

## ESAIM :Control, Optimization and the Calculus of Variations

This introductory article aims at summarizing the brief history of the Journal, at presenting its aims and scope and current format, and at encouraging potential subscribers to join.

**Brief History :** The Journal Series ESAIM (European Series in Applied and Industrial Mathematics) was launched in 1995 by the French society SMAI (Société de Mathématiques Appliquées et Industrielles) with the support of the Ministry of Education and Research of France (MENRT). At that time Jean-Pierre Puel was the president of SMAI and he played a pivotal role in this creation together with Jean C ea, who was also the founder of ESAIM :COCV.

Nowadays this series includes four journals : ESAIM : Mod elisation Math ematique et Analyse Num erique (ESAIM : M2AN), ESAIM : Control, Optimisation and Calculus of Variations (ESAIM : COCV), ESAIM : Probability and Statistics (ESAIM : PS) and ESAIM : Proceedings. The last three titles were created at the time of the series. The Journal ESAIM : M2AN was well established in the field of Applied Mathematics when it joined the series in 1999. The Society SMAI is responsible for all these titles and, in particular, selects and appoints their Editor-in-Chiefs (EiC) and Corresponding Editors (CE).

Soon after the Journal was created, Jean-Michel Coron became the first EiC, and he served in this capacity for two terms ending in 2002, for which the Journal is profoundly indebted. During his tenure, Jean-Michel Coron was assisted by Jacques Blum, Irene Fonseca, Jean-Pierre Quadrat and Enrique Zuazua as CEs.

The series ESAIM was initially intended as a vehicle to publish electronically and efficiently mathematical articles. With time its character has evolved, and nowadays the series has adopted a hybrid model that combines the electronic, real-time publication, with an early paper volume. The Publisher EDP (Editions de Physique) Sciences ([www.edpsciences.org](http://www.edpsciences.org)) is now in charge of these publications.

ESAIM : COCV has published to date over 160 articles and more than 5000 pages. Since its beginning the Journal has strive to attract high quality articles authored by top researchers in the areas targeted by the Journal, and it has been remarkably successful in this front. In 2002, and in addition to the ordinary yearly printed volume, ESAIM : COCV published a special volume dedicated to the memory of Jacques-Louis Lions, one of the pioneers

of contemporary Applied Mathematics. Jacques-Louis Lions deeply influenced the mathematical topics covered by Journal ESAIM : COCV, and in fact the first article that appeared in ESAIM :COCV was authored by him in collaboration with Enrique Zuazua. With this special volume ESAIM :COCV wished to express the gratitude of the mathematics community to Jacques-Louis Lions for his invaluable contributions to the discipline.

**Current Editors :**

Enrique Zuazua has been appointed as new EiC starting on January 1, 2003, and the current CEs are Hedy Attouch, Irene Fonseca, and Benedetto Piccoli. The Editorial Board has been restructured and it is now constituted by forty leading experts in the fields covered by the Journal :

A. Agrachev, G. Allaire, L. Ambrosio, J. Ball, C. Bardos, A. Bensoussan, F. Bethuel, G. Bouchitté, F. Bullo, G. Buttazzo, I. Capuzzo Dolcetta, D. Cioranescu, F. Clarke, R. Cominetti, B. Dacorogna, G. Dal Maso, L.C. Evans, E. Fernández-Cara, M. Fukushima, N. Fusco, J.-P. Gauthier, M. Gunzburger, O. Imanuvilov, D. Kinderlehrer, C. Le Bris, P.-L. Lions, J.E. Marsden, S.D. Micu, S. Müller, M. Overton, M. Pierre, J.-P. Puel, L. Qi, P. Rabinowitz, P. Rouchon, A. Shapiro, M. Teboulle, M. Vanninathan, J. Yong and Y.-X. Yuan

**Aims and Scope :**

ESAIM :COCV strives to publish electronically, rapidly and efficiently papers and surveys in the areas of Control, Optimization and Calculus of Variations.

Articles may be theoretical, computational, or both, and they will cover contemporary subjects with impact in forefront technology, biosciences, materials science, computer vision, continuum physics, decision sciences and other allied disciplines.

Targeted topics include :

- in control theory : modeling, optimal control, controllability, stabilization, control law design, hybrid control, robustness analysis, numerical and computational methods for control among others, for stochastic or deterministic, continuous or discrete control systems ;
- in optimization theory : linear, quadratic, nonlinear programming, large scale systems, stochastic or combinatorial optimization, interior point methods, numerical algorithms : convergence and complexity ;
- in the calculus of variations : minimization problems, existence and regularity properties of minimizers and critical points, variational methods for differential equations, homogenization, multiscale problems and geometric measure theory.

## Why and How to Subscribe :

*Consider joining the Journal ESAIM :COCV!*

To authors we promise a fast reviewing process. This is handled entirely electronically, and the EiC assigns each paper to a CE and an AE in order to better evaluate it. Long articles and survey papers are welcome. We are particularly interested in topics oriented towards applications and computational issues. To readers we provide top quality, well written and edited research articles. Finally, to the subscribers we offer real-time online access, at a very reasonable competitive price, and an elegant printed volume.

Those who might be interested in subscribing, submitting an article, or simply in learning more about the Journal, are kindly invited to visit the web page at

<http://www.edpsciences.org/journal/index.cfm?edpsname=cocv>

ESAIM :COCV papers are reviewed by most important mathematical databases, We recommend you to check your preferred ones to learn about what reviewers think of the articles published in ESAIM :COCV.

The subscription to the Journal (298 Euros per year) entitles to online access and downloading of all articles published so far to all members of the subscribing institution (identified by means of the IP number of class B) on the web address <http://www.edpsciences.org/cocv/>. In addition, subscribers receive yearly a printed volume of the articles published along the year. There is also the possibility of a reduced subscription for 198 Euros/year which includes online access and downloading but does not cover the printed volume.

Do not hesitate to get in touch with us by email with questions, comments or suggestions.

Madrid, March 2003

Enrique Zuazua

Editor in Chief of ESAIM : COCV

[enrique.zuazua@uam.es](mailto:enrique.zuazua@uam.es)