

SCIENTIFIC COMMUNICATION

CHAIRMANSHIPS

Int. Conference: **New Trends in water Engineering for safety and life: eco-compatible solution for aquatic environments**, Capri, Luglio 2000.

Int. Summer School (EC contract): **Turbulence: Theoretical Concepts and Industrial Applications**, Como. Sept. 1998.

Bilateral Italian – Israeli Forum **Water: environmental and management issues**, Sede Boquer (Israel), Marzo 2004.

Int. Forum FAO-LNCV **Food Security under Water Scarcity in the Middle East: Problems and Solutions**, Villa Olmo, Como, Novembre 2004

PUBLICATIONS

BOOKS/PROCEEDINGS

1. U. Maione, B. Majone Lehto, R. Monti (eds). 2000. **New Trends in water and Environmental Eng. for Safety and Life: eco-compatible solutions for Aquatic Environment**, AABalkema Int. Sci. Ed.
2. R. Monti, A. Soldati. 2001. **Turbulence: Structures, Modulation and Control**. Springer, c2001, 316 p. CNY627.43 <http://www.springer.com/east/home/generic/search/results?SGWID=5-40109-22-2295436-0>
3. U. Maione, R. Monti, V. Riboni, G. Principato, 2002. **Linee guida per la progettazione delle opere di difesa idrogeologica nel parco dell'Aspromonte**. Bios ed.
4. G. Becciu, U. Maione, B. Majone Lehto, R. Monti, M. Paoletti, S. Paoletti, U. Sanfilippo. 2002. **New Trends in water and Environmental Eng. for Safety and Life: eco-compatible solutions for Aquatic Environment**. CSDU ed.
5. A. Hamdy, R. Monti 2005. Proceedings of the LNCV Int. Forum "**Food Security under Water Scarcity in the Middle East: Problems and Solutions. Problems and Solutions**". Options Mediterraneennes, Serie A, N. 65, ISSN 1016-1228, ISBN 2-85352-316-0, ed. CIHEAM. <http://www.ciheam.org/pdf/catalogue2006.pdf>

ARTICLES

6. R. Monti, 2004. **L'Italia in Medioriente per proporre una corretta gestione dell'acqua** (Italy in the Middle East to suggest methods for a correct management of water resources). Il Giornale dell'Ingegnere n. 7/2004. http://www.giornaleingegnere.it/num_07-2004/articolo.htm
7. R. Monti, 2006. **L'acqua: uno strumento di cooperazione** (water: an instrument of cooperation). L'acqua n.1/2006.

SCIENTIFIC PAPERS

8. -Cancelli A., Monti R., Rimoldi P., 1990. "**Comparative study of geosynthetics for erosion control**." 4th Int. Conf. on Geotextiles, Geomembranes and Related Products, The Hague, The Netherlands, June 1990. Selected paper for publication on ACER Journal, 1/1993, pg. 30, 31.
9. -Cancelli A., Monti R., Rimoldi P., 1990: "**Controllo dell'erosione. Risultati sperimentali. (Erosion Control. Experimental Results)**". Presented at 4th Naz. Conf. Geotechnics and Geosynthetics, Bologna (Italy), October 26, 1990 and published on L'Ingegnere, n.9-12/1990 (in Italian).
10. -Cazzuffi D., Monti R., Rimoldi P., 1991. "**Geosynthetics subjected to different conditions of rain and runoff in erosion control application: a laboratory investigation**". Int. Congr. IECA (Inter. Erosion Control Association), Orlando, Florida, U.S., February 1991.
11. -Monti R., 1990: "**Erosione Pellicolare ed uso dei Geosintetici. (Sheet erosion and the use of geosynthetics)**". Costruzioni n.5, ed. la Fiaccola, Milano (Italy). (in Italian)
12. -Monti R., Monti F., Rimoldi P., 1991: "**A method of experimental research based on energetic explanation of the rain erosion phenomenon**". Prefettura of Milano, February 1992.
13. -Monti R., Orsi E., 1991: "**Esperienze sul funzionamento di un misuratore magnetico di portate a superficie libera (Experimental survey on the reliability of magnetic flow meters in open channel flows)**". III Nat. Conf. on Urban Drainage System, Ancona (Italy), February 1992. (in Italian)

