

K. P. (Kip) Haggerty, Consulting Engineer

Address

H&A Systems Engineering
P. O. Box 2875
El Segundo, CA 90245

Voice: (310) 607-9609
Fax: (310) 607-9475
E-mail: k.haggerty@hasys.com
Web: www.hasys.com

Summary of Qualifications

- Provides practical applications of systems theory
- Ph.D. in Electrical Engineering
- Twenty years of experience in control, communication, and sensor systems
- Broad technical background in algorithms, digital signal processing, and Kalman Filtering

Employment History

Dates	Position
8/94 to Present	Consulting Engineer: H&A System Engineering, El Segundo, CA – He leads the control, communication, and sensor systems engineering consulting portion of the business. He has provided requirements and analysis for a variety of RF sensors, including resolution of signal processing, tracking, and phenomenology issues. He also led the requirements and architecture model development for a multiple-unit parallel solid-state power conversion system, including specification of digital signal processing and control algorithms for execution on multiple embedded processors.
6/88 to 8/94	Senior Staff Engineer: Hughes Aircraft Company, El Segundo, CA – He developed, simulated, and analyzed avionic system concepts that included spread spectrum data communications, radar, and air traffic control communications. He used CASE tools to specify top-level system requirements for two avionic systems. He led the cooperative engagement system concept study for the AAAES program. He participated in a demonstration of the first high resolution radar range profiles from a new waveform.
1990	Instructor: Advanced Technical Education Program, Hughes Aircraft Company, El Segundo, CA – He developed and taught a course in Kalman Filtering.
9/84 to 6/88	Systems Engineer: Hughes Aircraft Company, El Segundo, CA – He designed, simulated, analyzed and verified radar signal processing, tracking, and calibration algorithms.
7/80 to 9/84	Member of the Technical Staff: Hughes Aircraft Company, El Segundo, CA – He designed, simulated, analyzed and verified radar signal processing and tracking algorithms.

Education

Degrees

- M.S. in System Science, ENGR. and Ph.D. in Electrical Engineering, UCLA, 1983, 86, and 88 respectively. Major: Control Systems, Minors: Communication Systems and Applied Mathematics
- B.S.E. in Electrical Engineering, University of Michigan, Ann Arbor, 1980 (Cum Laude). Emphasis: Control Systems and Computer Engineering.

Doctoral Thesis

Chair: Richard E. Mortensen, Professor Emeritus of Electrical Engineering

Title: *Aggregation and Validation of Random Square Wave Load Models for Electric Power Utility Load Control of Residential Cooling and Heating*

Synopsis: Simulation experiments and computer-based statistical analysis of utility data were performed to establish models of load behavior conducive to applying intelligent control techniques to the load manage-

ment problem. Systems engineering recommendations were made, including recommendations for a new data collection methodology for improved model validation. The ultimate goal of the research effort that included my thesis was to provide intelligent control methods that would permit meeting load demand by improving the operating efficiency of the power grid.

Honors Received

- Tau Beta Pi National Engineering Honor Society
- Hughes Aircraft Company Graduate Fellowships

Continuing Education

- Self-taught: Mathematica, Simulink, Matlab 1995-2000
- *Fundamentals and Applications of Object-Oriented Programming Using C++*, UCLA Extension 1996
- *Systems Engineering with Models and Objects*, Instructor: David W. Oliver, 1994
- *Structured System Development*, Instructor: Imtiaz A. Pirbhai, 1991