Human Factors and Ergonomics Society

FELLOW PROFILE

Name: **Barry L. Berson**

Degrees, certifications, etc.: M.A. Human Factors and Applied Experimental Psychology – CSUN

CHFP- BCPE

Current status: Active

Home page: HFCSI.com

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

Originally, I wanted to be an Industrial Psychologist. After graduating from UCLA, I applied to the Psychology Graduate program at CSUN. I was told by one of the UCLA professors that they offered a M.A, in Industrial Psychology. After being admitted to the program, I set up a meeting with the Department chair to talk about their program. The Department chair was Dr. Bill Knowles. Dr. Knowles told me that they did not have an Applied Psychology program, but instead offered an advance degree in Human Factors. I asked him what Human Factors was all about, and after listening to him for a few minutes, I decided that this was close enough. The rest is history.

Spent the first five years of my career working for small consulting companies on a variety of projects ranging from developing training plans and experiments to assess the capabilities of marine mammals to support Navy missions, developing the user interfaces for a kelp harvesting boat, developing a communication language for an underwater remote manipulator, and performing a study to support the development of test methods for Army material development programs.

I then spent the next 30 years working at Lockheed Martin and Hughes aircraft. At Lockheed I had the opportunity to support the design and validation of many different types of aircraft (e.g., P-3, S-3, F-117, U-2, F-22, F-35, a supersonic business jet, and assorted unmanned aircraft, etc.), and space vehicles (X-33, RLV and CEV). I was the first Human Factors engineer to work within the Skunk Works organization at Lockheed, and as manager I was able to grow the organization from 4 to 25 human factors engineers, pilots and crew systems engineers. After 15 years, I went to Hughes Aircraft and served as the manager of military and commercial human factors for about 1.5 years. While at Hughes, my team performed some of the initial research directed at integrating aircraft technology (e.g., navigation, night vision, collision avoidance, etc.) into automobiles. For most of my second stint at Lockheed, I served as a Senior Technical Fellow, with responsibilities for supporting Lockheed projects in the US and Internationally. I was also selected to be the Lockheed Martin Corporate representative to an organization that had at its goal to develop the certification basis for flying unmanned aircraft in the

national air space.

Since 1999, I have taught graduate level HF classes at CSUN. Since this time, I have been on over 50 thesis committees.

After retiring from Lockheed, I co-founded (along with Dr. Tyler Blake), Human Factors Consulting Services, Inc. (HFCSI). HFCSI is a full service HF consulting company focusing on the design and validation of world-class user interfaces for commercial products. Current emphasis is on medical equipment.

Employment History (List top 5 positions):
Integrated Sciences (1973 to 1976) – Staff Scientist
Perceptronics (1976 to 1977) – Human Factors Scientist
Lockheed Martin Skunk Works (1977 to 1991, and 1992 to 2008) – Department Manager for Human Factors and Crew Systems – Senior Technical Fellow
Hughes Aircraft - (1991 to 1992) – Manager for Military and Commercial Human Factors
Adjunct Professor – (1999 to present) – Teach HF Graduate Classes
Human Factors Consulting Services, Inc. - President

What were your significant contributions to the field?
Develop methodology used by the Army to validate system performance in operational settings.
Helped author the Data Item Description for DoD Test and Evaluation.
Lead author on the FAA/DOT Standard on Crew Alerting
Lead HF Engineer on many aircraft development programs (e.g., S-3B, P-3C, U-2, A-4 and F-117, a Supersonic Business Jet, a Hybrid aircraft (cargo blimp), several unmanned aircraft development programs, and many others).
Lead author for the HF/Crew Systems proposals for the F-22, F-35, and the Crew Exploration Vehicle programs. Performed some of the initial research on the integration of aircraft technology into automobiles (Navigation systems, collision warning systems, night vision sensors, etc.)
Currently supporting the design and validation of medical devices to help patients with diabetes lead healthier and safer lives.

Did you receive any notable awards or recognition during your career?
I have received three patents for advanced display technologies for commercial aircraft. Selected to be a Technical Fellow for Lockheed Martin (3 times). Selected to be a Senior Fellow for Lockheed Martin (~11,000 engineers in the aerospace sector of Lockheed Martin with 10 Senior Fellows) – Only behavioral scientist selected to be a Senior Fellow. Selected to be a Fellow of the Human Factors and Ergonomics Society. Certified Human Factors Professional (BCPE)

Which articles in the journal *Human Factors* would you say were the most influential to you and your research or practice?
Cannot think of any at the moment. The most influential books that I read were authored by David Meister in the 60s that dealt with the theory and practice of Human Factors.

Please provide any links to your online articles, essays, blogs, Wikipedia pages, etc., that pertain to your research, publications or practice.
Unfortunately, most of my publications were either classified or proprietary. References for several publications in the public sector are provided below:

- Aircraft Alerting System Standardization Study (DOT/FAA/RD-81/38.1) Jan 1981 Guide for Obtaining and Analyzing Human Performance Data in a Materiel Development Project – HEL TM 29-76, 1976
- Modernization of a Military Aircraft Cockpit – Ergonomics in Design (Volume 10 Number 3, Summer 2002)

3 articles (Seagulls Lie, Sushi for Breakfast and Missed it by that Much) in Stories from the first 50 years – Human Factors and Ergonomics Society, 2006

What advice would you give someone considering HF/E as a profession?
The HF/E profession is extremely broad. An individual with an HF/E degree can work in a wide variety of government, industry and service positions. Internships and networking provide the best opportunities to find out what HF/E personnel do and to find a position that you have a passion for. Therefore, it is strongly recommended that you try to get one or more internships during your undergraduate/graduate programs, and join local HF/E organizations, participate in webinars, and attend local and national HFES meetings and conferences. It is also extremely beneficial to obtain a mentor to help align your interests with potential job opportunities, or to discuss your HF/E interests with experienced members of the profession.

HF has been very, very good to me. After 40 years of practice, I still believe in the value of HF contributions to improve human and system performance. It has provided me with the opportunity to contribute to a wide variety of sophisticated products (e.g., aviation, automobiles, medical devices, etc.), to work with many outstanding engineers, program managers and HF professionals, and to teach applied HF methodologies to gradate students. I have been able to apply basically the same methodology and tools across all of the industries that I have worked. I believe that is one of the major strengths of our profession, namely individuals can easily move between domain areas without requiring substantial training.