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IN MEMORIAM JEAN LERAY (1906–1998)

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Jean Leray died at La Baule on November 10 1998, in this region of Bretagne where he was born, and where he had returned a few years ago. He was ninety-two since three days. With him we lose one of the most eminent mathematicians of our century, one of those who already belong to history. His mathematical work is astonishingly original, deep and diversified.

Born in Chantenay, near Nantes, on November 7 1906, the son of two teachers, a former student of the Ecole Normale Supérieure in Paris, Leray defends in 1933, at the Faculty of Science of Paris, a PhD thesis directed by Henri Villat [1]. It successfully deals with the global study of *nonlinear integral equations* and the stationary solutions of the *equations of hydrodynamics.* The corresponding evolution equations are masterly treated in two memoirs published in 1934 [2]. They introduce for the first time various fundamental concepts like those of *weak solutions,* called *turbulent solution* by Leray. Their contents is beautifully described by Leray himself, in his last publication [35]:

> The theoretical study of fluid motion with initial conditions leads thus in various cases to a same conclusion: the existence of at least one weak solution which is regular and unique near the initial time, and which exists for any further time. [. . .] In other words, in those cases: a fluid motion initially regular remains regular during some time interval; then he goes on indefinitely; but does it remain regular and uniquely determined? On still ignores the answer to this double question. It was asked, sixty