

WELCOME

ALEATEC Advisory Services Inc. provides high-end consulting and training services in risk and reliability. We promote quantitative risk analysis as an effective tool in ensuring the safe design and the reliable operation of engineering, environmental, and anthropogenic systems.

We provide effective solutions to complex projects involving reliability-based design, stochastic modeling and optimization, engineering statistics, uncertainty analysis, life-cycle optimization, probabilistic modeling and decision making.

ALEATEC Advisory Services Inc. is based in Calgary, Canada.

Contact ALEATEC at (403) 708-9516 or at mamaes@ucalgary.ca

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aleatory 1693 [from Latin *alea* the game of dice] Dependent on chance, dependent on uncertain contingencies.

hazard 1530 [from Arabic *az-zahr* the game of dice] A chance, a peril, a risk of loss or harm.

risk 1661 [from old Italian *risko* that which cuts, *spec.* a hazard such as a rock or a reef that "cuts" a vessel] The chance of loss or injury.

uncertain 1523 [from Latin *cernere* to cut, to separate, to decide] Not fixed, not determinate, dubious, vague, unspecified, variable.

stochastic 1662 [from Greek *stochazesthai* to aim at a target, to guess] Pertaining to chance or probability.

statistic(s) 1787 [from Latin *status* + *icus* of the state] The classification, analysis, and interpretation of numerical facts and data.

probability 1551 [from Latin *probare* to try, to test] A likelihood, a circumstance, a degree of belief.

ALEATEC Advisory Services Inc. provides high-end consulting and training services in risk and reliability. We specialize in the quantitative analysis and the assessment of risk. We assist in understanding and developing safe and reliable engineering, environmental, and anthropogenic systems.

We provide effective solutions to complex projects involving reliability-based design, stochastic modeling and optimization, engineering statistics, uncertainty analysis, life-cycle optimization, probabilistic modeling and decision making.

ALEATEC developed highly specialized tools and analysis frameworks in the following specialized fields:

- Structural Reliability and Reliability-Based Design
- Development and Calibration of Limit States Design Criteria
- Quantitative Risk Analysis and Risk Management
- Stochastic Modeling
- Life Cycle Cost Optimization
- Risk Based Repair, Inspection and Maintenance Planning
- Utility and Preference Modeling
- Consequence Modeling
- Rational Decision Making Techniques
- Bayesian Techniques in Engineering
- Assessment of Technological, Environmental and Anthropogenic Risks
- Extreme Value Analysis and Tail Statistical Analysis
- Uncertainty Modeling
- Probabilistic Limit States
- Offshore and Arctic Engineering Risk and Safety



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ALEATEC provides its clients with both consulting and advisory services. We have been asked to act in a variety of ways as problem solvers, experts and expert witnesses, third-party reviewers, analysts, policy planners and decision makers, coaches and educators, developers, and framework implementation leaders.

We also assist in product development for projects involving uncertainties, probabilistic modeling, calibration, and decision making.

In addition to consulting services, ALEATEC is also pleased to offer a variety of intensive hands-on computer-assisted courses, workshops, and lectures to groups of engineers and scientists. We are pleased to refer you to clients who have recently taken such courses. As an example, ALEATEC has been offering:

- a 4 day in-depth quantitative risk analysis (QRA) course
- a 1 day or 2 day basic QRA workshop

The format of such courses or workshops is flexible and based on the participants' background, interest, proficiency, and on the total number of participants. Small changes in content, time coverage, and applications can easily be accommodated.

The following is a (partial) list of recent clients:

ConocoPhillips Company, USA
ExxonMobil Canada Properties, Canada
Natural Resources, Canada
Sandwell Engineering Inc., Canada
National Energy Board (NEB), Canada
Encana Corporation, Canada
ConocoPhillips, Canada
Alberta Energy and Utilities Board (EUB), Canada
NRCB, Canada
Public Works and Government Services, Canada
Chevron Canada Resources, Canada
Canadian Standards Association
Town of Golden, British Columbia, Canada
ExxonMobil Upstream Research Company, USA
Stantec Consulting Ltd, Calgary, Canada
Blade Energy Partners, USA
Chris Stethem & Associates Ltd., Canada
Manitoba Hydro, Canada
Speco Engineering Ltd., Canada
ENRON, USA
PanCanadian Petroleum Ltd., Canada
BCI, Canada
Regie des Installations Olympiques, Canada
Mobil R&D Corporation, USA
Straits Crossing Inc., Canada
C-FER, Canada
Golder & Associates, Canada
Institute for Risk Research, Canada
Quebec Ministry of The Environment, Canada
Jean Muller Int., USA