

SEMINAR

**“On Bayesian networks and
information quality (InfoQ)”**

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Chair: Prof. Maurizio Carpita

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Numbers are not data and data analysis does not necessarily produce information and knowledge. Statistics, data mining, and artificial intelligence are disciplines focused on extracting knowledge from data. They provide tools for testing hypotheses, predicting new observations, quantifying population effects, and efficiently summarizing data. In these fields, quantitative and qualitative data is used to derive knowledge. The concept of Information Quality (InfoQ) is defined in Kenett and Shmueli as the potential of a dataset to achieve a specific (scientific or practical) goal using a given data analysis method (Kenett & Shmueli, 2014). Eight dimensions help assess the level of InfoQ of a report. These are: 1) Data Resolution, 2) Data Structure, 3) Data Integration, 4) Temporal Relevance, 5) Generalizability, 6) Chronology of Data and Goal, 7) Operationalization, and 8) Communication. In this talk we show, with examples, how Bayesian networks generate high InfoQ. Specifically, we refer to examples from customer surveys of high tech companies, risk management of telecom systems, monitoring of bioreactors and managing healthcare of diabetic patients.

