

# THE MATHEMATICS OF ENNIO DE GIORGI

## SCUOLA NORMALE SUPERIORE

### OCTOBER 24-27, 2001

## PROGRAM

### October 24.

9.00 - 9.10. OPENING ADDRESS.

9.10 - 9.20. S.SETTIS, Direttore Scuola Normale Superiore

9.20 - 9.30. A.LEACI, Direttore Dipartimento di Matematica "Ennio De Giorgi"

9.30 - 11.00. M.MIRANDA: "Plateau's problem and the minimal surface equation"

11.00 - 11.20. coffee break

11.20 - 12.50. S.SPAGNOLO: "The contribution of De Giorgi to non-elliptic PDE's: non-uniqueness examples, Cauchy problem in Gevrey classes and surjectivity on the analytic functions"

Afternoon session.

15.00 - 15.55. F.MORGAN: "Area-minimizing surfaces in ambients with singularities"

16.00 - 16.55. B.FRANCHI: "Perimeter and rectifiability in step 2 Carnot groups"

16.55 - 17.15. coffee break

17.15 - 18.10. F.HONSELL: "Virtuous circles"

### October 25.

9.00 - 10.30. M.FORTI: "The Foundational Programme of Ennio De Giorgi"

10.30 - 10.45. coffee break

10.45 - 11.40. I.FONSECA: "Higher order variational problems"

11.45 - 12.40. G.BUTTAZZO: "Shape optimization and mass transportation theory"

Afternoon session.

15.00 - 15.55. H.BREZIS: "New questions and new results on Sobolev spaces"

16.00 - 16.55. G.ALBERTI: "Jacobians of  $\mathbf{S}^k$ -valued maps"

16.55 - 17.15. coffee break

17.15 - 18.10. G.BELLETTINI: "Some remarks on barriers for differential equations"

### October 26.

9.00 - 10.30. E.GIUSTI: "The contribution of De Giorgi to the regularity theory for elliptic PDE's"

10.30 - 10.45. coffee break

10.45 - 11.40. U.MOSCO: "On the metric roots of De Giorgi-Nash-Moser's theory"

11.45 - 12.40. S.MÜLLER: "Elliptic and parabolic systems with nowhere smooth solutions"

Afternoon session.

15.00 - 15.55. G.LONGO: "The foundation of Mathematics as interaction with other sciences, reflections relating to and departing from De Giorgi's foundational approach"

16.00 - 16.55. A.BRAIDES: "The construction of asymptotic theories by  $\Gamma$ -convergence"

16.55 - 17.15. coffee break

17.15 - 18.10. F.TREVES: "On the analiticity of solutions of linear PDE"

**October 27.**

9.00 - 10.30. G.DAL MASO: "The early developments of  $\Gamma$ -convergence"

10.30 - 10.45. coffee break

10.45 - 11.40. D.KINDERLEHRER: "A Markov chain paradigm for the brownian motor and its consequences"