5.7 *M. Miranda,*
DE GIORGI'S SUMMER HOLIDAYS AND XIX HILBERT PROBLEM

Il testo è tratto da "Wolf Prize in Mathematics" (ed. S. S. Chern, F. Hirzebruch), vol. 1, Word Scientific (2000), 206.

Ennio De Giorgi used to spend two months, every year, to relax. In August he liked to rusticate in one Alpine village, where he could enjoy the company of colleagues and their families. In September he never missed a coming back home, to the Beaches of Salento, to stay with his family and old friends.

It was August '55, when hiking in the Dolomites, Guido Stampacchia told him about the XIX Hilbert Problem. And that Summer turned out to be a no–vacation time for Ennio. In the first week of October, at the IV Congresso della Unione Matematica Italiana, he announced his solution of the XIX Problem.

A few months later he wrote a short paper edited by the Accademia dei Lincei [1] containing some details about his proof.

A year later, ignoring the existence of De Giorgi's theorem, John F. Nash, Jr. decided to work at the regularity problem for solutions of elliptic and parabolic equations, see pp. 218–220 of "A Beautiful Mind" ed. by Sylvia Nasar (Simon and Schuster, 1998). In Spring '57, the complete proof of De Giorgi's Theorem was published by Accademia delle Scienze di Torino[2]. In Spring '58 Nash published his results in "Continuity of Solutions of Parabolic and Elliptic Equations", *Am. J. Math.,* 80.

This is a brief account of the famous De Giorgi–Nash Theorem.

De Giorgi's method, directly applied to solve the Hilbert Problem, is presented by Cristina Mosna in "Regularity of Lipschitz Minima", Rend. Semin. Mat. Univ. Padova, 104 (2000).

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[1] E. DE GIORGI, *Sull' analiticità delle estremali degli integrali mulipli,* 1956. Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur. (8) **20**, 438–441.

[2] E. DE GIORGI, *Sulla differenziabilità e l' analiticità delle estremali degli integrali mulipli regolari,* 1957. Mem. Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur. (3) **3**, 25–43.