

**Meeting:** 1001, Evanston, Illinois, SS 10A, Special Session on Differential Geometry

1001-53-34            **Matias Navarro\*** (nsoza@tunku.uady.mx), Facultad de Matematicas, Periferico Norte Tablaje 13615, Apartado Postal 172, Cordemex, 97110 Merida, Yucatan, Mexico, and **F Sanchez-Bringas** (sanchez@servidor.unam.mx), Ciudad Universitaria, 04510 Mexico, DF, Mexico. *The Theorema Egregium for  $\nu$ -Gaussian curvatures.*

Given a local 2-manifold  $M$  immersed in  $\mathbb{R}^n$  we can define for each  $\nu$  in the normal bundle of  $M$  the  $\nu$ -Gaussian curvature at  $p \in M$  in direction  $\nu$  by the determinant of the shape operator  $S_\nu$  at  $p$ . If  $\{\nu_i : i = 1, \dots, n - 2\}$  is an orthonormal basis of the normal bundle of  $M$  we prove that the sum of the  $\nu_i$ -Gaussian curvatures in all normal directions  $\nu_i$  equals the (intrinsic) Gaussian curvature  $K$  of  $M$ . (Received July 06, 2004)