



**Human
Factors
and
Ergonomics
Society**

FELLOW PROFILE

Name: Mark M. Brauer

**Degrees, certifications,
etc.:** PhD IE, Texas A&M
University, College Station.
Professional Engineer
(PE), TX.
Certified Safety Professional
(CSP), National.

Current status: President, AMENCIE
Consultants.

Biography (How you got involved in the field, your major career activities and milestones):

Walking across the wing of a Bell P-39 Aircobra at the NY World's Fair 'told' me I'd be devoted to flying and aviation. Years later, after almost blowing up the Stuyvesant High-School electrical laboratory 'told' me I'd be dedicated (dedicated) to Safety...The two were impossible to avoid, and so I've been a Military aircraft RDTE&O Human Factors/Safety engineer for over 40-years. I passed up opportunities for management -- after being appointed Project Engineer over 4-US Government programs -- to keep my 'hands-on' the real HFE/S interface from Down-Range instrumentation at Patrick Air Force Base ('52) through Lockheed's Skunkworks. A sad RIF at Lockheed ('93) Devinely placed me with my alma mater as an associate professor of engineering (HFE/S) and as ethics chair for the College of Engineering. The latter facilitated (a) invention of the 'Safety Cube,' increasing analysis bandwidth for the profession, (b) successfully having my graduate safety class (i) win an Annual ASSE/NIOSH Safety award, and (ii) re-design the NAS-Kingsville control tower in a hands-on exposure to the "real world."

In 1997 I began consulting with an eye to reducing my workload (ha), and developing MRTIC©, a unique medical/health-care database. Although my workload has doubled, I'm "lovin' it..." and will probably leave Connie with at least 13-works-in-progress.

Employment History (List top 5 positions):

Down-Range instrumentation crew chief (certified in timing/telemetry), USAF-AFMTC, Atlantic Coast Missile Range, PAFB, FL.
Control Systems Project Engineer, US Science Co., LA, CA
Senior Engineer, Northrop Aircraft, Palos Verdes, CA
HELLOG Team Chief, USA-HEL Detachment, US Army-Rock Island Arsenal (RIA), IL
Research Scientist, Lockheed "Skunkworks," Burbank, CA

What were your significant contributions to the field?

B-58 Hustler (fleet retrofit), Voice Warning System (VWS) anti-jamming invention, USAF/
Northrop CMIP Medal, Palos Verdes.
S-280 Shelter TIPI Fleet Retrofit (formaldehyde evolvment-discovery/mitigation), TI, Austin.
Invented CORP, a method for safely cleaning supertankers while recovering their valuable effluent (instead of polluting our oceans and waterways), US Navy and Texas A&M University.
8-in SP Howitzer, invented 'fallback problem' solution, life saving field promotion, USA-HEL, RIA

Synthesized Target System (STS) eliminates down-range target-scoring, 'life saving' patent, USA-HEL, RIA.

1st 'O/O' escape-capsule design, National Aerospace Plane (NASP), USAF/NASA/Lockheed "Skunkworks" commendation, Burbank. The latter design was early enough (c. '87) such that it could have saved the entire crew if implemented on the Columbia Spacecraft.

Original developer of MRTIC ©, a public medical/health-care database that facilitates National collaboration between researchers and sponsors while conserving critical resources. I am working on this with Texas A&M University.

Did you receive any notable awards or recognition during your career?

Elected member: Tau Beta Pi, Alpha Pi Mu, Sigma Iota Epsilon and Phi Kappa Phi. Elected College of Engineering representative to Graduate Student Council, Texas A&M University.

Appointed Patent Review Committee representative (Northrop). Appointed Division Product Excellence Committee representative and elected by that body to chair same (Lockheed).

Elected Fellow: Human Factors and Ergonomics Society (HFES), Institute of Industrial Engineers (IIE) and Institute for the Advancement of Engineering (IAE).

Elected emeritus member Department of Defense – Human Factors Engineering – Technical Advisory Group (DOD-HFE-TAG). Founded Technical Society/Industry and Safety Subgroups and chaired the Safety Subgroup for two terms.

Elected Engineer of the Year (and later CEO), Quad Cities Engineering and Science Council (QCESC).

Which articles in the journal *Human Factors* would you say were the most influential to you and your research or practice?

While the Journal has always been of interest and importance, I find myself engaged more often, and more deeply, with ERGONOMICS IN DESIGN.

What advice would you give someone considering HF/E as a profession?

For me, I did my best when trying to save the lives of, or reducing the strain on, the various servicemen with whom I worked, trained and played. I found that gratification from ethics and design (engineering) is higher-pay than the 'pay-check' and striving to be a part of the toughest-team – no matter the assignment – was a worthy goal.