

UNIVERSITÀ CATTOLICA DEL S. CUORE
Dipartimento di Matematica e Fisica “Niccolò Tartaglia”

12 hours with Mathematical Physics

On the Navier-Stokes initial boundary value problem:
a short review of the chief results



LEONARDO DA VINCI: STUDIES OF WATER PASSING OBSTACLES AND FALLING

Series of lectures

Paolo MAREMONTI, Seconda Università di Napoli

January 26th - 30th, 2015

Via dei Musei, 41 – 25121 BRESCIA (Italy)

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INFORMATION

The aim of the Course is to bring together people with different scientific backgrounds to learn and discuss an advanced subject in Mathematical Physics. The Course consists of 12 lectures of approximately 1 hour each; the style of the meetings is very informal.

Topics

- Spaces of Hydrodynamics.
- Existence and uniqueness of regular solutions: global (in time) existence in the special cases of 2-dimensional domains and 3-dimensional domains with small data.
- Weak solutions and partial regularity. Regularity and uniqueness by means of extra conditions (Sather-Serrin's theorem).
- Non decaying solutions: L^∞ -solutions.

Program

The lectures are organized as follows:

- Monday January 26th, 2015:
3pm-6pm (with floating ☕ break);
- Tuesday January 27th, 2015:
9am-12pm (with floating ☕ break);
2.30pm-5.30pm discussions and remarks;
8pm Social Dinner
- Wednesday January 28th, 2015:
9am-1pm (with floating ☕ break) question time; second order fluids
(by the Brescia Mathematical Physics research group);
- Thursday January 29th, 2015:
9am-12pm (with floating ☕ break);
2.30pm-5.30pm discussions and remarks;
- Friday January 30th, 2015:
9am-12pm (with floating ☕ break).

Application

Those who are interested are kindly requested to write an e-mail to

`alfredo.marzocchi@unicatt.it` and/or `alessandro.musesti@unicatt.it`,
in order to help us find an appropriate lecture room. No participation fee is required.

Accommodation

Participants should make their own arrangements for accommodation. We suggest

Centro Pastorale "Paolo VI"

Via Gezio Calini, 30 - 25121 BRESCIA

Tel. +39 030 3773511

<http://www.centropastoralepaolovi.it>

Arrival

To get to the department: from the railway station, underground line direction "Prealpino", get off at the next station "Vittoria" and walk approximately 5 min.

For information about bus lines, see also

<http://www.bresciamobilita.it/utenti/autobus>