

Research Articles 2014:

Atangana, A. 2014. A generalized advection dispersion equation. *Journal of Earth System Science*, 123 (1), February: pp. 101 - 108.

Atangana, A. 2014. On the singular perturbations for fractional differential equation. *Scientific World Journal*, pp. 1–9.

Atangana, A. 2014. Analytical solutions for the recovery tests after constant-discharge tests in confined aquifers. *Water SA*, 40 (4), October: pp. 595 – 600

Atangana, A. 2014. Drawdown in prolate spheroidal-spherical coordinates obtained via Green's function and perturbation methods. *Communications in Nonlinear Science and Numerical Simulation*, 19 (2014), pp. 1259 – 1269

Atangana A. 2014. Convergence and stability analysis of a novel iteration method for fractional biological population equation. *Neural Computing & Applications*, 25 (5), pp. 1021 – 1030.

Atangana A, Ahmed O, Noutchie S 2014. On the Hamilton-Jacobi-Bellman equation by the homotopy perturbation method. *Abstract and Applied Analysis*, 2014 pp. 1-9.

Atangana, A & Baleanu D. 2014. Modelling the advancement of the impurities and the melted oxygen concentration within the scope of fractional calculus. *International Journal of Non-Linear Mechanics*, 67 pp. 278 – 284.

Atangana A, Bildink N & Noutchie S. 2014. New iteration methods for time-fractional modified nonlinear Kawahara equation. *Abstract and Applied Analysis*, 2014 pp 1-9.

Atangana A, Demiray S, Bulut H. 2014. Modelling the nonlinear wave motion within the scope of the fractional calculus. *Abstract and Applied Analysis*, 2014 pp. 1-7.

Atangana A, Goufo E. 2014. Computational analysis of the model describing HIV infection of CD4+T cells. *Biomed Research International*, 2014 pp. 1–7.

Atangana A, Goufo E. 2014. On the mathematical analysis of Ebola hemorrhagic fever: Deadly infection disease in West African countries. *Biomed Research International*, 2014 pp. 1–8.

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Atangana A, Kilicman A. 2014. On the generalized mass transport equation to the concept of variable fractional derivative. *Mathematical Problems in Engineering*, 2014 pp. 1–9.

Atangana A, Kilicman A, Noutchie S, Secer A, Ray S, El-Sayed A. 2014). Editorial: Theory, methods, and applications of fractional calculus. *Scientific World Journal*, 2014 pp. 1-2.

Atangana A, Noutchie S. 2014. A modified groundwater flow model using the space time Riemann-Liouville fractional derivatives approximation. *Abstract and Applied Analysis*, 2014 pp. 1-8

Atangana A, Noutchie S. 2014. On the fractional Nagumo equation with nonlinear diffusion and convection. *Abstract and Applied Analysis*, 2014 pp. 1-7.

Atangana A, Noutchie S. 2014. Modelling the formation of liver zones within the scope of fractional order derivative. *Biomed Research International*, 2014 pp. 1-10

Atangana A, Noutchie S. 2014. Model of break-bone fever via beta-derivatives. *Biomed Research International*, 2014 pp. 1-11.

Atangana A & Okouomi S. 2014. On multi-Laplace transform for solving nonlinear partial differential equations with mixed derivatives. *Mathematical problems in engineering*, 2014 pp 1-9.

Atangana A & Okouomi S. 2014. Novel approach for dealing with partial differential equations with mixed derivatives. *Abstract and Applied Analysis*, 2014 pp. 1–8.

Atangana A & Rusagara I. 2014. On the Agaciro equation via the scope of green function. *Mathematical Problems in Engineering*, 2014 pp. 1-8.

Atangana A. & **Van Tonder GJ.** 2014. Stochastic risk and uncertainty analysis for shale gas extraction in the Karoo basin of South Africa. *Abstract and Applied Analysis*, 2014 pp. 1-10.

Atangana A. & **Vermeulen PD.** 2014. Analytical solutions of a space-time fractional derivative of groundwater flow equation. *Abstract and Applied Analysis*, 2014 pp. 1–11

Atangana A. & **Vermeulen PD.** 2014. Modelling the aggregation process of cellular slime mold by the chemical attraction. *Biomed Research International*, 2014 pp. 1-9.

Dubey R, Alkahtani B, **Atangana A** 2014. Analytical solution of space-time fractional fokker-planck equation by homotopy perturbation sumudu transform method. *Mathematical Problems in Engineering*. pp.1-7.

Gomo M. & **Vermeulen PD.** 2014. Hydrogeochemical characteristics of a flooded underground coal mine groundwater system. *Journal of African Earth Sciences*, 92: pp 68-75.

Hossein J, **Atangana A**, Kilicman A, Usman M. 2014. Special issue on analytical and numerical approaches for complicated nonlinear equations. *Abstract and Applied Analysis*, 2014 pp. 1-1.

Ray S, **Atangana A**, Noutchie S, Kurulay M, Bildik N, Kilicman A 2014. Fractional calculus and its applications in applied mathematics and other sciences (Editorial). *Mathematical Problems in Engineering*, 2014 pp. 1-2.

Van Tonder GJ & **Tucker AR.** 2014. Karoo fracking and the Christian faith community. *HTS Theological Studies/ Teologiese Studies* www.hts.org.za, 70 (2), pp. 1-8.

Vermeulen PD, **Burger M**, **van Wyk A.** 2014. Potential Hydrological Interaction of a Gold Mine and a Coal Mine in South Africa. *Mine Water and the Environment*, 33 pp. 3-14.

Vermeulen PD, Burger M, Van Wyk A & Lukas E. 2014. Using environmental isotopes in a coal mine and a gold mine to determine groundwater interaction. *Mine Water and the Environment*, 33(1): pp. 15-23.

Conference papers

Prof Vermeulen gave the keynote address at the Southern African Society of Aquatic Scientists (SASAQS) on Shale gas development and the environment of the Karoo – Can the two be compatible? The conference was held at Black Mountain, Thaba Nchu on the 25th of June 2014