

Edwin A. Erlbacher, Ph.D.

Dr. Erlbacher is President of *PushCorp, Inc.* and will participate in the project as Principal Investigator. Dr. Erlbacher has over seventeen years of diverse industrial experience. This experience includes working as an engineer at the Grand Gulf Nuclear Power Station, Port Gibson, Mississippi and as a Project Manager for the Ford Aerospace Sidewinder Missile Thermoelectric Assembly at Marlow Industries, Dallas, Texas. His duties included design of computer-controlled test systems, developing manufacturing production equipment, and quality control testing for thermoelectric devices used in missile heat-seeking electronics.

During his employment at the University of Texas Automation & Robotics Institute he was responsible for the development of a high pressure (60,000 psi) robotic water jet quick disconnect. The disconnect is unique in that no axial decoupling forces are generated. Dr. Erlbacher served as project manager in the development of a six degree-of-freedom custom manipulator designed to singulate and dispense medication from 100 storage canisters. The manipulator design encompassed mechanical, electrical and software development efforts.

Dr. Erlbacher designed and patented a pneumatic active adjustable force control tool as the basis of his PhD dissertation. The design included complete mechanical design and dynamic modeling as well as the development of non-linear feedback control algorithms allowing precise force control for robotic applications. Since the inception of *PushCorp*, he has served as Lead Mechanical Engineer in the design and development of all the company's products.

He received his BSME from the University of Memphis, Memphis, Tennessee in 1982 and his Ph.D from the University of Texas at Arlington, Arlington, Texas in 1992. Dr. Erlbacher continues his involvement with the University of Texas by serving as an Adjunct Professor teaching mechanical design.