14. -D. Cazzuffi, F. Monferino, R. Monti, P. Rimoldi, 1994: "**Experimental evaluation of the erosion on bare and geosynthetically protected slopes**". Selected paper, Conserving Soil Resources, ed. R.J. Rickson, Univ. Press Cambridge (UK).
15. R. Monti, 1994. "**Indagine sperimentale sulle caratteristiche fluidodinamiche del campo di moto intorno ad una pila circolare (Experimental Investigation on the flow field characteristics around a bridge pier)**". PhD. Thesis, Politecnico di Milano, Milano (in Italian).
16. -Franzetti S., Monti R., De Ponte S., Cerchiarì M., Gibertini G., 1994: "**Vortical flow and skin friction in a surface-body intersection. An Aeronautical-Hydraulic cooperation**". II Int. Conf. on Fluid Mechanics, I.C.E.F.M. 1994, July 4-8, Torino.
17. -De Ponte S., Monti R., 1995: "**Flow field around a circular obstacle emerging from an erosion scour hole**". Lectures Notes in Physics n.462, Springer Verlag ed.
18. -Monti R., 1995: "**Turbulence and Chaos. Classical Theories and New Developments**". Technical Notes Brescia Univ. n.3. (in Italian)
19. -Monti R., 1996: "**La Circolazione e' un parametro significativo nei fenomeni di erosione 3D? (Is Circulation a meaningful parameter in 3D erosion phenomena?)**". XXV Congresso Naz. Di Idraulica e Costruzioni Idrauliche, Sept. 1996, Torino (Italy). (in Italian)
20. -Monti R., 1996: "**Coerenza, Intermittenza e Resistenza nei moti Turbolenti. (Coherence, Intermittency and Resistance in Turbulent Flows)**". XXV Congresso Naz. Di Idraulica e Costruzioni Idrauliche, Sept. 1996, Torino (Italy). (in Italian)
21. -Monti R., 1996: "**Flow field around a bridge pier**". Accepted paper at Third Int. Symposium on Experimental and Computational Aerothermodynamics of Internal Flows, Sept. 1-6, 1996, Beijing, China.
22. Levich E., Malomed B., Monti R., Shtilman L., 1995 "**Anomalous Dynamical Chaos in a System of Truncated Euler Equations**" Int. Workshop "From Finite to Infinite Dimensional Dynamical Systems: PDEs and Low Order Models". Newton Institute for Mathematical Sciences, Dec. 1995, Cambridge (UK).
23. -Levich E., Malomed B., Monti R., Shtilman L., D. Tsibelman 1996: "**Dynamical Chaos in a Minimum System of Truncated Euler Equations**". Physical Review E, vol. 56, n.4, October 1997.
24. -R.Monti, S. De Ponte 1997: "**Topological Analysis applied to an horseshoe vortex**". Int. Conf. On Stability and Instabilities of Stratified and/or Rotating flows, Russian Acc. Of Science, Institute for Problems in Mechanics, Moscow, Russia
25. -de los Reyes A., Hontanon E., R. Monti, J.A. Capitao, 1997: "**Aerosol Resuspension in Turbulent Flows**". Abstract ICMF98, June 1998, Lyon.
26. -R. Monti, G. Passoni, I. Wertgeim 1998: "**3D Parallel simulation of turbulent channel flow**". Winter School on Continuous Mechanics, RAS, Nat. Com. for Theor. and App. Mech., Inst. Cont. Mech., Perm (RU).
27. - J.A. Capitao, A. De los Reyes, R. Monti 1999, "**Data Analysis**", OECD-OCDE, European Commission Final Comparison Report EUR 18708 EN, NEA/CSNI/R(99)4, "ISP 40-Aerosol Deposition and Resuspension" ed. by A. de Los Reyes Castelo. J.A. Capitaio, G. De Santi. 1999.
28. -R. Monti 1999: "**Drag reduction in a turbulent boundary layer**". EUR 18966 EN, European Commission, JRC.
29. -R. Monti, S. De Ponte 1999: "**Experiments on Drag Reduction in a Turbulent Boundary Layer**", accepted abstract, Conference UIT, Cernobbio (IT), June 2000.
30. U. Maione, R. Monti, R. Romiti, 1999: "**Ricerca Sperimentale sulla Resistenza in Alvei Vegetati. (Experimental Investigation on Resistance in Vegetated Channel)**". AIPIN Congr., Trieste, Dec. 1999 (in Italian).
31. R. Monti, S. De Ponte, E. Levich, 2000: "**Effects on the resistance and on the separation of V shapes passive manipulators in a Turbulent Boundary Layer**", European Drag Reduction Conference, 20-21 June 2000, Potsdam (proceedings in press).
32. A. Abba', G. Passoni, R. Monti, 1999: "**Statistical properties of the velocity field in a turbulent channel flow**", abstract submitted to European Turbulence Conference ETC8, Barcellona, June 2000.
33. R. Monti, 1999: "**Esperimenti sulla Riduzione delle Resistenze in uno Strato Limite Turbolento, (Experiments on Drag Reduction in a Turbulent Boundary Layer)**", accepted abstract, Idra2000, XXVII Congr. Naz. Idraulica e Costruzioni Idrauliche, Genova (Italy), Sept. 2000 (in Italian).
34. U. Maione, R. Monti, R. Romiti, 1999: "**Resistenze Idrauliche in Alvei Vegetati. Un Indagine di Campagna (Hydraulic Resistance in Vegetated Channels. A Campaign Investigation)**", accepted abstract, Idra2000, XXVII Congr. Naz. Idraulica e Costruzioni Idrauliche, Genova (Italy), Sept. 2000 (in Italian).
35. U. Maione, R. Monti, R. Romiti, 2000: "**Hydraulic Drag in Vegetated Channels. A Campaign Investigation**". Int. Conf. New Trends in water and Environmental Eng. for Safety and Life: eco-compatible solutions for Aquatic Environment, Capri 3-7 July, 2000, Balkema eds..

