

# LINEAR EQUATIONS ON REAL ALGEBRAIC SURFACES

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The talk is based on a joint work with Krzysztof Kurdyka. We prove that if a linear equation, whose coefficients are continuous rational functions on a nonsingular real algebraic surface, has a continuous solution, then it also has a continuous rational solution. This is known to fail in higher dimensions. The paper is inspired by a theorem of Fefferman-Kollár, which asserts that existence of a continuous solution implies in all dimensions existence of a continuous semialgebraic solution.