

Marty Pecaric

Owner and Lead Consultant

CONTRAIL
CONSULTING SERVICES



CITIZENSHIPS Canadian and Slovenian

EDUCATIONAL BACKGROUND

1992 - 1999 Doctor of Philosophy (Applied Physiology/Human Factors Engineering)
University of Toronto, Toronto, Ontario

1991 International Space University, Toulouse, France

1988 - 1991 Master of Science (Applied Physiology)
York University, Toronto, Ontario

1982 - 1986 Bachelor of Science (Exercise Science)
Concordia University, Montreal, Quebec

WORK EXPERIENCE

2000 - Current Owner and Lead Consultant
Contrail Consulting Services, Toronto, Ontario

Provide consultancy services to companies in the aerospace, medical, information technology, and biotechnology sectors. Areas of involvement include business planning (pursuit of regional and international opportunities), marketing (strategy development, website and graphical design), project management, research and statistical support, documentation, and technical writing.

2001- 2002 Project Lead, Life Science Systems
Millenium Biologix Inc., Kingston, Ontario

Manager of all life science related R&D projects for both microgravity and terrestrial based tissue engineering applications. Responsibilities included control over program timelines, budgets, and resources, progress reporting, proposal submissions, patent application, liaison between R&D scientists and engineering personnel, development of company-wide and project-wide SOPs and DOPs with QA staff.

1999 – 2000 Project Lead, Vibration Analysis and Balancing System
MDS Aero Support Corporation, Ottawa, Ontario

Responsible for the development of software for turbine engine vibration testing and balancing. Duties include user interface design, algorithm development, hardware configuration and control, compliance testing, system integration and documentation (design briefs, version description documents, and acceptance test protocols).

1990 - 1997 Project Lead, Protection Systems Development
Rylin/Drumoyne, Mississauga, Ontario

Led the development and evaluation of advanced systems for current and next generation Canadian Forces and US Navy aircraft. Programs evaluated physiological responses to new concepts in counterpressure garment design and pressure control hardware in protecting humans exposed to hazardous micro-gravity, high acceleration, or high altitude environments. Provided technical consultancy for Canadian Space Agency projects requiring access to the institute's facilities, during the International Microgravity Lab Experiments onboard Space Shuttle, and for ground-based assessments of prototype equipment slated for use in NASA experiments.

PROJECT MANAGEMENT RELATED SKILLS

- project oversight: supervision and direction of multi-disciplinary teams
- knowledgeable of project management techniques: Work Breakdown Structures, PERT and Mechanized Gantt charts, Earned Value and Trend Analysis, requirements and cost estimation analyses, proposal development, experimental design, committee briefings, program scheduling, risk assessment
- material management: procurement and product upgrades, liaison with COTS product developers and manufacturers
- technical specification development and review of 3D models generated using Solid Edge development environment
- development of company-wide standard operating procedures (SOPs) and project-wide detailed operating procedures (DOPs)
- documentation: peer reviewed publications (journal articles and abstracts, limited access publications), preliminary patent filing, technical reports, proposals, monthly project summaries, end user manuals
- presentations: in-house, international scientific meetings, senior management
- knowledgeable of government, academic, and private industry research sectors
- experienced advisor to senior management and other government officials regarding best practices in research and/or operational issues

COMPUTER AND TECHNICAL COMPETENCIES

- high level knowledge of LabVIEW, FORTRAN, and some C/C++ programming
- extensive experience with Mac and PC OS (Win XP, Win2K, Win95, Win98, WinNT)
- conversant with word processing, graphics, presentation, data management packages
- extensive experience with statistical analysis programs (SAS, SPSS, Statistica, SuperANOVA, StatView, BMDP, Excel) and methodologies (parametric and nonparametric statistics)
- mathematical modelling: pressure system performance and physiological responses
- installation and implementation of biomedical monitoring systems: ECG, EMG, ambulatory blood pressure measurement systems and blood gas analyzers
- electronic and pneumatic hardware: current to pressure transducers, pressure relief valves, volume boosters, pneumotachographs, pressure regulators, pressure reducing valves, relays, amplifiers and pre-amplifiers, power supplies
- full life cycle software development: control and data analysis applications (AtoD and DtoA conversions, digital I/O, graphical user interface design, algorithm generation, and post data collection routines), software testing and evaluation, documentation
- sensor installation and calibration: pressure transducers, accelerometers, interlocks
- signal conditioning: analog and digital filtering, integrators, differential amplification
- architecting and implementing Information Technology related project components
- setting up hardware, software, and required networking components
- programming and trouble shooting requisite applications to support project initiative
- final level problem resolution resource
- system testing: compliance testing of prototype equipment to requisite standards
- data acquisition system configuration: National Instrument multifunction and voltage output boards; multiple board synchronization (RTSI); system performance enhancement (Direct Memory Access boards)
- data file management: retrieval, display, and analysis using specialty software (SWAP) and EXCEL macros; backup to mass storage devices (EPOCH, MASSCOMP, and SUN mainframe systems) and external storage devices (CDR, ZIP and external hard drives)
- UNIX shell scripting: Sun/Sparc workstations

ACADEMIC AWARDS AND SCHOLARSHIPS

- 1997 Student Travel Award (University of Toronto)
- 1994 Student Travel Award (University of Toronto)
- 1993 Ross McFarland Student Award (Life Sciences and Biomedical Engineering Branch of the Aerospace Medical Association and sponsored by Systems Research Laboratory)
- 1992 University of Toronto Open Fellowship (University of Toronto)
- 1991 International Space University Scholarship (Canadian Foundation for the International Space University and sponsored by the Department of National Defence)

MEMBERSHIPS

Canadian Alumni of International Space University (CAISU)
Canadian Owners and Pilots Association (COPA)

CERTIFICATIONS AND HOBBIES

Traveled through SE Asia, Australia, Europe and some Central America
Private Pilot Licence (Single Engine Land) and Glider Pilot Licence
Recreational Scuba Diver (American Canadian Underwater Council)
White Sail I - III; Basic and Intermediate Keel Boat; Coastal Cruising (CYA)
Recreational squash and tennis

REFERENCES

Available upon request.