List of Publications

Mario Putti

October 7, 2021

Preprints

[1] E. Bachini, E. Bellizia, M. Putti, S. Donnicic, F. Madricardo, A. D'Alpaos, and M. Ghinassi. Two-dimensional model of flow and transport in porous media: linking heterogeneous anisotropy with stratal patterns in meandering tidal channel deposits of the Venice Lagoon (Italy). *Environ. Mod. Software*, Submitted, 2021.

[2] L. Berti, E. Facca, and M. Putti. Numerical solution of the L^1-optimal transport problem on surfaces. *J. Comput. Appl. Math.*, Submitted, 2021.

[3] P. Deidda, M. Putti, and F. Tudisco. Nodal domain count for the generalized graph p-Laplacian. *Appl. Comp. Harm. Anal.*, Submitted, 2021. Preprint submitted.

[4] E. Facca, L. Berti, F. Fassó, and M. Putti. Computing the cut locus of a Riemannian manifold via optimal transport. *ESAIM Math. Model. Num. Anal.*, Submitted, 2021.

[5] E. Facca, F. Piazzon, and M. Putti. L^1-transport energy. *Appl. Math. Optim.*, Submitted, 2021.

Journal Papers

[6] E. Bachini, M. W. Farthing, and M. Putti. Intrinsic finite element method for advection-diffusion-reaction equations on surfaces. *J. Comp. Phys.*, 424:109827, 2021.

[7] E. Bachini, G. Manzini, and M. Putti. Arbitrary-order intrinsic virtual element method for elliptic equations on surfaces. *Calcolo*, 58(3):1–28, 2021.

[8] S. Dutta, M. W. Farthing, E. Perracchione, G. Savant, and M. Putti. A greedy non-intrusive reduced order model for shallow water equations. *J. Comp. Phys.*, 439:110378, 2021.

[9] E. Facca, F. Cardin, and M. Putti. Branching structures emerging from a continuous optimal transport model. *J. Comp. Phys.*, pages 110700, in print,, 2021.

[10] A. Lonardi, E. Facca, M. Putti, and C. De Bacco. Optimal transport for multi-commodity routing on networks. *Phys. Rev. Research*, page in print, 2021.

[11] E. Bachini and M. Putti. Geometrically intrinsic modeling of shallow water flows. *ESAIM Math. Model. Num. Anal.*, 4:2125–2157, 2020.

[12] D. Baptista, D. Leite, E. Facca, M. Putti, and C. De Bacco. Network extraction by routing optimization. *Sci. Rep.*, 10(1):1–13, 2020.

[13] E. Facca, S. Daneri, F. Cardin, and M. Putti. Numerical solution of Monge-Kantorovich equations via a dynamic formulation. *J. Sci. Comput.*, 82(3):1–26, 2020.

[14] C.-A. Xia, D. Pasetto, B. X. Hu, M. Putti, and A. Guadagnini. Integration of moment equations in a reduced-order modeling strategy for Monte Carlo simulations of groundwater flow. *J. Hydrol.*, 590:125527, 2020.

[15] L. Bergamaschi, E. Facca, A. Martínez, and M. Putti. Spectral preconditioners for the efficient numerical solution of a continuous branched transport model. *J. Comput. Appl. Math.*, 354:259–270, 2019.

[16] S. Bersan, A. R. Koelewijn, M. Putti, and S. P. Large-scale testing of distributed temperature sensing for early detection of piping. *J. Geotech. Geoenviron.*, 145:04019052, 2019.

[17] M. Camporese, C. Paniconi, M. Putti, and J. J. McDonnel. Fill and spill hillslope runoff representation with a Richards equation-based model. *Water Resour. Res.*, 55:8445–8462, 2019.

[18] G. Manzini, G. Maguolo, and M. Putti. The high-order mixed mimetic finite difference method for time-dependent diffusion problems. *J. Sci. Comput.*, 80:1805–1830, 2019.

[19] I. McCallum, C. Montzka, B. Bayat, S. Kollet, A. Kolotii, N. Kussul, M. Lavreniuk, A. Lehmann, J. Maso, P. Mazzetti, A. Mosnier, E. Perracchione, M. Putti, M. Santoro, I. Serral, L. Shumilo, D. Spengler, and F. S. Developing food, water and energy nexus workflows. *Int. J. Digit. Earth.*, 19:299–308, 2019.

[20] M. Previati, D. Canone, E. Iurato, D. Gisolo, S. Ferrari, P. Teatini, M. Putti, and S. Ferraris. Thorough wetting and drainage of a peat lysimeter in a climate change scenario. *Hydrol. Proc.*, 2019.

[21] E. Facca, F. Cardin, and M. Putti. Towards a stationary Monge-Kantorovich dynamics: the Physarum Polycephalum experience. *SIAM J. Appl. Math.*, 78(2):651—676, 2018.

[22] I. Fent, M. Putti, C. Gregoretti, and S. Lanzoni. Modeling shallow water flows on general terrains. *Adv. Water Resources*, 121:316–332, 2018.

[23] M. Bogoni, M. Putti, and S. Lanzoni. Modeling meander morphodynamics over self-formed heterogeneous floddplains. *Water Resour. Res.*, 53:5137–5157, 2017.

[24] K. Haaken, G. P. Deidda, G. Cassiani, R. Deiana, M. Putti, C. Paniconi, C. Scudeler, and A. Kemna. Flow dynamics in hyper-saline aquifers: Hydro-geophysical monitoring and modeling. *HESS*, 21:1439–1454, 2017.

[25] S. Kollet, M. Sulis, R. M. Maxwell, C. Paniconi, M. Putti, G. Bertoldi, E. T. Coon, E. Cordano, S. Endrizzi, E. Kikinzon, E. Mouche, C. Mügler, Y.-J. Park, J. C. Refsgaard, S. Stisen, and E. Sudicky. The integrated hydrologic model intercomparison project, IH-MIP2: A second set of benchmark results to diagnose integrated hydrology and feedbacks. *Water Resour. Res.*, 53:867–890, 2017.

[26] D. Pasetto, M. Ferronato, and M. Putti. A reduced order model-based preconditioner for the efficient solution of transient diffusion equations. *Int. J. Numer. Methods Eng.*, 109:1159–1179, 2017.

[27] C. Scudeler, C. Paniconi, D. Pasetto, and M. Putti. Examination of the seepage face boundary condition in subsurface and coupled surface/subsurface hydrological models. *Water Resour. Res.*, 53:1799–1819, 2017.

[28] G. Cassiani, J. Boaga, M. Rossi, M. Putti, G. Fadda, B. Majone, and A. Bellin. Soil–plant interaction monitoring: Small scale example of an apple orchard in Trentino, North-Eastern Italy. *Sci. Total Env.*, 543:851–861, 2016.

