

**A. Pellionisz shares much of his vast research on the Internet.  
 You can Google him or find the material on Gaze Control directly under Pellionisz:  
 Tensor Model of Gaze Control**

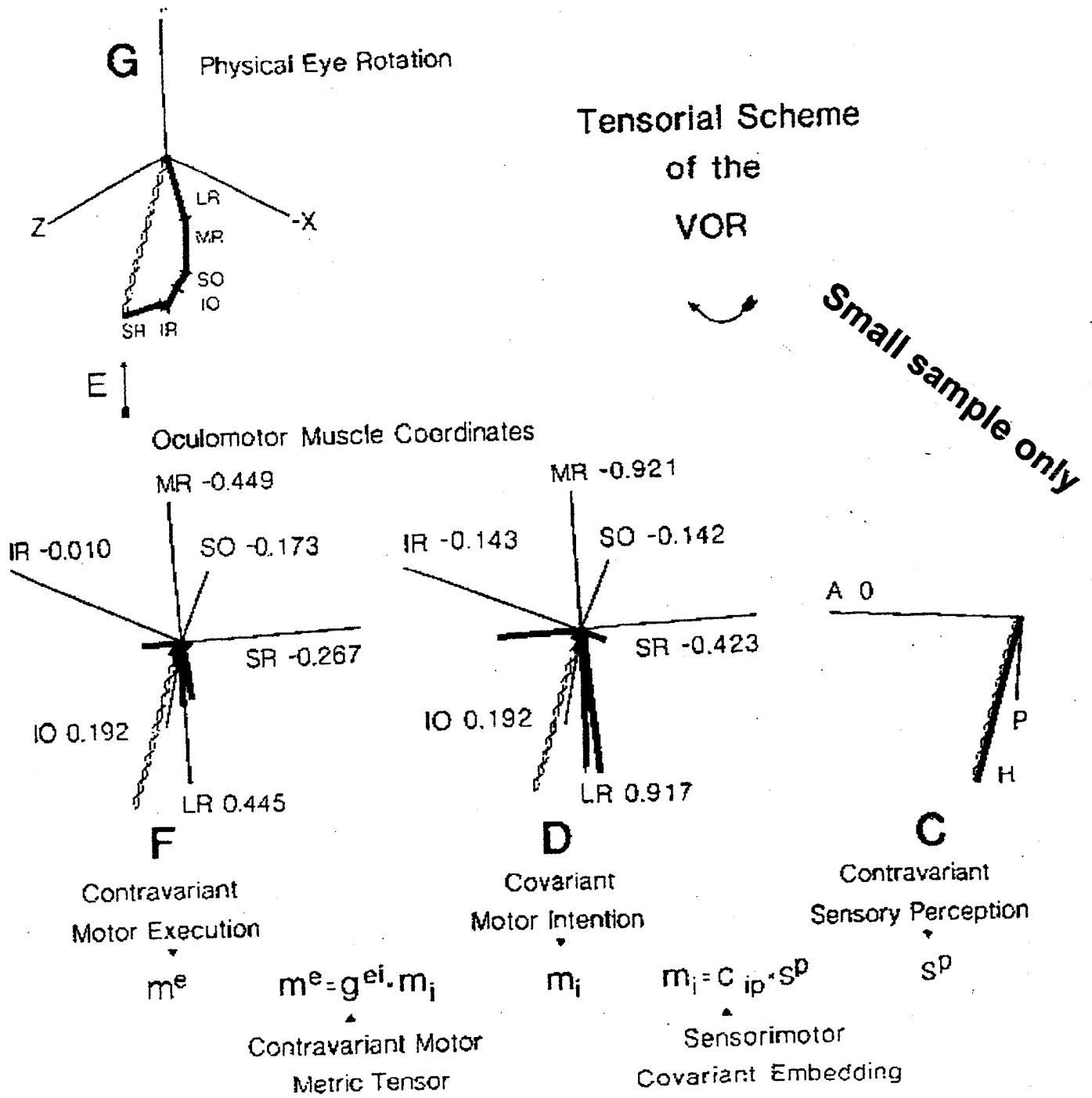


Fig. 3. Tensorial scheme of the VOR. A physical entity, a coordinate-system invariant head rotation is vectorially expressed in extrinsic, orthogonal Cartesian frames (A,G), and in intrinsic non-orthogonal vestibular and extraocular muscle-frames, both covariantly and contravariantly in either (B,C,D,F). A, an arbitrarily selected head rotation, corresponding to maximal excitation of the horizontal canals is expressed in an extrinsic, Cartesian XYZ frame. The extrinsic vestibular matrix V (Fig. 2) transforms these XYZ extrinsic coordinates into HAP intrinsic covariant components, as shown in B (for the vestibular HAP, see Fig. 2V). The BCDF three-step sequence is implemented by neuronal networks performing a sensory metric  $g^{pr}$ , sensorimotor transfer  $c_{ip}$ , and motor metric transformations  $g^{ie}$ . The last intrinsic neuronal expression is the contravariant motor execution vector  $m^e$ , which generates a physical rotation by activating the eye muscles. The extrinsic eye-muscle matrix E (Fig. 2) can