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## Data Analysis: Is it Science or Art ?

*Friday, July 10, 2015 12:00 PM (30 minutes)*

In some fields of research, data analysis is routine, either relying on the formal apparatus of hypothesis testing, or resulting in rock-solid conclusions that convince without further ado.

In other fields, however, including several neutron scattering techniques, data analysis appears to be more an art than exact science, with fit quality to be visually assessed by the experienced eyes, and conclusions formulated in purposefully vague language.

The generalizations proposed in this talk will be illustrated with examples from my own research in fields as diverse as liquid dynamics (experiments supporting mode-coupling theory and refuting the purported fragile-to-strong transition of confined water), surface science (development of simulation software for grazing-incidence small-angle scattering), and sociology (critical reanalysis of the student performance study PISA).

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