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The Three Pillars of Career Growth: My Journey So Far

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ABSTRACT

My resume documents professional accomplishments (<http://mechanics.tamu.edu>) in research during my professional journey, which began while I was a Ph.D. student in the USA in 1970s. In nutshell, I consider the following of my research works will standout: the publication of a seminal paper on 14 primal and dual variational principles, the third-order shear deformation theory composite materials and structures, least-squares finite elements models, higher-order shell finite elements, non-local continuum theories, and nonlocal model to assess damage and fracture in solids. In addition, my contribution to engineering (mechanics) education through the publication of 25 text books noteworthy. The lecture will begin with an overview of the author's highly cited shear deformation and layerwise theories for composite laminates, the penalty and least-squares finite element models of the flows of viscous incompressible fluids, a robust shell finite element, and non-local mechanics ideas in the graph-based finite element framework (GraFEA) for the study of damage in brittle materials. However, much the time in this lecture will be dedicated to lessons learned along the way as an educator and researcher as well as a peek at the human side of my academic success. The three pillars of human side as well the three pillars of scientific research in engineering and applied sciences will be identified and elaborated.