TECHNICAL REPORTS

36. R. Monti, 1991. "**Le discariche (Landfills)**". Didactic text for "Environmental Expert technicians", Sept. 1990, Sept. 1991, Sept. 1992.
37. R. Monti, 1991. "**By-pass Gallery of Bitto di Gerola stream**". Final report on the tests performed on a 1:50 physical model c/o Hydraulic Institute of Politecnico di Milano, Milano (in Italian)..
38. R. Monti, A. Pereira, 1992. "**Inertization Methodologies for ENEL toxic and nuclear waste**". CISM Report, sept. 1992 (in Italian).
39. R. Monti, A. Pereira, 1993. "**Analysis of possible re-uses of fly ashes, zeolites and desulphorated gypsum**". Report for CISM, feb.1993
40. -J. A. Capitaio, R.Monti 1997: "**Thermo-hydraulic boundary conditions for International Standard Problem ISP-40, part A & B**", JRC-EC, CTS Technical Notes.

41. -R.Monti 1996, 1997: **"STORM Results Analysis"**. contract n. 11761, n.1 Nov. 1996, n.2 May 1997, n.3 Nov. 1997. JRC-EC Internal Reports.
42. J. A. Capitao, A. de Los Reyes, R. Monti, 1996. **"Data Analysis", STORM test SD04, Deposition of SnO2 in partially insulated pipes with N2 as carrier gas**. EC-JRC Technical Notes. N. I.96.183. Compiled by A. Krasenbrink, R. Hummel, J.A. Capitao.
43. J. A. Capitao, A. de Los Reyes, R. Monti, 1996. **"Data Analysis", STORM test SD05, Deposition of SnO2 in completely insulated pipes with Steam as carrier gas**. EC-JRC Technical Notes. N. I.96.184. Compiled by A. Krasenbrink, R. Hummel, J.A. Capitao.
44. . A. Capitao, A. de Los Reyes, R. Monti, 1997. **"Data Analysis", STORM test SD06, Deposition and Resuspension of SnO2 in partially insulated pipes with N2 as carrier gas**. EC-JRC Technical Notes. N. I.97.30. Compiled by A. Krasenbrink, R. Hummel, J.A. Capitao
45. A. Capitao, A. de Los Reyes, R. Monti, 1996. **"Data Analysis", STORM test SD07, Deposition of SnO2 in partially insulated pipes with Steam as carrier gas**. EC-JRC Technical Notes. N. I.96.185. Compiled by A. Krasenbrink, R. Hummel, J.A. Capitao
46. - J. A. Capitao, A. de Los Reyes C., R. Monti, 1997. **"Data Analysis", STORM test SD08, Deposition of SnO2 in partially insulated pipes with N2 as carrier gas**. EC-JRC Technical Notes. N. I.97.203. Compiled by P. Dilara, A. Krasenbrink, R. Hummel, J.A. Capitao.
47. - J. A. Capitao, A. de Los Reyes C., R. Monti, 1998. **"Data Analysis", STORM Test SR11-ISP 40, Deposition of SnO2 in partially insulated pipes with steam and resuspension of SnO2 from partially insulated pipes with N2**. EC-JRC Technical Note no. I.98.123 . Compiled by P. Dilara, A. Krasenbrink, R. Hummel.
48. J. A. Capitao, A. de Los Reyes C., R. Monti, 1998. **"Data Analysis", STORM Test SR09-ISP 40, Deposition of SnO2 in partially insulated pipes with steam and resuspension of SnO2 from partially insulated pipes with N2**. EC-JRC Technical Note no. I.98.24 . Compiled by P. Dilara, A. Krasenbrink, R. Hummel, J.A. Capitao.
49. R. Monti, 1997. **Post tests analysis**. II Meeting of the STORM Scientific Committee, JRC Ispra (Italy), January 1997.
50. R. Monti, 1998. **ISP-40 Calculation with Sophaeros** . Presented at the 2nd ISP-40 Workshop. JRC Ispra (Italy), March 1998.
51. R. Monti, J.A. Capitao, 1998. **ISP-40 Open Calculations with Sophaeros** . Presented at the 3rd ISP-40 Workshop. JRC Ispra (Italy), July 1998.
52. G. Passoni, R. Monti, A. de Los Reyes, 1998. **Detailed Investigations in the vicinity of solid walls using direct numerical simulation**. CAESAR/STORM Meeting, JRC-EC Ispra, May 1998.
53. G. Passoni, R. Monti, A. de Los Reyes, 1999. **Detail Investigation of turbulent flow field in the immediate vicinity of solid walls**. Final STORM Project Meeting, JRC-EC Ispra, 25 May 1999.