[29] C. Scudeler, M. Putti, and C. Paniconi. Mass-conservative reconstruction of Galerkin velocity fields for transport simulations. *Adv. Water Resources*, 94:470–485, 2016.

[30] C. Scudeler, L. Pangle, D. Pasetto, G.-Y. Niu, T. Volkmann, C. Paniconi, M. Putti, and P. Troch. Multiresponse modeling of variably saturated flow and isotope tracer transport for a hillslope experiment at the Landscape Evolution Observatory. *HESS*, 20:4061–4078, 2016.

[31] L. Beirão da Veiga, G. Manzini, and M. Putti. Post processing of solution and flux for the nodal mimetic finite difference method. *Num. Meth. PDE*, 31(1):336–363, 2015.

[32] S. Bonetti, G. Manoli, J.-C. Domec, M. Putti, M. Marani, and G. G. Katul. The influence of water table depth and the free atmospheric state on convective rainfall predisposition. *Water Resour. Res.*, 51(4):2283–2297, 2015.

[33] G. Manoli, S. Bonetti, E. Scudiero, F. Morari, M. Putti, and P. Teatini. Modeling soil–plant dynamics: Assessing simulation accuracy by comparison with spatially distributed crop yield measurements. *Vadose Zone J.*, 14:–, 2015.

[34] G. Manoli, M. Rossi, D. Pasetto, R. Deiana, S. Ferraris, G. Cassiani, and M. Putti. An iterative particle filter approach for coupled hydro-geophysical inversion of a controlled infiltration experiment. *J. Comp. Phys.*, 283:37 – 51, 2015.

[35] C. Paniconi and M. Putti. Physically based modeling in catchment hydrology at 50: Survey and outlook. *Water Resour. Res.*, 51:7090–7129, 2015.

[36] D. Pasetto, G.-Y. Niu, L. Pangle, C. Paniconi, M. Putti, and P. A. Troch. Impact of sensor failure on the observability of flow dynamics at the Biosphere 2 LEO hillslopes. *Adv. Water Resources*, 86:327–339, 2015.

[37] G. Passadore, A. Sottani, L. Altissimo, M. Putti, and A. Rinaldo. Groundwater thermal monitoring to characterize streambed water fluxes of the brenta river (northern italy). *Procedia Env. Sci.*, 25:199 – 205, 2015.

[38] M. Rossi, G. Manoli, D. Pasetto, R. Deiana, S. Ferraris, C. Strobbia, M. Putti, and G. Cassiani. Coupled inverse modeling of a controlled irrigation experiment using multiple hydro-geophysical data. *Adv. Water Resources*, 82:150 – 165, 2015.

[39] J. Boaga, A. D'Alpaos, G. Cassiani, M. Marani, and M. Putti. Plant-soil interactions in salt marsh environments: Experimental evidence from electrical resistivity tomography in the venice lagoon. *Geophys. Res. Let.*, 41(17):6160–6166, 2014. 2014GL060983.

[40] G. Manoli, S. Bonetti, J. C. Domec, M. Putti, G. Katul, and M. Marani. Tree root systems competing for soil moisture in a 3d soil-plant model. *Adv. Water Resources*, 66:32–42, 2014.

[41] R. Maxwell, M. Putti, S. Meyerhoff, J. d. Delfs, I. e. Ferguson, V. Ivanov, J. Kim, O. g. Kolditz, S. Kollet, M. Kumar, S. Lopez, J. Niu, C. Paniconi, Y. Park, M. Phanikumar, C. Shen, E. Sudicky, and M. Sulis. Surface-subsurface model intercomparison: A first set of benchmark results to diagnose integrated hydrology and feedbacks. *Water Resour. Res.*, 50, 2014.

[42] G.-Y. Niu, D. Pasetto, C. Scudeler, C. Paniconi, M. Putti, P. A. Troch, S. B. DeLong, K. Dontsova, L. Pangle, D. D. Breshears, J. Chorover, T. E. Huxman, J. Pelletier, S. R. Saleska, and X. Zeng. Incipient subsurface heterogeneity and its effect on overland flow generation: insight from a modeling study of the first experiment at the Biosphere 2 Landscape Evolution Observatory. *HESS*, 18:1873–1883, 2014.

[43] D. Pasetto, A. Guadagnini, and M. Putti. A reduced-order model for monte carlo simulations of stochastic groundwater flow. *Comput. Geosci.*, 18:157–169, 2014.

[44] L. Bergamaschi, R. Bru, A. Martinez-Calomardo, J. Mas, and M. Putti. Low rank update of preconditioners for the nonlinear Richards equation. *Math. Comp. Model.*, 57(7):1933–1941, 2013.

[45] A. Lovison, F. Comola, P. Teatini, C. Janna, M. Ferronato, M. Putti, and G. Gambolati. Model calibration of a geomechanical problem with efficient global optimization. *Dolomites Res. Notes Approx.*, 6:140–150, 2013.

[46] G. Manoli, S. Bonetti, E. Scudiero, P. Teatini, P. Binning, F. Morari, M. Putti, and M. Marani. Monitoring and modeling farmland productivity along the venice coastland, italy. *Procedia Env. Sci.*, 19:361–368, 2013.

[47] D. Pasetto, M. Putti, and W. W.-G. Yeh. A reduced-order model for groundwater flow equation with random hydraulic conductivity: Application to monte carlo methods. *Water Resour. Res.*, 49:1–14, 2013.

[48] S. Weill, M. Altissimo, G. Cassiani, R. Deiana, M. Marani, and M. Putti. Saturated area dynamics and streamflow generation from coupled surface–subsurface simulations and field observations. *Adv. Water Resources*, 59:196–208, 2013.

[49] L. Bergamaschi, R. Bru, A. Martinez-Calomardo, and M. Putti. Quasi-Newton acceleration of ILU preconditioners for two-phase flow equations in porous media. *Adv. Engng. Soft.*, 46:63–68, 2012.

[50] O. Cainelli, A. Bellin, and M. Putti. On the accuracy of classic numerical schemes for modeling flow in saturated heterogeneous formations. *Adv. Water Resources*, 47:43–55, 2012.

[51] D. Pasetto, M. Camporese, and M. Putti. Ensemble kalman filter versus particle filter for a physically-based coupled surface–subsurface model. *Adv. Water Resources*, 47, 2012.

[52] G. Passadore, M. Monego, L. Altissimo, A. Sottani, M. Putti, and A. Rinaldo. Alternative conceptual models and the robustness of groundwater management scenarios in the multi-aquifer system of the central veneto basin, italy. *Hydrogeology Journal*, 20:419–433, 2012.

