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Partial Differential Equations and Mathematical Physics

In Memory of Jean Leray

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Preface

This symposium on Partial Differential Equations and Mathematical Physics in Memory of Jean Leray was organized at Maison Franco-Japonaise in Tokyo on July 2–6, 2001.

The 17 invited research articles in this volume, all written by leading experts in their respective fields, are dedicated to the great French mathematician, Jean Leray. A wide range of topics with significant new results—detailed proofs—are presented in the areas of partial differential equations, complex analysis, and mathematical physics. Key subjects are treated from the mathematical physics viewpoint: nonlinear stability of an expanding universe, the compressible Euler equation, spin groups and the Leray–Maslov index. The Cauchy problem is linked to an intermediate case between effective hyperbolicity and the Levi condition, global Cauchy–Kowalewski theorem in some Gevrey classes, the analytic continuation of the solution, necessary conditions for hyperbolic systems, well posedness in the Gevrey class, uniformly diagonalizable systems and reduced dimension, and monodromy of ramified Cauchy problem. Additional articles examine results on local solvability for a system of partial differential operators, the hypoellipticity of second order operators, differential forms and Hodge theory on analytic spaces, subelliptic operators and sub-Riemannian geometry.

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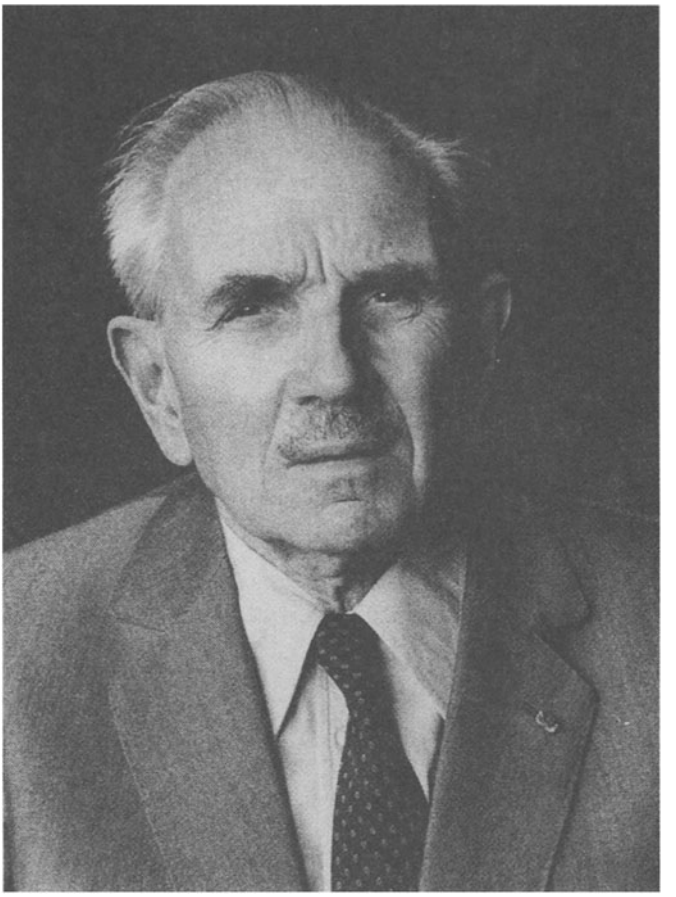
We also wish to thank all the invited speakers for their inspiring lectures and contributions to this volume.

Kunihiko Kajitani and Jean Vaillant
July 31, 2002



Jean Leray
1906–1998

Dedicated to the memory of Jean Leray

Partial Differential Equations and Mathematical Physics

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