

**Robert J. Sprafka, Ph.D.**

5800 Forest Hills Blvd. A-102, Columbus, OH, 43231-2951

Phone: (614) 882-0381

E-mail: rjsprafka@rjsprafka.net

Objective:

To find activities, projects and clients which allow me to utilize a combination of my scientific, artistic, computer and teaching skills.

Background Summary:

50+ years computer experience covering micro to mainframe applications, system management and programming and security administration, local area networks (LANs). Fluent in spreadsheets, word processing, procedural languages, numerical analysis, data reduction, computer mapping, computer graphics including simple web page design. Music notation & MIDI.

12 years of computer based data acquisition and analysis in industrial and laboratory settings. This also includes basic industrial automation and controls.

Directed a quantitative services group (computer applications, statistics, research design, etc.) in a Community Medicine Department reporting to two medical schools. (9 years)

10 years physics teaching experience at major universities: introductory physics with and without calculus; honors physics; modern physics; radioactivity. (Lab sections; recitation sections; lecturer; course administrator.)

Basic research in experimental high-energy elementary particle physics. (10 years)

Designed several major data bases:

- Multi-county cancer registry (1970's)
- State legislature bill tracking and status system (1980's)
- Real-time physiological data bank at a major trauma center (1980's)

Professional Experience:

Senior Scientist: AAI Scientific, (1997-2011) SOHO computing, small office LANs, industrial data acquisition, tutoring, simple HTML web page design.

Senior Project Engineer: East Ohio Gas, Cleveland, Ohio (1988-1997).

Specialized in data acquisition and data reduction for New Market Development. Used computers and real time sensors to monitor and control industrial apparatus involving innovative demonstrations of new ways to use natural gas (both liquid and gaseous). Selected, programmed and calibrated the equipment involved. PLC programming for process control.

- Created the EOG Data Logger (1988) used in the Technical Market Support group
- Used the data logger to document efficiencies and cost savings for several gas technologies
- Created (with co-worker) the LNG truck refueling facility at Roadway, Inc., Copley, Ohio
- Won 5 marketing awards as team member responsible for quantitative aspects of projects

Senior Associate (1977-84) and Director-Systems (1984-88): LAM Consulting, East Lansing, Michigan.

Conceptual design; hardware selection; software creation and adaptation for nontraditional, one of a kind databases.

- Created and maintained "Information Plus", the Hannah Information Systems Legislative bill tracking database for Michigan and Ohio (1984-1988).
- Analyzed communication and equipment requirements for five state and county health organizations (MI).
- Designed overall strategy for on-line, real time, patient vital signs data at a Maryland trauma center.

Senior Associate (1980-82) and Vice President (1983-84): E:F Technology, Inc., St. Johns, Michigan. Techno-economic assessment and characterization of the readiness for commercialization for several alternative fuels, principally natural gas (NG) and hydrogen, for both stationary and automotive use.

- Evaluated potential production of hydrogen and oxygen from renewable resources for the NASA space shuttle program
- Served on a World Bank funded project in Bangladesh to speed potential development of NG use in transportation
- Explored non-technical (institutional) barriers to NG automotive use in New York State
- Co-chair of discussion session at World Hydrogen Energy Conference V (Toronto, 1984)

Associate Professor, Community Medicine (1977-83); Associate Professor, Physics and Community Medicine (1973-77); Associate Professor, Physics (1971-73); Assistant Professor, Physics (1967-1971): Michigan State University, East Lansing, Michigan.

Directed two-college (D.O. and M.D.) quantitative services group in the Department of Community Medicine. Taught various undergraduate physics courses. Basic research in experimental particle physics (bubble chamber, spark chamber, and counters).

- Co-Principal investigator on several-year, half-million dollar grant projects (Kellogg Foundation) developing a patient oriented encounter form data base used to evaluate the care provided by 150 medical residents participating in eight Family Practice Residency Training programs in Michigan.
- Consultant to Genesee County Health Department.
- Director of 7 FTE Quantitative services group providing questionnaire design, administration, and analysis; computer mapping services; custom data base design, etc., including the use of various major statistical packages (SPSS, BMD, SAS, etc.).
- Chosen as physics department nominee for University wide Teacher Scholar award (1970).
- Chosen to be a member of virtually all major campus-wide computer committees (advisory, operations (chair, secretary), networking, research).

Education:

Ph.D. Physics, Purdue University, West Lafayette, Indiana. (1965)

BS Physics-Math, Purdue University, West Lafayette, Indiana. (1959)

Memberships and Honor Societies:

Sigma Pi (Physics honorary society). Sigma Xi (Graduate Level science honorary society). American Physical Society. American Society of Heating and Refrigeration Application Engineers.

Other:

Refereed publications in Physics, Health Services Research, industrial research, and Alternative Energy. Theater experience: acting, singing, technical (lights, tech directing), music directing. Music: 5 years voice study (bass-baritone), church soloist, 2 years piano. Summer church choir director. "Medieval banquet" music director. Use of computers for music (MIDI sequencing, notation programs). Sports Car Racing Crew Chief, including five 24-hour endurance races.