[53] A. Siade, M. Putti, and W. W.-G. Yeh. Reduced order parameter estimation using quasilinearization and quadratic programming. *Water Resour. Res.*, 48:W06502, 2012.

[54] W.-C. Cheng, M. Putti, D. R. Kendall, and W. W.-H. Yeh. A real-time groundwater management model using data assimilation. *Water Resour. Res.*, 47:W06528, 2011.

[55] A. Mazzia, G. Manzini, and M. Putti. Bad behavior of godunov mixed methods for strongly anisotropic advection-dispersion equations. *J. Comp. Phys.*, 230:8410–8426, 2011. 10.1016/j.jcp.2011.07.021.

[56] D. Pasetto, A. Guadagnini, and M. Putti. Pod-based monte carlo approach for the solution of regional scale groundwater flow driven by distributed recharge. *Adv. Water Resources*, 34:1450–1463, 2011.

[57] S. Weill, A. Mazzia, C. Paniconi, and M. Putti. Coupling water flow and solute transport into a physically-based surface–subsurface hydrological model. *Adv. Water Resources*, 34:128–136, 2011.

[58] F. Zanello, P. Teatini, M. Putti, and G. Gambolati. Long term peatland subsidence: Experimental study and modeling scenarios in the venice coastland. *J. Geophys. Res.*, 116:F04002, 2011.

[59] J. Barco, T. S. Hogue, M. Girotto, D. R. Kendall, and M. Putti. Climate signal propagation in southern california aquifers. *Water Resour. Res.*, 46:W00F05, 2010.

[60] M. Camporese, C. Paniconi, M. Putti, and S. Orlandini. Surface-subsurface flow modeling with path-based runoff routing, boundary condition-based coupling, and assimilation of multisource observation data. *Water Resour. Res.*, 46:W02512, 2010.

[61] A. Lovison, G. Manzini, A. Maritan, M. Putti, and A. Rinaldo. Spanning traceroutes over modular networks and general scaling degree distributions. *Phys. Rev. E*, 81(3):036105, Mar 2010.

[62] M. Monego, G. Cassiani, R. Deiana, M. Putti, G. Passadore, and L. Altissimo. A tracer test in a shallow heterogeneous aquifer monitored via time-lapse surfcae ERT. *Geophysics*, 75:WA61–WA73, 2010.

[63] A. Siade, M. Putti, and W. W.-G. Yeh. Snapshot selection for groundwater model reduction using proper orthogonal decomposition. *Water Resour. Res.*, 46:W08539, 2010.

[64] M. Sulis, S. B. Meyerhoff, C. Paniconi, R. M. Maxwell, M. Putti, and S. J. Kollet. A comparison of two physics-based numerical models for simulating surface water–groundwater interactions. *Adv. Water Resources*, 33(4):456–467, 2010.

[65] P. Teatini, M. Ferronato, G. Gambolati, D. Baù, and M. Putti. Anthropogenic venice uplift by seawater pumping into a heterogeneous aquifer system. *Water Resour. Res.*, 46:W11547, 2010.

[66] M. Camporese, C. Paniconi, M. Putti, and P. Salandin. Ensamble Kalman filter data assimilation for a process-based catchment scale model of surface and subsurface flow. *Water Resour. Res.*, page W10421, 2009.

[67] M. Camporese, C. Paniconi, M. Putti, and P. Salandin. Comparison of data assimilation techniques for a coupled model of surface and subsurface flow. *Vadose Zone J.*, 8(4):1–9, 2009.

[68] W.-C. Cheng, D. R. Kendall, M. Putti, and W. W.-G. Yeh. A nudging data assimilation algorithm for the identification of groundwater well pumping rates. *Water Resour. Res.*, 45:W08434, 2009.

[69] G. Gambolati, P. Teatini, M. Ferronato, T. Strozzi, L. Tosi, and M. Putti. On the uniformity of anthropogenic Venice uplift. *Terra Nova*, 21(6):467–473, 2009.

[70] M. Putti and F. Sartoretto. Linear Galerkin vs. mixed finite element 2D flow fields. *Int. J. Numer. Methods Fluids*, 60:1011–1031, 2009.

[71] O. Tosatto, E. Belluco, S. Silvestri, N. Ursino, A. Comerlati, M. Putti, and M. Marani. Reply to comment on "spatial organization and ecohydrological interactions in oxygen-limited vegetation ecosystems by marani et al.", by l. r. gardner. *Water Resour. Res.*, 45:W05604, 2009.

[72] G. Botter, F. Peratoner, M. Putti, A. Zuliani, R. Zonta, A. Rinaldo, and M. Marani. Observation and modeling of catchment-scale solute transport in the hdrologic response: A tracer study. *Water Resour. Res.*, 44:W05409, 2008.

[73] M. Camporese, M. Putti, P. Salandin, and P. Teatini. Spatial variability of CO_2 efflux in a drained cropped peatland south of Venice, Italy. *J. Geophys. Res.*, 113:G04018, 2008.

[74] N. Casteletto, M. Ferronato, G. Gambolati, M. Putti, and P. Teatini. Can venice be raised by pumping water underground? a pilot project to help decide. *Water Resour. Res.*, 44:W01408, 2008.

[75] M. Ferronato, G. Gambolati, M. Putti, and P. Teatini. A pilot project using seawater to uplift Venice anthropogenically. *EOS Transactions of American Geophysical Union*, 89(16):152–152, 2008.

[76] F. Cardin, A. Lovison, and M. Putti. Implementation of an exact finite reduction scheme for steady state diffusion-reaction problems. *Int. J. Numer. Methods Eng.*, 69:1804–1818, 2007.

[77] C. D'Haese, M. Putti, C. Paniconi, and N. Verhoest. Assessment of adaptive and heuristic time stepping for variably saturated flow. *Int. J. Numer. Methods Fluids*, 53:1173–1193, 2007.

[78] M. Manzini and M. Putti. Mesh locking effects in the finite volume solution of 2-d anisotropic diffusion equations. *J. Comp. Phys.*, 220:751–771, 2007.

[79] L. Bergamaschi, R. Bru, A. Martinez, and M. Putti. Quasi-Newton preconditioners for the inexact Newton method. *Electronic Trans. Num. Anal.*, 23:76–87, 2006.

[80] M. Camporese, S. Ferraris, M. Putti, P. Salandin, and P. Teatini. Hydrological modeling in swelling/shrinking peat soils. *Water Resour. Res.*, 42:W06420, 2006.

[81] A. Comerlati, M. Ferronato, G. Gambolati, M. Putti, and P. Teatini. Fluid-dynamical and geomechanical effects of co_2 sequestration below the venice lagoon. *Environmental & Engineering Geoscience*, 12:87–102, 2006.