MASTER THESIS's SUPERVISOR

- 1992, **Erosione intorno alle pile di ponte (Scour erosion around bridge piers)**. Politecnico di Milano, Fac. of Engineering
- 1993. **Erosione del suolo su pendii protetti con geosintetici (Soil erosion on protected slopes)**. Politecnico di Milano, Fac. of Engineering
- 1999. **Studi Sperimentali su Manipolatori di Turbolenza (Experimental investigation on Turbulence Manipulators)**. Politecnico di Milano, Fac. of Engineering.
- 1999. **Ricerca sperimentale sulla Resistenza al Moto in Alvei Vegetati (Experimental Survey on the Drag in Vegetated Channels)**. Politecnico di Milano, Fac. of Engineering.
- 1999. **Manipolatori di Turbolenza in Corrente Decelerante (Turbulence Manipulators in Decelerated Flows)**. Politecnico di Milano, Fac. of Engineering.
- 2006. **Israele e l'acqua: dall'imperativo ideologico alla necessità vitale. Fatti e prospettive dello stato di Israele moderno (Israel and water: from the ideological imperative to vital necessity: Facts and perspectives of a modern Israel)**. Università degli Studi di Milano, Fac. Scienze Politiche.

INVITED LECTURES

- Anomalous Dynamical Chaos in a System of Truncated Euler Equations.

Int. Work. "From Finite to Infinite Dimensional Dynamical Systems: PDEs and Low Order Models". Newton Institute for Mathematical Sciences, Cambridge (UK). Dec. 1995
 In honour of Prof. Prigogine (laureate Nobel in Chemistry), JRC-European Community ISPRA Nov. 1996.

- Turbulence and Chaos. Classical Theories and New Developments

Universita' di Brescia, Brescia Nov. 3, 1995.
 JRC., European Community, Ispra Dec.2, 1995
 ENEL-CRIS, Milano June 4, 1996.

- Dynamical Chaos in a Minimum System of Truncated Euler Equations

IUTAM Symp. on Simulation and Identification of Organized Structures in Flows, Lyngby, Denmark, 25-29 May 1997.

- **Experiments on drag reduction in a turbulent boundary layer.**
Universita' di Trieste, Trieste 18 May 1999.
Advanced School Turbulence Modulation and Control, Invited lecture in the framework of the Workshop: Application and Developments in Turbulent Flows, Udine, 23-24 September 1999.
- **Topological analysis of flow visualization**
Dip. Ing. Aeronautica, Politecnico di Milano, Milano 9 December 1999.
- **Origine delle resistenze idrauliche (Origin of the Hydraulic Drag)**
Advanced course on River Engineering, Politecnico di Milano, Permanent Educational Programme, Miano 4-9 October 1998 (in Italian).
- **Resistenze Idrauliche in canali vegetati (Hydraulic Resistance in Vegetated Channels)**
 - Advanced course on Bio-engineering Techniques in River Protection, Politecnico di Milano, Permanent Educational Programme, Milano 2-5 October 1999 (in Italian).
- **Fondamenti di Idraulica Fluviale (Fundaments of River Hydraulic)**
Lombardia Region, IREF Milano, 15-19 Nov., 1999.
- **Horseshoe vortex evolution around a bridge pier**
EPFL-LRH, ERCOFTAC programme, Dec. 19, 2000
- **Methods of soil erosion control**
EPFL-LRH, ERCOFTAC programme, Dec. 18, 2000
- **Il problema della gestione dell'Acqua. Il caso Israeliano (To manage water resources. The case of Israel)**
Trento University, Fac. Of Engineering, Trento 8 march 2004
- **Il Medio Oriente: conflitti di grande area per il controllo della "risorsa prima" del mondo (Middle East: conflicts for the control of the "vital resource").**
3° cycle of conferences "Deepening on Globalization", Vicenza province council, Vicenza 24 march, 2004.

