Public Abstract
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This thesis describes the application of fuzzy logic to the Short Physical Performance Battery (SPPB) test, a series of timed physical activities that have been created to evaluate, physical functional performance for both research and clinical purposes, primarily for physically impaired older adults. The original scoring system of the SPPB test uses crisp time boundaries to assign the subject to discrete classes of performance. The crisp nature of the crisp thresholds can easily produce anomalies. Fuzzy Logic theory allows the natural description, in linguistic terms, of input/output relationships rather than relying on precise numerical threshold values. This thesis demonstrates that in the proposed system, the Fuzzy Short Physical Performance Battery (FSPPB), the sensitivity and data distribution of the scoring system for the SPPB test can be improved.