1033-41-142 **Wai Wah Lau*** (lauw@spu.edu), 3307 3rd Ave West, Department of Mathematics, Seattle Pacific University, Seattle, WA 98119. *An Equivalent Condition for the Exact Dimension of Bivariate Spline Spaces.*

We consider bivariate C^r spline spaces of degree d defined on arbitrary triangulations. Schumaker (1979) established a lower bound for the dimensions of such spaces. It has been conjectured that the lower bound is the exact dimension for $d \geq 2r + 1$. We give an equivalent condition for which the dimension is given by the lower bound. (Received September 08, 2007)