[82] G. Gambolati, M. Putti, P. Teatini, and G. G. Stori. Subsidence due to peat oxidation and impact on drainage infrastructures in a farmland catchment south of the venice lagoon. *Environ. Geol.*, 49:814–820, 2006.

[83] M. Marani, S. Silvestri, E. Belluco, N. Ursino, A. Comerlati, O. Tosatto, and M. Putti. Spatial organization and ecohydrological interactions in oxygen-limited vegetation ecosystems. *Water Resour. Res.*, 42:W07S06, 2006.

[84] A. Mazzia and M. Putti. Three dimensional Mixed Finite Element-Finite Volume approach for the solution of density dependent flow in porous medi. *J. Comput. Appl. Math.*, 185:347–359, 2006.

[85] G. Gambolati, M. Putti, P. Teatini, M. Camporese, S. Ferraris, G. G. Stori, V. Nicoletti, S. Silvestri, F. Rizzetto, and L. Tosi. Peat land oxidation enhances subsidence in the Venice watershed. *EOS Transactions of American Geophysical Union*, 86(23):217, 224, 2005.

[86] A. Mazzia and M. Putti. High order Godunov mixed methods on tetrahedral meshes for density driven flow simulations in porous media. *J. Comp. Phys.*, 208:154–174, 2005.

[87] A. Comerlati, M. Ferronato, G. Gambolati, M. Putti, and P. Teatini. Saving venice by seawater. *J. Geophys. Res.*, 109:F03006, 2004.

[88] A. Comerlati, M. Ferronato, G. Gambolati, M. Putti, and P. Teatini. Can CO_2 help save Venice? *EOS Transactions of American Geophysical Union*, 84(49):546, 552–553, 2003.

[89] C. Paniconi, M. Marrocu, M. Putti, and M. Verbunt. Newtonian nudging for a Richards equation-based distributed hydrological model. *Adv. Water Resources*, 26:161–178, 2003.

[90] L. Bergamaschi and M. Putti. Numerical comparison of iterative eigensolvers for large sparse symmetric matrices. *Comp. Methods App. Mech. Eng.*, 191(45):5233–5247, 2002.

[91] A. Mazzia and M. Putti. Mixed-finite element and finite volume discretization for heavy brine solutions in groundwater. *J. Comput. Appl. Math.*, 147(1):191–213, 2002.

[92] A. Mazzia, L. Bergamaschi, C. N. Dawson, and M. Putti. Godunov mixed methods on triangular grids for advection-dispersion equations. *Comput. Geosci.*, 6(2):123–139, 2002.

[93] A. C. Bixio, G. Gambolati, C. Paniconi, M. Putti, V. M. Shestopalov, V. N. Bublias, A. Bohuslavsky, N. Kastelteseva, and Y. Rudenko. Modeling groundwater–surface water interactions including effects of morphogenetic depressions in the Chernobyl exclusion zone. *J. Environ. Geol.*, 42:162–177, 2002.

[94] C. Cordes and M. Putti. Accuracy of Galerkin finite elements for the groundwater flow equation in two and three dimensional triangulations. *Int. J. Numer. Methods Eng.*, 52:371–387, 2001.

[95] A. Mazzia, L. Bergamaschi, and M. Putti. On the reliability of numerical solutions for density dependent flow and transport in groundwater. *Transp. Porous Media*, 43(1):65–86, 2001.

[96] L. Bergamaschi, G. Gambolati, A. Mazzia, G. Pini, and M. Putti. Mixed finite elements and finite volumes for density dependent flow and transport in groundwater. *Ann. Univ. Ferrara. Sez. 7: Sci. Mat*, XLV:179–190, 2000.

[97] A. Mazzia, L. Bergamaschi, and M. Putti. A time-splitting technique for advection-dispersion equation in groundwater. *J. Comp. Phys.*, 157(1):181–198, 2000.

[98] L. Bergamaschi and M. Putti. Mixed finite elements and Newton-like linearization for the solution of Richard's equation. *Int. J. Numer. Methods Eng.*, 45(8):1025–1046, 1999.

[99] M. Putti and C. Cordes. Finite element approximation of the diffusion operator on tetrahedra. *SIAM J. Sci. Comput.*, 19(4):1154–1168, 1998.

[100] G. Pini and M. Putti. Parallel finite element laplace transform method for the non-equilibrium groundwater transport equation. *Int. J. Numer. Methods Eng.*, 40:2653–2664, 1997.

[101] L. Bergamaschi, G. Gambolati, G. Pini, and M. Putti. Gradient eigenanalysis on nested finite elements. *Advances on Engeneering Software*, 27:155–165, 1996.

[102] G. Gambolati, G. Pini, and M. Putti. Nested iterations for symmetric eigenproblems. *SIAM J. Sci. Comput.*, 16(1):173–192, 1995.

[103] M. Putti and C. Paniconi. Picard and Newton linearization for the coupled model of saltwater intrusion in aquifers. *Adv. Water Resources*, 18(3):159–170, 1995.

[104] G. Gambolati and M. Putti. A comparison of Lanczos and optimization methods in the partial solution of sparse symmetric eigenproblems. *Int. J. Numer. Methods Eng.*, 37:605–621, 1994.

[105] G. Gambolati, M. Putti, and R. Rangogni. Saltwater contamination of a coastal Italian aquifer by a coupled finite element model of flow and transport. *Excerpta*, 7 (1992-1993):145–186, 1994.

[106] C. Paniconi and M. Putti. A comparison of Picard and Newton iteration in the numerical solution of multidimensional variably saturated flow problems. *Water Resour. Res.*, 30(12):3357–3374, 1994.

[107] M. Putti, W. W.-G. Yeh, and W. A. Mulder. A triangular finite volume approach with high resolution upwind terms for the solution of groundwater transport equations. *Water Resour. Res.*, 26(12):2865–2880, 1990.

Book Chapters

[108] G. Passadore, A. Sottani, L. Altissimo, M. Putti, and A. Rinaldo. Using heat as a tracer to characterize streambed water fluxes of the brenta river (italy). In G. Lollino, M. Arattano, M. Rinaldi, O. Giustolisi, J.-C. Marechal, and G. E. Grant, editors, *Engineering Geology for Society and Territory - Volume 3*, pages 241–244. Springer International Publishing, 2015.

[109] M. Camporese, G. Gambolati, M. Putti, and P. Teatini. Peatland subsidence in the Venice watershed. In I. P. M. et al., editor, *Peatland: basin evolution and depository of records on global environmental and climate changes*, chapter 23, pages 529–550. Elsevier, Amsterdam, The Netherlands, 2006.

