My main research interest is on the representation of notions and concepts from statistics and probability in an algebraic and geometric framework of which to exploit the computational power and from which to derive tools to drive theory and help applications. Most of this research goes under the name of Algebraic Statistics, which at the moment is a very dynamic field and hard to define. To get an idea look up "Algebraic statistics" on google.

Currently I am focusing on algebraic methods for design of experiments, on the representation of stochastic processes as non-commutative formal power series, on the algebraic representation of causality, on the interplay between algebraic statistics and information geometry.

Students and other researchers interested in a topic at the frontier between statistics, probability, algebra and geometry, are invited to contact me at riccomagno@dima.unige.it to discuss common interests, topics of research and opportunities of collaboration.

Recent applications include: on line methods for fraud detection and money laundering based, performance evaluation of robotic systems in marine robotics, expert decision system for the definition of a naval unit.