ORGANIZED EVENTS

- Seminar: **Principles and Perspectives of Turbulence Management**, E. Levich (ORLEV-IL), JRC-EC Ispra, Ottobre 30, 1996.
- Seminar: **Geometrical and Topological Aspects of Integrable Vortex Dynamics**, Ricca (Univ. College London, UK), JRC-EC Ispra, Maggio 29, 1997.
- Seminar: **Drag Reduction**, P. Orlandi (Roma Univ.), JRC-EC Ispra, Ottobre 1997.
- Seminar: **Genesis and Control of Coherent Structures in near wall Turbulence**, F. Hussain (Huston Univ., USA), JRC-EC Ispra, Aprile 1997.
- International Summer School: **"Turbulence: theoretical concepts and industrial applications"**, Como, 5-12 Settembre 1998.
Scientific Summer School financed by the European Commission, organized under the auspices of Centro di Cultura Scientifica A. Volta, Terr@A Centro Studi Idraulici per l'Ambiente, Joint Research Centre Ispra, with the participation of ENEL, Constellation Group GmbH, Consejo de Seguridad Nuclear.
<http://www.mi.infn.it/~landnet/TTCIA.html>
- International Conference: **"New trends in water and environmental engineering for safety and life. Eco compatible solution for aquatic environments"**. Napoli, 3-7 Luglio 2000.
International Conference promoted by Terr@A, All, Uni. Napoli Federico II, Sec. Uni. Napoli, under the auspices of UNESCO International Hydrological Programme, IAHR, IGS e CNR GNDCI.
- International Forum **"Water security in the first millenium. Mediterranean Countries towards a regional vision"**. Villa Olmo 12-15 Apr. 1999, Como. LNVC, UNESCO (Science for Peace e Int. Hydrol. Progr.), Ministero degli Affari Esteri, ENEA, ACSM Como, Fondazione Lombardia per l'Ambiente, SoPra Protezioni Ambientali, Regione Lombardia, Comune di Como, JRC CE, Terr@A, Mediterranean Water Network, IME, Water Services of Malta, Italian Inst. of Culture of Malta, Istituto di Idrobiologia di Pellanza, FFU.
- National Congress: **"Soluzioni innovative per la manutenzione di fiumi con forte trasporto solido"**, Capri, 10-11 Giugno 1999. Terr@A, Associazione Idrotecnica Italiana con il supporto di: Dip. Min. della Protezione Civile, Comm. Naz. per la Difesa dalle Catastrofi Idrogeologiche, Politecnico di Milano, Universita' della Calabria, Universita' degli Studi di Bologna, Universita' di Trento, Regione Campania, Autorita' di Bacino del Liri-Garigliano Volturno, Industrie Tenax srl, Officine Maccaferri spa, Italdreni spa, ENI-Aquater.

- Internation Conference: **“New trends in water and environmental engineering for safety and life. Eco-compatible solution for aquatic environments”**. Napoli, 3-7 Luglio 2000. Int. Congress promoted by Terr@A, All, Uni. Napoli Federico II, Sec. Uni. Napoli, con gli auspici di UNESCO International Hydrological Programme, IAHR, IGS e CNR GNDCI.
- Bilateral Forum **“Water: Environmental and Management Aspects”**, Sede Boquer, March 2004. Organized by the It. Embassy in Tel Aviv and Ben Gurion Uni.,
http://www.ambberlino.esteri.it/Ambasciata_TelAviv/Menu/l_rapporti_bilaterali/Cooperazione+scientifica/Eventi/
- Int. Forum FAO-LNCV **“Food Security under Water Scarcity in the Middle East: Problems and Solutions”**, Villa Olmo, Como, Novembre 2004.
http://giornateperlacooperazione.it/docs/como24_27nov.shtml
- Nat. Forum Hydroaid **“Vulnerabilita’ ambientale, monitoraggio, governance dei sistemi di prevenzione dei rischi nel settore idrico”**, Torino, 6 december 2005.