# Editorial

Dear Readers

Welcome to the first issue of *Parabola Incorporating Function* for 2011. The first article in, by John Perram, describes different meanings of equality. For example, we might write $y = x^2 + x + 1$ to define $y$ or to represent an equation. In the former meaning we regard $y$ as a symbol to represent $x^2 + x + 1$. In the latter meaning we think that for a given value of $y$ there will be values of $x$ for which both $y$ and $x^2 + x + 1$ have the same value. We usually know which meaning of equality to adopt based on different context. But context is a very human thing. Computer algebra systems (CAS) need to know the difference too and this can be achieved through different syntax. One possibility, is the use of $:=$ for an assignment operator and $=$ for equals in an equation. The meaning of $y := x^2 + x + 1$ is that $y$ has been assigned as a name for $x^2 + x + 1$ whereas $y = x^2 + x + 1$ represents an equation without any assignment of the name $y$ to $x^2 + x + 1$. We could write $eqn := y = x^2 + x + 1$ to assign the name $eqn$ to the equation $y = x^2 + x + 1$. Part of the power of CAS has come from precision in dealing with equality through syntax.

Michael Deakin's article provides an interesting illustration of intermediate asymptotics in the derivation of the Michaelis-Menten law for reaction kinetics. This famous law describes the reaction rates of enzymes. Enzymes are necessary for the biological reactions that support life to occur on appropriate time scales. The enzyme reacts with a substrate to yield a product. The reaction rate increases as the concentration of the substrate increases until the reaction rate approaches a limiting value.

David Angell has some nice problems in this issue too. Some of these could be a good warm up for the 50th UNSW Annual School Mathematics Competition to be held in June this year.

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Editor