

ZVEME VÁS NA SEMINÁŘ ODDĚLENÍ LOGIKY

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(Filosofický ústav AV ČR)

## **SOME EARLY ATTEMPTS TO PROVE THE IMPOSSIBILITY OF SQUARING THE CIRCLE**

With the emergence of symbolic algebra in XVIth and XVIIth century geometry, the question whether all mathematical problems could be solved by algebraic means became a matter of concern. Particularly, it was discussed whether certain well-known problems, like the quadrature of the circle, could be solved in this way. My talk will explore this issue, considering a controversy occurred in 1668 between the Scottish mathematician James Gregory and the Dutch mathematician Christiaan Huygens, about the possibility of solving the quadrature of central conics (which included the circle) by algebraic means. Whereas the former held it was impossible but advanced weak arguments, the latter correctly refuted Gregory's proof but falsely believed that the circle could be squared algebraically. The major point of interest of this controversy, according to me, is foundational: which were the bounds of Cartesian geometry? Are the five arithmetic or algebraic operations sufficient in order to express and solve all problems concerning the objects of Euclid's geometry?

**Přednáška se koná ve čtvrtek 29. 3. od 14:00  
v zasedací místnosti FLÚ AV ČR, Jilská 1, Praha 1**