[110] G. Gambolati, M. Putti, and C. Paniconi. Three-dimensional model of coupled density-dependent flow and miscible salt transport in groundwater. In J. Bear, A. H.-D. Cheng, S. Sorek, D. Ouazar, and I. Herrera, editors, *Seawater Intrusion in Coastal Aquifers; Concepts, Methods and Practices*, chapter 10, pages 315–362. Kluwer Academic Publ., Dordrecth, The Netherlands, 1999.

[111] G. Gambolati, G. Giunta, M. Putti, P. Teatini, L. Tomasi, I. Betti, M. Morelli, J. Berlamont, K. D. Backer, C. Decouttere, J. Monbaliu, C. Yu, I. Broker, E. Christensen, B. Elfrink, A. Dante, and M. Gonella. Coastal evoluation of the upper Adriatic sea due to sea level rise and natural and anthropic land subsidence. In G. Gambolati, editor, *CENAS Coastal Evoluation of the Upper Adriatic Sea due to Sea Level Rise and Natural and Anthropic Land Subsidence*, Water Science and Technology Library, chapter 1, pages 1–34. Kluwer Academic Publ., Dordrecht, 1998.

[112] M. Gonella, G. Gambolati, G. Giunta, M. Putti, and P. Teatini. Prediction of land subsidence due to groundwater withdrawal along Emilia-Romagna coast. In G. Gambolati, editor, *CENAS Coastal Evoluation of the Upper Adriatic Sea due to Sea Level Rise and Natural and Anthropic Land Subsidence*, Water Science and Technology Library, chapter 7, pages 151–168. Kluwer Academic Publ., Dordrecht, 1998.

[113] P. Teatini, G. Gambolati, L. Tomasi, and M. Putti. Simulation of land subsidence due to gas production at Ravenna coastline. In G. Gambolati, editor, *CENAS Coastal Evoluation of the Upper Adriatic Sea due to Sea Level Rise and Natural and Anthropic Land Subsidence*, Water Science and Technology Library, chapter 6, pages 133–150. Kluwer Academic Publ., Dordrecht, The Netherlands, 1998.

[114] G. Gambolati, M. Putti, and P. Teatini. Land subsidence. In V. Singh, editor, *Hydrology of Disasters*, chapter 9, pages 231–268. Kluwer Academic, Dordrecht, Holland, 1996.

[115] G. Gambolati, G. Pini, M. Putti, and C. Paniconi. Finite element modeling of the transport of reactive contaminants in variably saturated soils with LEA and non-LEA sorption. In P. Zannetti, editor, *Environmental Modeling, Vol. II: Computer Methods and Software for Simulating Environmental Pollution and its Adverse Effects*, chapter 7, pages 173–212. Computational Mechanics Publications, Southampton, UK, 1994.

[116] G. Gambolati, C. Paniconi, and M. Putti. Numerical modeling of contaminant transport in groundwater. In D. Petruzzelli and F. G. Helfferich, editors, *Migration and Fate of Pollutants in Soils and Subsoils*, volume 32 of *NATO ASI Series G: Ecological Sciences*, pages 381–410, Springer-Verlag, Berlin, 1993.

Peer Reviewed Proceedings

[117] G. Cassiani, J. Boaga, L. Busato, M. Perri, M. Putti, D. Pasetto, B. Majone, and A. Bellin. Time lapse electrical resistivity tomography and distributed temperature measurements in the hyporheic zone of an alpine river. In *EGU General Assembly 2015*, pages –, 12-17 April 2015.

[118] S. Bonetti, G. Manoli, E. Scudiero, F. Morari, M. Putti, and P. Teatini. Modelling temporal and spatial variability of crop yield. In *2014 Fall Meeting AGU*, pages –, 2014.

[119] G. Manoli, E. Scudiero, M. Putti, F. Morari, and P. Teatini. Farmland productivity under stress conditions: a field scale monitoring and modeling study on the venice coastland, italy. In *Geophysical Research Abstracts*, volume 16, pages –, 2014.

[120] M. Bogoni, S. Lanzoni, and P. M. Numerical simulations of floodplain heterogeneity effects on meander migration. In *Digital Library for Physics and Astronomy*, pages –, Dicembre 2014.

[121] K. Haaken, G. Deidda, G. Cassiani, A. Kemna, R. Deiana, M. Putti, and C. Paniconi. Hydrogeophysical monitoring and modeling of freshwater injection in a hyper-saline aquifer. In *NOVCARE 2013 (Novel Methods for Subsurface Characterization and Monitoring: From Theory to Practice)*, pages –, May 13-16, 2013.

[122] G. Manoli, M. Rossi, D. Pasetto, P. Teatini, R. Deiana, S. Ferraris, M. Putti, and G. Cassiani. Hydro-geophysical monitoring and stochastic inverse modeling of a controlled irrigation experiment. In *Geopysical Abstracts*, pages –, 7-12 April 2013.

[123] J. Boaga, G. Cassiani, M. Rossi, A. D'Alpaos, G. Fadda, M. Putti, and M. Marani. Time-lapse ert for the monitoring of soil-plant interactions in the root zone. In *eological Society of America*, pages –, October 2013.

[124] G. Cassiani, J. Boaga, M. Rossi, A. D'Alpaos, G. Fadda, M. Putti, and M. Marani. Time-lapse ert for the monitoring of soil-plant interactions in the root zone. In *Abstract Volume*, volume H43L-01, pages –, 9-13 Dec 2013.

[125] J. Boaga, M. Rossi, G. Cassiani, and M. Putti. Time-lapse 3d electrical resistivity tomography to monitor soil-plant interactions. In *EGU2013-9656, 2013 EGU General Assembly 2013*, pages –, 2013.

[126] P. Teatini, G. Manoli, E. Scudiero, R. Deiana, M. Perri, F. Braga, L. Tosi, M. Putti, and F. Morari. Risk of land degradation due to saltwater intrusion along the venice coastland, italy. In *2012 Fall Meeting AGU*, pages –, 2012.

[127] K. Haaken, G. Deidda, G. Cassiani, A. Kemna, R. Deiana, M. Putti, C. Paniconi, F. Schirru, and M. Mura. Cross-hole ert monitoring of freshwater injection in a hypersaline aquifer. In *Geophysical Abstracts*, pages –, 22-27 April 2012.

[128] M. T. Perri, G. Cassiani, J. Boaga, M. Rossi, G. Vignoli, R. Deiana, N. Ursino, M. Putti, B. Majone, A. Bellin, M. Blaschek, R. Duttmann, S. Meyer, R. Ludwig, A. Soddu, P. Dietrich, and U. Werban. Monitoring soil-vegetation interactions using non-invasive geophysical techniques. In *AGU Fall Meeting – 2012*, pages –, 3-7 December 2012.

[129] M. Camporese, M. Putti, P. Salandin, and P. Teatini. Spatial variability of co2 emissions in a drained farmed peatland of the venice watershed, italy. In -, pages –, 21-24 February 2011.

