

# Chemistry and Mathematics

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The lecture will outline the main connections that exist between mathematics and chemistry, what happens to be the lecturer's half-a-century field of interest and research. Chemical ideas motivated by mathematical concepts, and mathematical ideas motivated by chemical facts can be traced back until the Middle Age. The use of rigorous mathematical reasonings in chemistry has its commencement in the 19<sup>th</sup> century (if not earlier). Yet, the great advance, expansion, impact, and recognition of mathematical approaches in chemistry started around 1970, a time that fortunately coincided with the beginning of the lecturer's scientific career. This roughly is the time when a scientific discipline called *Mathematical Chemistry* was born.

In the lecture, some of the greatest achievements of *Mathematical Chemistry* will be mentioned and its present-day status briefly described. A few results in this area will be presented, selected so as to have some connection with the lecturer's own research.