

Nematrian's Research Insights, Intellectual Property and Teaching Resources Pages

[Nematrian website page: [ResearchIntro](#), © Nematrian 2015]

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As explained in its [main introduction](#), the Nematrian website contains a wide range of material to help you understand latest developments in quantitative finance, actuarial and mathematical thinking.

The coverage of this part of the Nematrian website is currently biased towards teaching material on [Enterprise Risk Management](#) (ERM) and on other [quantitative finance](#) and [actuarial](#) topics (including material on [Solvency II](#)).

However, the website also includes material on a wide range of purer [mathematical](#) and [physics](#) related topics, particularly ones that have analogues with topics in quantitative finance (of which there are surprisingly many!), as well as some more light-hearted [mathematically-orientated games, puzzles and quizzes](#).

This part of the website also includes information on some of Nematrian's [intellectual property](#), including material on:

- (a) Approaches for reducing runtimes (for a given level of accuracy) of simulation-based computations of portfolio value, value-at-risk and other similar portfolio-level metrics and of corresponding computations outside the financial arena (using [tri-segmented Monte Carlo](#) simulation).
- (b) Approaches for improving the efficiency of epidemiological testing (such as for Covid-19) using [group testing](#).

[Physics](#)-related topics covered in this part of the website include material on [optics](#), [solar powered space flight](#), [general relativity](#) and [quantum mechanics](#).