[130] G. Cassiani, R. Deiana, J. Boaga, G. Vignoli, M. Rossi, M. Marani, M. Putti, M. Altissimo, A. Bellin, and O. Cainelli. Hydro-geophysics for hillslope hydrology. In *Geophysical Research Abstracts Vol. 12, EGU2010-15433*, pages –, 2010.

[131] S. Weill, M. A., M. Putti, and C. Paniconi. Coupling water flow and solute transport in a catchment scale hydrological model. In *XVIII International Conference on Water Resources*, pages –, 21-25 giugno 2010.

[132] P. Teatini, M. Ferronato, G. G., D. Bau', and M. Putti. Stochastic analysis of the venice uplift due to seawater injection into deep aquifers. In -, pages –, CIMNE, BARCELONA, 21-24 June , paper no. 153 2010.

[133] F. Zanello, P. Teatini, M. Putti, and G. Gambolati. Modeling long-time peatland subsidence in a venice lagoon catchment, italy. In *Proc. of the 3rd International Conference on Approximation Methods and Numerical Modeling in Environment and Natural Resources MAMERN*, volume 2, pages 897–902, -, PAU, 8-11 June , 2009.

[134] P. Teatini, M. Putti, C. Rorai, A. Mazzia, G. Gambolati, L. Tosi, and L. Carbognin. Modeling saltwater intrusion in the lowlying catchment of the southern venice lagoon, italy. In *Management of Natural Resources, Sustainable Development and Ecological Hazards II*, volume 127, pages 351–362, WITpress (Wessex Institute of Technology),, CAPE TOWN, 15 - 17 December 2009.

[135] L. Bergamaschi, R. Bru, A. Martinez, and M. Putti. *Proceedings of the Sixth International Conference on Engineering Computational Technology*, volume 89, chapter Quasi-Newton Preconditioners for the Solution of Large Nonlinear Systems in Porous Media, pages 1–12. 2008.

[136] S. Weill, M. A., C. Paniconi, and M. Putti. Incorporating transport processes into a coupled model of surface and subsurface interactions. In *XVII Computational Methods in Water Resources*, pages –, -, ITA, July 6-10, 2008.

[137] M. Camporese, C. Paniconi, M. Putti, and P. Salandin. Ensemble kalman filter vs. newtonian nudging for a coupled model of surface and subsurface flow: a comparison of data assimilation approaches. In *Geophysical Research Abstracts, Vol. 9, 09631, 2007 SRef-ID: 1607-7962/gra/EGU2007-A-09631.*, pages –. European Geosciences Union (EGU), 2007.

[138] M. Ferronato, G. Gambolati, M. Putti, P. Teatini, G. Brancolini, and P. Campostrini. A pilot project of anthropogenic venice uplift by deep seawater injection. In *Harmonizing the Demands of Art and Nature in Hydraulics*, pages –, Corila, VENICE, July 1-7, 2007.

[139] J. Aparicio, A. A. Aldama, C. Paniconi, and M. Putti. An optimal switching mechanism for a combined Picard-Newton method in the solution of Richards' equation. In P. B. et al., editor, *XVI International Conference on Computational Methods in Water Resources*, http://proceedings.cmwr-xvi.org/getFile.py/access?contribId=125&resId=0&materialId=paper&confId=a051, Copenhagen, Denmark, June 2006. Paper n. 125.

[140] M. Camporese, C. Paniconi, M. Putti, P. Salandin, and P. Teatini. Two dimensional hydrological simulation in elastic swelling/shrinking peat soils. In P. B. et al., editor, *XVI International Conference on Computational Methods in Water Resources*, http://proceedings.cmwr-xvi.org/getFile.py/access?contribId=112&resId=0&materialId=paper&confId=a051, Copenhagen, Denmark, June 2006. Paper n. 112.

[141] A. Comerlati, A. Bellin, and M. Putti. Generation of binary permeability fields rfor the simulation of escape paths in geological CO_2 sequestration projects. In P. B. et al., editor, *XVI International Conference on Computational Methods in Water Resources*, http://proceedings.cmwr-xvi.org/getFile.py/access?contribId=271&resId=0&materialId=paper&confId=a051, Copenhagen, Denmark, June 2006. Paper n. 271.

[142] G. Leonardi, F. Paronetto, and M. Putti. Effective anisotropy tensor for the numerical solution of flow problems in heterogeneous porous media. In P. B. et al., editor, *XVI International Conference on Computational Methods in Water Resources*, http://proceedings.cmwr-xvi.org/getFile.py/access?contribId=204&resId=0&materialId=paper&confId=a051, Copenhagen, Denmark, June 2006. Paper n. 204.

[143] M. Ferronato, G. Gambolati, M. Putti, and P. Teatini. A diffusion model for land subsidence. In P. B. et al., editor, *XVI International Conference on Computational Methods in Water Resources*, http://proceedings.cmwr-xvi.org/getFile.py/access?contribId=211&resId=0&materialId=paper&confId=a051, Copenhagen, Denmark, June 2006. Paper n. 211.

[144] M. Camporese, M. Putti, P. Salandin, and P. Teatini. Modelin peatland hydrology and related elastic deformation. In C. M. et al., editor, *Computational Methods in Water Resources*, volume 1, pages 1453–1465, Elsevier, Amsterdam, 2004.

[145] A. Comerlati, M. Ferronato, G. Gambolati, M. Putti, and P. Teatini. CO_2 injection below the Venice Lagoon: a numerical study. In C. M. et al., editor, *Computational Methods in Water Resources*, volume 1, pages 827–838, Elsevier, Amsterdam, 2004.

[146] C. M. D'Haese, M. Putti, C. Paniconi, N. E. Verhoest, and F. D. Troch. Assessment of initial solution estimates and adaptive vs. heuristic time stepping for variably saturated flow. In C. M. et al., editor, *Computational Methods in Water Resources*, volume 1, pages 545–556, Elsevier, Amsterdam, 2004.

[147] A. Mazzia and M. Putti. Behavior of the mixed hybrid finite element method for the solution of diffusion equations on unstructured triangulations. In C. M. et al., editor, *Computational Methods in Water Resources*, volume 1, pages 1053–1066, Elsevier, Amsterdam, 2004.

[148] M. Putti and C. Paniconi. Time step and stability control for a coupled model of surface and subsurface flow. In C. M. et al., editor, *Computational Methods in Water Resources*, volume 1, pages 1391–1402, Elsevier, Amsterdam, 2004.

[149] A. Mazzia, G. Pini, M. Putti, and F. Sartoretto. Comparison of 3D flow fields arising in mixed and standard unstructured finite elements. In P. S. et al., editor, *Computational Science – ICCS 2003*, volume 2657 of *LLNCS*, pages 560–567, Springer, Berlin, 2003.

