

# On the Global Solvability for Overdetermined Systems

Srgio Luís Zani

*Departamento de Matemática – ICMC,  
Universidade de So Paulo  
Avenida Trabalhador so-carlense, 400 – Centro – Caixa Postal 668 – CEP 13560-970 So  
Carlos - SP  
Brazil  
szani@icmc.usp.br*

## **Abstract:**

We consider a class of systems of two smooth vector fields on the 3-torus associated to a closed 1-form. The global solvability of such systems is completely determined by the connectedness of the sublevel and superlevel sets of a primitive of this 1-form in the minimal covering. The main point of this talk is addressing the case when the 1-form is non-exact and its periods are rationally dependent.

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