



Systems of Ordinary Differential Equations > Nonlinear Systems of Three and More Equations

3. $x'_t = \alpha(y - x), \quad y'_t = bx - y - xz, \quad z'_t = -cz + xy.$

Lorenz equations.

References

Sparrow, C., *The Lorenz equations: Bifurcations, Chaos and Strange Attractors*, Springer, Berlin, 1982.

Leach, P. G. L. and Flessas, G. P., Solutions in closed form and as power series to the real Lorenz equations, *J. Phys. A: Math. Gen.*, Vol. 34, pp. 6013–6029, 2001.

Yee, T. L. and Conte, R., Another integrable case in the Lorenz model, *J. Phys. A: Math. Gen.*, 2004 (to appear).