Seminario de Matemáticas

Periodic solutions of differential equations:
automatic differentiation for Fourier series and computer assisted proof
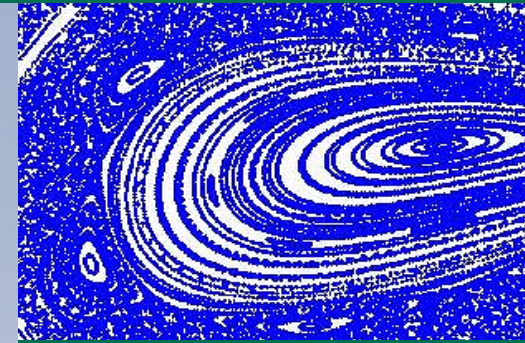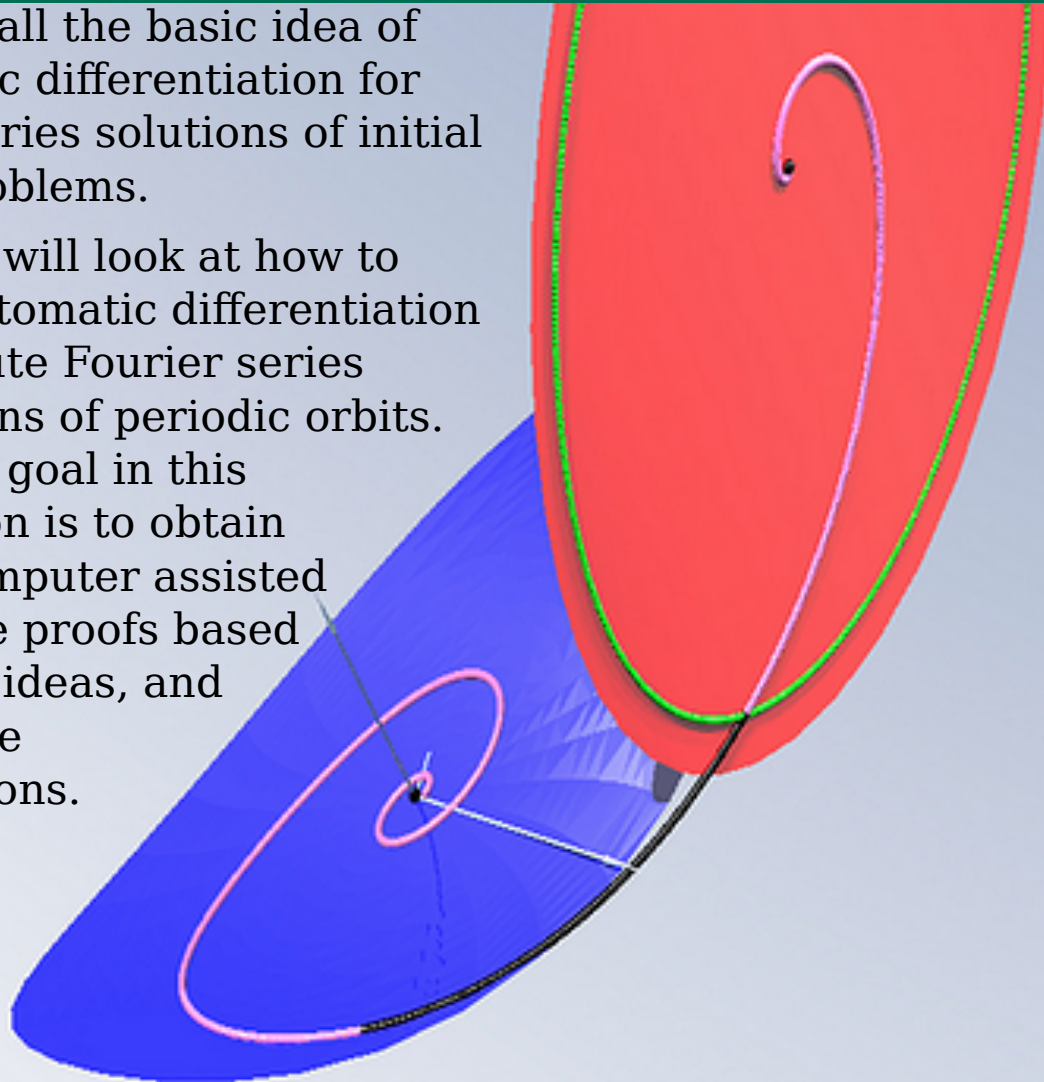
Jason Mireles James

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I will recall the basic idea of automatic differentiation for Taylor series solutions of initial value problems.

Then we will look at how to adapt automatic differentiation to compute Fourier series expansions of periodic orbits. My main goal in this discussion is to obtain some computer assisted existence proofs based on these ideas, and give some applications.

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Viernes **16** *Octubre*

13:00 hrs
Salón B3

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