[150] P. Cau, G. Lecca, M. Putti, and C. Paniconi. The influence of a confining layer on salt-water intrusion and surface recharge and groundwater extraction conditions. In W. G. G. S. M. Hassanizadeh, R. J. Schotting and G. Pinder, editors, *Computational Methods in Water Resources, Developments in Water Resources, 47*, volume 1, pages 493–500, Elsevier, Amsterdam, 2002.

[151] A. Comerlati, G. Gambolati, M. Putti, and P. Teatini. A preliminary numerical model of CO_2 sequestration in a normally consolidated sedimentary basin. In W. G. G. S. M. Hassanizadeh, R. J. Schotting and G. Pinder, editors, *Computational Methods in Water Resources, Developments in Water Resources, 47*, volume 1, pages 217–224, Elsevier, Amsterdam, 2002.

[152] A. Mazzia and M. Putti. Three dimensional godunov mixed methods on tetrahedra for the advection-dispersion equation. In W. G. G. S. M. Hassanizadeh, R. J. Schotting and G. Pinder, editors, *Computational Methods in Water Resources, Developments in Water Resources, 47*, volume 1, pages 381–388, Elsevier, Amsterdam, 2002.

[153] A. Mazzia and M. Putti. Investigation of extension of high order finite volume schemes from triangles to tetrahedra. In D. K. R. Herbin, editor, *Finite Volumes for Complex Applications III, Problems and Perspectives*, pages 413–420, Hermes Penton Science, London, 2002.

[154] C. Paniconi, M. Putti, M. Marrocu, and M. Verbunt. Numerical behavior of a simple data assimilation procedure (Newtonian nudging) for a Richards equation-based coupled surface-subsurface flow model. In W. G. G. S. M. Hassanizadeh, R. J. Schotting and G. Pinder, editors, *Computational Methods in Water Resources, Developments in Water Resources, 47*, volume 1, pages 1347–1354, Elsevier, Amsterdam, 2002.

[155] A. Mazzia, L. Bergamaschi, and M. Putti. A second order time-splitting technique for advection-dispersion equation on unstructured grids. In E. F. Toro, editor, *Godunov Methods Theory and Applications*, volume 1, pages 603–610, Academic/Plenum Publishers, New York, 2001.

[156] L. Bergamaschi, G. Gambolati, and M. Putti. Iterative methods for the partial symmetric eigenproblem. In T. Manteufel and S. McCormick, editors, *Proceedings of the 2000 Copper Mountain Conference on Iterative Methods*, 2000.

[157] L. Bergamaschi, A. Mazzia, and M. Putti. A time-splitting technique for the solution of density dependent flow and transport in groundwater. In L. R. B. et al., editor, *Computational methods in Water Resources*, pages 75–82, Balkema, Rotterdam, 2000.

[158] A. C. Bixio, S. Orlandini, C. Paniconi, and M. Putti. Physically-based distributed model for coupled surface runoff and subsurface flow simulation at the catchment scale. In L. R. B. et al., editor, *Computational methods in Water Resources*, pages 1115–1122, Balkema, Rotterdam, 2000.

[159] A. Mazzia, L. Bergamaschi, and M. Putti. A second order time-splitting technique for advection-dispersion equation on unstructured grids. In *Proceedings of: Godunov Methods: Theory and Applications*, 2000.

[160] A. Mazzia, L. Bergamaschi, and M. Putti. Triangular finite volume-mixed finite element discretization for the advection-diffusion equation. In M. Griebel, S. Margenov, and P. Yalamov, editors, *Large Scale Scientific Computations of Engineering and Environmental Sciences*, pages 371–378. Vieweg, 2000.

[161] A. C. Bixio, S. Orlandini, C. Paniconi, and M. Putti. Coupled surface runoff and subsurface flow model for catchment simulations. In J. Feyen and K. Wiyo, editors, *Modelling of transport processes in soils*, pages 583–591, Wageningen Pers, Wageningen, The Netherlands, 1999.

[162] L. Bergamaschi and M. Putti. Mixed finite elements for the solution of the variably saturated flow equation. In V.N. Burganos and G.P. Karatzas, editor, *Computational Methods in Water Resources XII*, pages 305–312, Computational Mechanics and Elsevier Applied Sciences, Southampton, UK, 1998.

[163] A. Bixio, M. Putti, L. Tosi, L. Carbognin, and G. Gambolati. Finite element modeling of saltwater intrusion in the venice aquifer system. In V. N. Burganos, G. P. Karatzas, A. C. Payatakes, C. A. Brebbia, W. G. Gray, and G. F. Pinder, editors, *Computational Methods in Water Resources XII*, pages 193–200, Computational Mechanics and Elsevier Applied Sciences, Southampton, UK, 1998.

[164] L. Bergamaschi and M. Putti. Mixed finite elements for the nonlinear Richard's equation. In A. Sydow, editor, *15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics*, pages 69–74, Wissenschaft & Technik Verlag, Berlin, 1997.

[165] L. Bergamaschi and M. Putti. Mixed finite elements for the solution of Richard's equation. In A. A. Aldama and J. Aparicio and C.A. Brebbia and W.G. Gray I. Herrera G.F. Pinder, editor, *Int. Conf. Comp. Meth. Wat. Res. XI.*, pages 535–542, Computational Mechanics and Elsevier Applied Sciences, Southampton, London, 1996.

[166] C. Cordes and M. Putti. Triangular mixed finite elements vs.finite differences and finite volumes in groundwater flow modeling. In A. A. Aldama and J. Aparicio and C.A. Brebbia and W.G. Gray I. Herrera G.F. Pinder, editor, *Int. Conf. Comp. Meth. Wat. Res. XII.*, pages 61–68, Computational Mechanics and Elsevier Applied Sciences, Southampton, London, 1996.

[167] G. Gambolati, M. Putti, and C. Paniconi. Projection methods for the finite element solution of the dual-porosity model in variably saturated porous media. In M. M. Aral, editor, *Advances in Groundwater Pollution Control and Remediation*, volume 9 of *NATO ASI Series 2: Environment*, pages 97–125. Kluwer Academic, Dordrecht, Holland, 1996.

[168] G. Gambolati, G. Pini, and M. Putti. Parallel finite elements and Laplace transforms for reactive transport in sorbing porous media. In C.-K. Choi *et al.*, editor, *Proc. of Third Asian Pacific Conf. Comp. Mech.*, volume 3, pages 1823–1828, Seoul, Korea, 1996.

[169] G. Gambolati, M. Putti, and P. Teatini. Coupled and uncoupled poroelastic solutions to land subsidence due to groundwater withdrawal. In *ASCE Engineering Mechanics Conference, Mini Symposium on Poroelasticity*, 1996.

