

Didier Thevenard PhD, PEng

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► PROFESSIONAL PROFILE

- Highly skilled and experienced engineer who loves creating and applying numerical models to solve scientific or engineering problems.
- Keen on originating elegant methodologies that facilitate consistency, duplication of methods, and ease of use.
- Skilled at bringing structure, order, logic, and harmony to chaotic or ill-defined situations.
- Extremely proficient at documenting systems and processes to improve their quality and facilitate their future use.
- Performs exacting and careful analysis to identify potential risks and problems with every solution.
- Years of experience in collaboratively defining standards.
- Core values are integrity and trustworthiness.
- Promotes harmony, aims for common ground, consensus and mutual support.
- Enjoys working as part of a team to solve problems and improve existing processes.

► KEY DEMONSTRATED COMPETENCIES

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| ○ Scientific research | ○ Software development |
| ○ Numerical modelling | ○ Green buildings and technologies |
| ○ Computer simulation | ○ Development of engineering standards |
| ○ Data mining and analysis | ○ Team facilitation |

► SELECTED ACHIEVEMENTS

Calculated climatic design conditions for the 2005 and 2009 ASHRAE Handbook of Fundamentals. Researched, improved and implemented methods for extracting relevant information from massive amounts of climatic data. Developed procedures for QC and project documenting. Data used throughout the world and incorporated in standards. Similar work awarded for the National Building Code of Canada. Projects completed on time, on budget.

Researched, developed and implemented algorithms for design tools for renewable energy systems. Developed documentation subsequently used as template by other contributors. Most recent version of program has over 180,000 users in over 200 countries.

Collaborated with other experts on the development of international standards for solar energy. Reviewed and assessed proposed standards, improved communication between the members of the standards working group through the creation of a web site, served as secretary to the group.

Developed computer simulation tools are used in the planning, design, and analysis of complex energy systems. Created libraries of objects and functions which act as building blocks for the development of simulation software. Implemented powerful algorithms while keeping the software easy to use. Software used by hundreds of engineers in many countries.

Analyzed monitoring data. Developed procedures to analyze the data, identify erroneous data, and extract useful information from vast amounts of data, and establish useful indicators of system performance.

Presided parent advisory council (volunteer work). Co-organized school events, promoted dialogue between participants, reinforced communication within the school community through the creation of an electronic mailing list. Helped launch after-school care service.

► WORK HISTORY

NUMERICAL LOGICS Inc., Waterloo, ON and Vancouver, BC 1996-present

Principal

Numerical Logics Inc. is a scientific consulting company specializing in renewable energy systems, scientific and engineering computing, and simulation. Clients have included Natural Resources Canada, Environment Canada, Agriculture Canada, the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), and others.

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY, Burnaby, BC 2006

Project Leader, Renewable Energy Research

BCIT's Photovoltaic Energy Applied Research Laboratory provides expertise in renewable energy technologies.

LEVELTON CONSULTANTS, Richmond, BC 2004-2005

Project Engineer

Levelton Consultants provides expertise in the field of air quality modeling, energy, and building science.

UNIVERSITY OF WATERLOO, Waterloo, ON 1991-1996
Manager, Watsun Simulation Laboratory, then
Assistant Research Professor, Dept. of Systems Design Engineering
The laboratory was doing contract work and software development for several government agencies and private companies in the field of renewable energies and climate data.

DASSAULT SYSTEMES, Paris, France 1989-1990
R&D Engineer
Dassault Systèmes' CATIA software is one of the world leaders for CAD/CAM applications.

► **MEMBERSHIPS**

Professional Engineer.
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).
International, American and Canadian Solar Energy Societies.

► **EDUCATION**

1986-1989 Institut National Polytechnique de Grenoble, Grenoble, France
Ph.D. in Metallurgy and Materials Sciences.
1985-1986 Université de Paris 13, Paris, France
Specialization in Mechanics and Materials Sciences.
1984-1986 Ecole Nationale Supérieure de Techniques Avancées, Paris, France
MSc in Robotics.
1981-1984 Ecole Polytechnique, Palaiseau, France
Engineering degree.

► **INTERESTS**

Cooking, hiking, camping, sculpture, logic, science.