

1011-22-283

Nigel Boston* (boston@math.wisc.edu), Department of Mathematics, University of Wisconsin, Madison, WI 53706. *Invariant-based Face Recognition*.

Psychophysicists have produced evidence that humans use invariants to perform face recognition. In practice, however, the classical differential invariants (of Lie groups acting on manifolds) turn out to be too sensitive to noise. This motivates the development of a theory of integral invariants. We describe this theory and the results of its implementation. (Received August 29, 2005)