[170] C. Paniconi and M. Putti. Newton-type linearization and line search methods for unsaturated flow models. In M. M. Aral, editor, *Recent Advances in Ground-Water Pollution Control and Remediation*, volume 9 of *NATO ASI Series 2: Environment*, pages 155–172. Kluwer Academic, Dordrecht, Holland, 1996.

[171] G. Pini and M. Putti. PFELT - a parallel finite element laplace algorithm for integrodifferential equations. In *Science and Supercomputing at Cineca, 1995 Report*, pages 484–490. Cineca, BO, Italy, 1996.

[172] L. Bergamaschi, C. Gallo, G. Manzini, C. Paniconi, and M. Putti. A mixed finite element/TVD finite volume scheme for saturated flow and transport in groundwater. In M. Morandi Cecchi, K. Morgan, J. Periaux, B. A. Schrefler, and O. C. Zienkiewicz, editors, *Finite Elements in Fluids*, pages 1223–1232, Dip. Matematica Pura e Applicata, University of Padua, Italy, 1995.

[173] G. Gambolati, C. Gallo, C. Paniconi, and M. Putti. Numerical solutions for nonequilibrium solute transport in porous media. In *Advances in Hydro-Science and -Engineering, Volume II, Part B*, pages 1733–1742, Tsinghua University Press, Beijing, China, 1995.

[174] G. Gambolati, G. Pini, and M. Putti. Conjugate gradient-like methods for the numerical solution of the two site model in sorbing porous media. In S. Atluri, G. Yagawa, and T. A. Cruse, editors, *Computational Mechanics '95. Theory and Applications*, pages 748–753, Springer-Verlag, Berlin, New York, 1995.

[175] C. Paniconi and M. Putti. Modeling variably saturated flow problems using Newton-type linearization methods. In G. Gambolati and G. Verri, editors, *Advanced Methods for Groundwater Pollution Control*, CISM Courses and Lectures NO. .364, pages 45–64, Springer-Verlag, Wien, New York, 1995.

[176] C. Paniconi and M. Putti. Quasi-Newton and line search methods for the finite element solution of unsaturated flow problems. In *Advances in Hydro-Science and -Engineering, Volume II, Part B*, pages 1681–1688, Tsinghua University Press, Beijing, China, 1995.

[177] M. Putti and C. Paniconi. Finite element modeling of saltwater intrusion problems with an application to an Italian coastal aquifer. In G. Gambolati and G. Verri, editors, *Advanced Methods for Groundwater Pollution Control*, CISM Courses and Lectures NO. .364, pages 65–84, Springer-Verlag, Wien, New York, 1995.

[178] C. Paniconi, S. Ferraris, M. Putti, G. Pini, and G. Gambolati. Three-dimensional numerical codes for simulating groundwater contamination; FLOW3D, flow in saturated and unsaturated porous media. In P. Zannetti, editor, *Proc. Envirosoft 94*, pages 149–156, CMP, Southampton, UK, 1994.

[179] G. Pini and M. Putti. Krylov methods in the finite element solution of groundwater transport problems. In A. Peters, G. Wittum, B. Herrling, U. Meissner, C. A. Brebbia, W. G. Gray, and G. F. Pinder, editors, *Computational Methods in Water Resources X, Volume 1*, pages 1431–1438, Kluwer Academic, Dordrecht, Holland, 1994.

[180] M. Putti, S. Ferraris, C. Paniconi, G. Pini, and G. Gambolati. Three-dimensional numerical codes for simulating groundwater contamination; TRAN3D, transport with equilibrium and nonequilibrium adsorption. In P. Zannetti, editor, *Proc. Envirosoft 94*, pages 141–148, CMP, Southampton, UK, 1994.

[181] M. Putti and C. Paniconi. Quasi-Newton methods for Richards' equation. In A. Peters, G. Wittum, B. Herrling, U. Meissner, C. A. Brebbia, W. G. Gray, and G. F. Pinder, editors, *Computational Methods in Water Resources X, Volume 1*, pages 99–106, Kluwer Academic, Dordrecht, Holland, 1994.

[182] G. Gambolati, C. Paniconi, and M. Putti. Mass transfer analysis in sorbing porous media by an integro-differential approach. In S. S. Y. Wang, editor, *Advances in Hydro-Science and -Engineering, Volume I, Part B*, pages 1819–1828, Center for Computational Hydroscience and Engineering, The University of Mississippi, University, MS, 1993.

[183] C. Paniconi and M. Putti. A modified Newton scheme for the solution of density dependent flow and transport equations. In S. S. Y. Wang, editor, *Advances in Hydro-Science and -Engineering, Volume I, Part B*, pages 1837–1844, Center for Computational Hydroscience and Engineering, The University of Mississippi, University, MS, 1993.

[184] M. Putti and C. Paniconi. Evaluation of the Picard and Newton iteration schemes for three-dimensional unsaturated flow. In T. R. Russell, R. E. Ewing, C. A. Brebbia, W. G. Gray, and G. F. Pinder, editors, *Proceedings of the IX International Conference on Computational Methods in Water Resources, Vol. 1, Numerical Methods in Water Resources*, pages 529–536, Computational Mechanics and Elsevier Applied Sciences, Southampton, 1992.

[185] R. Rangogni, A. F. Uliana, , G. Pini, and M. Putti. Salt intrusion study into an italian aquifer. In T. R. Russell, R. E. Ewing, C. A. Brebbia, W. G. Gray, and G. F. Pinder, editors, *IX International Conference on Computational Methods in Water Resources*, pages 359–366, Computational Mechanics and Elsevier Applied Sciences, Southampton, London, 1992.

[186] M. Putti and G. Gambolati. Multigrid vs. conjugate gradient in the FE solution of flow problems. In D. Ben Sari, C. A. Brebbia, and D. Ouazar, editors, *Computer Methods in Water Resources,Vol. 1: Groundwater Modeling and Pressure Flow*, pages 27–40, CMP and Springer-Verlag, Berlin, 1991.

[187] M. Putti, W. A. Mulder, and W. W.-G. Yeh. A time-accurate multigrid method for the solution of the transport equation. In G. Gambolati, A. Rinaldo, C. A. Brebbia, W. G. Gray, and G. F. Pinder, editors, *Computational Methods in Surface Flow*, pages 441–447, CMP and Springer-Verlag, Berlin, 1990.

[188] M. Putti, W. W.-G. Yeh, and W. A. Mulder. Characteristic based finite volume method for the solution of transport equations in groundwater. In H. Morel-Seytoux, editor, *Ninth Annual AGU Front Range Branch Hydrology Days*, pages 56–76, Colorado State University, Fort Collins, Colorado, April 1989.

Padova, October 7, 2021