



DIFFERENTIAL EQUATIONS, NUMERICAL ANALYSIS AND THEIR APPLICATIONS



INTRODUCTION

This research group has numerous publications and extensive experience in the field of numerical analysis. The 9 researches of the group are specialists in numerical flow simulation and hydraulic models. Within this innovative research line they have developed a software application (<http://www.damflow.org>) capable to recreate distinct geophysical flow phenomena. Thus, with help of this software they are able to study, e.g. the behaviours of tsunamis, river overflows as well as contamination discharges in a determined fluid, etc. (<http://anamat.cie.uma.es/animaciones>).

RESEARCH TOPICS

- Numerical analysis of equation systems of partial derivatives:
 - Element methods.
 - Finite volume methods.
- Numerical simulations of geophysical flows.
 - Shallow water models.
 - Sediment transport.
 - Submarine landslides. Tsunami generation.
 - Oceanographic applications.

SCIENTIFIC-TECHNICAL SERVICES

- Numerical method laboratory:
 - Parallel and vector scientific computation (Computer cluster).
 - Web development platform allowing the simulation of geophysical flow.
 - 3D visualization software.
- Advice on hydraulic models.

RESEARCH GROUP LEADER: CARLOS MARÍA PARÉS MADROÑAL
PAI CODE: FQM216

CONTACT

PHONE: 952 132 017 | FAX: 952 131 894

E-MAIL: pares@uma.es | WEB: <http://webdeptos.uma.es/anamat/edanya>

ADDRESS: Dpto. Análisis Matemático. Facultad de Ciencias. Campus de Teatinos, s/n. 29071- Málaga