Alberto Mancini (Montevarchi, AR – Italy - december 10 ,1970)
Università degli Studi di Firenze
Dipartimento di Matematica "U.Dini"
Viale Morgagni, 67a
50134 - Firenze
mancini@math.unifi.it

Current Work

From 1999 *System Administrator* at the Dept. of Mathematics "U.Dini" (Florence).
Main activities includes: planning, development and administration of the computational resources   of the Department; deployement and administration of network services and servers   (e.g. mail/web, Kerberos, AFS, etc ...)

Research activities

Coworker of Prof. A. Fasano and Prof. M. Primicerio for research in the field of "**Applied and Industrial Mathematics**".

Teaching

From 2005/2006 lecturer of   "*Computer Graphics*" within the course of "***Computational Geometry"*** (Prof. V. Ancona)

Firenze, October 19 - 2006

Alberto Mancini

Curriculum Studiorum

1990   (*July 21*)
Liceo *"B. Varchi"* - Montevarchi - Maturità classica .

1995   (December *15*)
Università degli Studi di Firenze, Dipartimento di Matematica "U.Dini"
Matser Degree in Mathematics - 110 / 110 e lode.
Thesis (in italian):
"Evoluzione di Profili di Sedimentazione nel Trasporto di Sospensioni Concentrate in Condotta" *Advisor* prof. A. Fasano.

Awarded with the ***"Hansjorg Wacker Memorial Prize (ECMI 96)".***

Joint work with **SNAMPROGETTI** *(Fano - Italy)*.

1996/   Università degli Studi di Firenze, Dipartimento di Matematica "U.Dini"
1997   Scholarship Federchimica (Federazione Nazionale dell'Industria Chimica) with title:
"Processo di cristallizzazione non isoterma di polipropilene in condizioni isobare"

1999   (Oc*tober 31*)
Università degli Studi di Milano, Dipartimento di Matematica "F.Enriques"
PhD in Computational Mathematics and Operational Research (MaCRO)
Thesis:
"Mathematical Investigation of Non-Isothermal, Isobaric Crystallization of Polypropylene" *Advisor* prof. R. Ricci.

Joint work with **Montell** (Ferrara - Italy)

Selected Publications

- Sedimentation and non newtonian fluid dynamics -

E. De Angelis, A. Fasano, A. Mancini, M. Primicerio, F. Rosso, *Relazione sull'attività svolta nell'ambito della collaborazione fra la Snamprogetti e l'Università di Firenze,* Dipartimento di Matematica "U.Dini", Università degli Studi di Firenze, **1995**.

A. Mancini, *Sedimentation in the Transport of CWS,* "Proc. of SIMAI 96**",** **1996**, pp. 148-150.

A. Mancini, *Evolution of Sedimentation Profiles in the Transport of Coal Water Slurries through a Pipeline,* "Progress in Industrial Mathematics at ECMI 96", eds. M. Brøns, M. Ph. Bendsøe, M. P. Sorensen, B.G. Teubner Stuttgart, **1997**, pp. 441-449.

E. De Angelis, A. Mancini, *A Model for the Evolution of Sedimentation Beds in the Dynamic of a Pipelined Non-Newtonian Fluid*, "Math. Comput. Modelling", Vol. 25, No. 7, **1997**, pp. 65-78.

- Crystallization of polymers -

A. Fasano, A. Mancini, *A Mathematical Model for the Analysis of Polymers P-V-T Diagrams*, "Proceedings of the Venice-2 Symposium on Applied and Industrial Mathematics" , R. Spiegler ed., Kluwer academic publishers, **2000**.

A. Fasano, A. Mancini, *Existence and Uniqieness of a Classical Solution for a Mathematical Model Describing the Isobaric Crystallization of a Polymer*, "Interfaces and Free Boundaries" , Vol 2., **2000**, pp. 1-19

A. Fasano, A. Mancini, S.Mazzullo, **Non Isothermal Crystallization of Polypropilen**e, "Complex Flows in Industrial Applications" , A. Fasano ed., Birkhäuser, pp. 149-189.

A. Mancini, *A Model for the Non Isothermal Crystallization of Polypropilene under Pressure*, "Progress in Industrial Mathematics at ECMI 98" , pp. 146-154.

A. Fasano, A. Mancini, *Isobaric Solidification Processes of molten Polymers*, "Proceedings of ICIAM99"

M. Ferrari, A. Mancini, S. Mazzullo, *A Modified Spencer-Gillmore equation of state (SGM) for Polypropylene during Crystallization under Isobaric Condition*, "XIII National Macromolecular Meeting" , Genova, **1997**.

