SEMINÁRIO
LÓGICA MATEMÁTICA

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Albrecht Dürer's "Melencolia I" and Renaissance concepts of mathematical beauty

Alan J. Cain

ABSTRACT:

Renaissance mathematicians knew -- and declared -- that they were recovering and building upon ancient mathematics. Archimedes was the ideal they aimed to emulate. But, at least initially, their aesthetic evaluation of mathematics -- their judgement of certain parts of mathematics as beautiful or elegant or otherwise -- owed more to the philosophy of Plato than to any inheritance from the mathematicians of antiquity. During the later Renaissance, this Platonic influence weakened: Johannes Kepler's work was shaped by it but also largely marked its end. In the seventeenth century, with the emergence of analytic geometry and number theory, there was little discernible Platonism in the aesthetic evaluation of mathematics.

This talk will briefly survey the influence of ancient Greek thought, philosophical and mathematical, on the Renaissance view of mathematical beauty, and illustrate how this view shifted away from the Greek influence. In particular, the contribution of the artist Albrecht Dürer will be discussed, and his famous engraving "Melencolia I" will be interpreted in the context of the Renaissance idea of mathematical beauty.

[This talk will be historical and philosophical. Only elementary algebra and geometry will appear.]

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