliability in Groundwater Modelling, Proceedings of the International Conference ModelCARE'90, IAHS Publ. n°195*, 351-360.
- TIEDEMAN, C. & S.M. GORELICK. 1993. Analysis of uncertainty in optimal groundwater contaminant capture design. *Water Resources Research*, **29**(7), 2139-2153.
- TOMPSON, A.F.B., R. ABABOU & L.W. GELHAR. 1989. Implementation of the three-dimensional turning bands random field generator. *Water Resources Research*, **25**(10), 2227-2243.
- UFFINK, J.M.G. 1990. Analysis of dispersion by the random-walk method. *PhD thesis, Technical University of Delft, The Netherlands*.
- URISH, D.W. 1981. Electrical resistivity-hydraulic conductivity relationships in glacial outwash aquifers. *Water Resources Research*, **17**(5), 1401-1408.
- VALSTAR, J.R. 2001. Inverse modeling of groundwater flow and transport. *PhD thesis, Faculty of Civil Engineering, Delft University of Technology, The Netherlands*, 231 p.
- VAN DER HOEK, C.J. 1992. Contamination of a well in a uniform background flow. *Stochastic Hydrology and Hydraulics*, **6**(3), 191-208.
- VAN KOOTEN, J.J.A. 1995. An asymptotic method for predicting the contamination of a pumping well. *Advances in Water Resources*, **18**(5), 295-313.
- VAN LEEUWEN, M. 2000. Stochastic determination of well capture zones conditioned on transmissivity data. *PhD thesis, Department of Civil and Environmental Engineering, University of London*, 154 p.
- VAN LEEUWEN, M., A.P. BUTLER, C.B.M. TE STROET & J.A. TOMPKINS. 2000. Stochastic determination of well capture zones conditioned on regular grids of transmissivity measurements. *Water Resources Research*, **36**(4), 949-957.
- VAN LEEUWEN, M., C.B.M. TE STROET, A.P. BUTLER & J.A. TOMPKINS. 1998. Stochastic determination of well capture zones. *Water Resources Research*, **34**(9), 2215-2223.
- VAN LEEUWEN, M., C.B.M. TE STROET, A.P. BUTLER & J.A. TOMPKINS. 1999. Stochastic determination of the Wierden (Netherlands) capture zones. *Ground Water*, **37**(1), 8-17.
- VANMARCKE, E., M. SHINOZUKA, S. NAGAKIRI, G.I. SCHUËLLER & M. GRIGORIU. 1986. Random fields and stochastic finite elements. *Structural Safety* **3**, 143-166.
- VARLJEN, M.D. & J.M. SHAFER. 1991. Assessment of uncertainty in time-related capture zones using conditional simulation of hydraulic conductivity. *Ground Water*, **29**(5), 737-748.
- VASSOLO, S., W. KINZELBACH & W. SCHÄFER. 1998. Determination of a well head protection zone by stochastic inverse modelling. *Journal of Hydrology*, **206**, 268-280.
- VATNASKIL Consulting Engineers. 1995. AQUA 3D Version 1.5, Groundwater flow and contaminant transport model. *Reykjavik, Island*.
- WACKERNAGEL, H. 1995. Multivariate geostatistics : an introduction with applications. *Springer-Verlag*, 255 p.

- WEISBERG, S. 1980. Applied linear regression. *John Wiley & Sons Ed., New-York*, 283 p.
- WEISS, R. & L. SMITH. 1998. Efficient and responsible use of prior information in inverse methods. *Ground Water*, **36**(1), 151-163.
- YEH, W.W-G. 1986. Review of parameter identification procedures in groundwater hydrology : The inverse problem. *Water Resources Research*, **22**(2), 95-108.
- YEH, W.W-G. & Y.S. YOON. 1981. Aquifer parameter identification with optimum dimension in parameterization. *Water Resources Research*, **17**(3), 664-672.
- ZIMMERMAN, D.A., G. DE MARSILY, C.A. GOTWAY, M.G. MARIETTA, C.L. AXNESS, R.L. BEAUHEIM, R.L. BRAS, J. CARRERA, G. DAGAN, P.B. DAVIES, D.P. GALLEGOS, A. GALLI, J. GÓMEZ-HERNÁNDEZ, P. GRINDROD, A.L. GUTJAHR, P.K. KITANIDIS, A.M. LAVENUE, D. MCLAUGHLIN, S.P. NEUMAN, B.S. RAMARAO, C. RAVENNE & Y. RUBIN. 1998. A comparison of seven geostatistically based inverse approaches to estimate transmissivities for modeling advective transport by groundwater flow. *Water Resources Research*, **34**(6), 1373-1413.