– Polymerization -

A. Fasano, A. Mancini, R. Ricci, ***Solid core revisited,*** "Free boundary problems" (Trento, 2002), 139--149, Internat. Ser. Numer. Math., 147, Birkhäuser, Basel, **2004**.

A. Fasano, K. Kannan, A. Mancini, K.R. Rajagopal, ***Modelling Ziegler-Natta polymerization in high pressure reactors,*** in "Material substructures in complex bodies: from atomic level to continuum", Elsevier, **To Appear**

– Liquid Liquid Dispersions -
–

A. Fasano, A. Mancini, F. Rosso, ***A "close-up" view of breakage and scattering kernels for the dynamics of liquid dispersions: theory and numerical simulations***. Applied and industrial mathematics in Italy, 324--335, Ser. Adv. Math. Appl. Sci., 69, World Sci. Publ., Hackensack, NJ, **2005**.

A. Mancini, F. Rosso, ***A new model for the dynamics of dispersions in a batch reactor: numerical approach***. Meccanica 37 (**2002**), no. 3, 221--237.

A. Fasano, A. Mancini, F. Rosso ***Modeling the dynamics of liquid-liquid dispersions: recent developments***. Fourth Italian-Latin American Conference on Applied and Industrial Mathematics (Havana, 2001), 135--148, Inst. Cybern. Math. Phys., Havana, **2001.**

- Food Industry -

A. Fasano, A.Mancini, ***A mathematical model for a class of frying processes***. **To appear**.

- Biomathematics -

A. Fasano, A. Mancini, M. Primicerio M., ***Equilibrium of two populations subject to chemotaxis,*** Math. Models Methods Appl. Sci. 14 (**2004**), no. 4, 503--533.

- misc -

A. Clemens, L. Lalli, A. Mancini, S. Overbeek, I. Ptitchkina, *The Distribution Loading Problem,* **"Proceedings of the 8th ECMI modelling week",** 1995, pp. 10.1-10.16.

Selected Meetings/Schools

1994   CASPUR Università degli Studi di Roma,
"First European PVM Users Group Meeting (ePVM)"

1995   Stratclyde University (Glasgow, Scotland),
"8th ECMI Modelling Week"

1996   Salice Terme (PV),
"SIMAI 96 (III Congresso Nazionale della Società Italiana di Matematica Applicata ed Industriale)"

1996   Technical University of Denmark Lyngby/Copenhagen,
"ECMI 96 (9th Conference of the European Consortium for Mathematics in Industry)"

1996   International Centre for Theoretical Physics (ICTP), Trieste,
"School on Numerical Simulation of Partial Differential Equations: Methods, Algorithms, Applications"

1996/
1997   Università degli Studi di Pisa – Facoltà di Ingegneria,
"Corso di perfezionamento in fluidodinamica computazionale ed equazioni alle derivate parziali".

1997   Centro Internazionale Matematico Estivo (C.I.M.E.), Cetraro,
"Advanced Numerical Approximation of Nonlinear Hyperbolic Equations"

1997   Associazione Amici della Scuola Normale Superiore, Pisa,
"Parallel Computing in Applied Fluid Mechanics"

1998   von Karman Institute for Fluid Dynamics, Rhode-Saint-Genèse – Belgique
"Advances in Turbolence Modelling"

1998   Goteborg University, Goteborg – Sweden
"ECMI 98"

1998   CIRM Centre International de Rencontres Matematiques, Marseille-Luniny – France
"Singularities and Interfaces in Non-Linear PDE's"

1998   CIME Centro Internazionale Matematico Estivo, Cetraro – Italia
"Filtration in Porous Media and Industrial Applications"

1999   Polymer Days – A TMR workshop, Milano – Italia

1999   FLUID99 - Istituto Superior Tecnico – Lisbona - Portogallo

"*Mathematical Modelling in Polymer Science*"

1999 **Computational Mathematics Driven by Industrial Applications** – CIME Centro Internazionale Matematico Estivo, Martina Franca – Italia

1999 ICIAM99, the Fourth **International Congress on Industrial and Applied Mathematics** - Edimburgh – Scotland

2000 11th ECMI Conference – Palermo – Italy

2000 Non-Newtonian and Viscoelastic Fluid Flows: Mathematical Theory, Modelling and Applications – Scuola Normale Superiore – Pisa

2001 *ISAM2001 – Siena - Italy*

2004 *7th SIMAI Conference – Venezia – Italy*

2004 *13th ECMI Conference – Edimburgh – Scotland*

2006 *8th SIMAI Conference – Ragusa – Italy*