1067-40-1538 **Ovidiu Costin** and **Min Huang*** (huangm@math.uchicago.edu), Dept. of Mathematics, 5734 S. University Avenue, Chicago, IL 60637. *Applications of Transseries to the Geometry of Fractals.*

Fractals are fascinating geometric objects, having highly complicated and self-similar shapes. Among the most famous fractals are the Julia sets of quadratic maps. Here we present transseries formulas for the Julia sets corresponding to hyperbolic components of the Mandelbrot set. These formulas not only reveal the geometric structures of the fractals, but also provide a way to estimate their Hausdorff dimensions. (Received September 21, 2010)