

Kevin Newman

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<http://www.ameritech.net/users/kevba/kevbahome.html>

- Objective** To design and implement realtime control systems for a variety of applications, including, but not limited to, hybrid vehicles, robots, or planes trains and things that go.
- Education** **Cornell University College of Engineering** Ithaca, NY
Master of Engineering – Computer Science, Dec. 1994 GPA 3.98
Bachelor of Science (with Distinction) – Computer Science, May 1993 GPA 3.71
- University of New South Wales** Sydney, Australia
Study Abroad Fall 1991, Fine Arts Curriculum
- Computer Skills** Proficiency in C/C++, Pascal, Scheme, Common LISP, BASIC, FORTRAN;
Intel 8096, PIC16C7x, M6502, M68K Assembly Languages;
Familiarity with Windows, UNIX, X Windows, VAX/VMS, MS-DOS, EMACS, LaTeX;
Printed Circuit Board CAD/CAM, Macintosh and Windows 3.1 Programming
- Awards** Faculty Fellow in CS (Teaching Assistant and Recitation Instructor) 1993-1994
Dean's List, All Semesters
Member First Place Team, Hybrid Electric Vehicle Challenge 1993, Fourth Place 1994
Tau Beta Pi, Phi Kappa Phi and Golden Key National Honor Societies
- Experience** **Hybrid Vehicle Controls Engineer** March 1995 - Present
U.S. Environmental Protection Agency *National Vehicle and Fuel Emissions Lab*
Analyzed an existing hybrid hydraulic vehicle, specified and developed an electronic control system to oversee vehicle operation. Controller managed multiple hydraulic pump/motors, valve networks, and a direct injection turbo diesel engine to obtain peak performance and efficiency as part of the nationwide Partnership for a New Generation of Vehicles (PNGV). Used Matlab and Simulink to create detailed models of vehicle systems and EAGLE PCB to develop printed circuit board layouts.
- Powertrain Team Leader** Fall 1992 - Summer 1994
Cornell University Hybrid Electric Vehicle Team *Cornell University*
Developed an advanced hybrid electric vehicle powertrain design featuring real-time control of a multiple-motor system incorporating a high power brush DC motor and a high efficiency brushless permanent magnet motor. Designed and fabricated multi-purpose microcontroller electronics using CAD/CAM. Created a modular software simulation system to aid in powertrain design and optimization. Developed a 200V/400A DC motor controller for use with the Advanced DC L91-4003.
- Robotics Researcher** Summer 1990 - December 1994
Computer Science Robotics and Vision Laboratory *Cornell University*
Engaged in extensive hardware design, development, production and debugging. Gained experience with distributed, multi-language, multi-processor sensor systems. Performed real-time programming of autonomous mobile robots. Designed a sophisticated digital infrared communication / proximity detection system. Created detailed technical documentation of hardware and software.
- Control System Engineer** Fall 1991
Universal Special Effects / Australian National Maritime Museum *Sydney, Australia*
Designed control software and hardware for permanent interactive exhibits with an emphasis on robustness, error detection and recovery. Performed ladder-logic programming of PLCs.