



Curriculum Vitae of De Wrachien Daniele

Photo



Education

Master in Geology , State University of Milan Ph. D. in Advanced Engineering
Geology, State University of Milan

Professional experiences

Full Professor of Agricultural Hydraulics
Associate Professor of Agricultural Hydraulics (1983-86)
Professor of Geopedology (1970-1983)
Director Institute of Agricultural Hydraulics (2000-2006);
Director Computer Centre of the Faculty of Agriculture,(1992-95);
Tutor of many MPhil and PhD students of the Faculty of Agriculture;
External Examiner to MPhil and PhD students of the Politecnico Milan ,State University
of Palermo and State University of Basilicata;
Honours and Awards
-Award for Truthful Support and Help in Organizing and Improving Scientific Level of the
Symposia "Actual Tasks on Agricultural Engineering", Croatian Agricultural Engineering
Society, Opatija ,Croatia, February 2006 ;
-Award in Recognition of Services to the European Society of Agricultural Engineers,
Bonn ,Germany ,September 2006 ;
-Award for outstanding contribution to Engineering Sciences ,Wessex Institute of
Technology ,The New Forest ,UK, June 2008 ;
-Award for the Best Performing Working Body ,International Commission on Irrigation
and Drainage, Lahore ,Pakistan ,October 2008.

Over 150 scientific publications: papers, key-note lectures, books and technical reports.
Creative works:

-Co-author "Land Reclamation and Conservation", CIGR Handbook of Agricultural



Engineering, 1999;

-Author "Land Use Planning: A Key to Sustainable Agriculture", FAO Handbook of Conservation Agriculture, 2003.

-Co-organizer and Key-note Speaker: over sixty International Conferences, Congresses, Symposia, Workshops in Africa, America, Asia and Europe ,among which is worth mentioning:

- XII CIGR World Congress/AgEng'94 International Conference organised by CIGR and EurAgEng, 29 August-1 September 1994, Milan, Italy

- International Workshop Irrigation Scheduling: From Theory to Practice ,organised by FAO and ICID and EurAgEng , 12-13 September 1995, Rome, Italy

- Conference Operation Management and Maintenance of Large Irrigation Networks ,organised by AIIA (Italian Association of Agricultural Engineering) and EurAgEng , 5-7 June 1996, Novara, Italy

- AgEng'96 Madrid International Conference, organised by EurAgEng, 22-25 September 1995, Madrid, Spain

- World Water Day '97 ,organised by ITAL-ICID and EurAgEng ,21 September 1997, Rome, Italy

- International Conference Sustainable Irrigation in Areas of Water Scarcity and Drought ,organised by the ICID W.G. on Sustainable Crops and Water Use ,CIGR and EurAgEng ,11-12 September 1997, Oxford, U.K.

- International Conference Water Management, Salinity and Pollution Control towards Sustainable Irrigation in the Mediterranean Region, organised by CIHEAM ,CIGR and EurAgEng ,22-26 September 1997, Valenzano, Italy

- XIII CIGR World Congress ,organised by CIGR and EurAgEng ,2-6 February 1998, Rabat, Morocco

- World Water Day'98 ,organised by ITAL-ICID and EurAgEng ,23 March 1998, Rome, Italy

- International Workshop Groundwater Management: Guidelines for Sustainable Identification, Control and Reclamation Strategies organised by IRIS (Italian Association of Ground water Engineering) , IAHR and EurAgEng ,16 April 1998, Rome, Italy

- International Symposium Experimental Data and Validation of Groundwater Mathematical Models for Reclamation of Polluted Sites ,organised by IRIS , IAHR, and EurAgEng ,6-10 July 1998, Cosenza, Italy

- International Workshop Sustainable Tillage Systems, organised by CIGR and EurAgEng, 8-10 July 1998, Auburn, Alabama (USA)

- International Workshop The Use of Saline and Brackish Water in Irrigation: Implication to the Management of Irrigation, Drainage and Crops, organised by the ICID WG on Sustainable Crops and Water Use ,CIGR and EurAgEng ,23-24 July 1998, Bali, Indonesia

- AgEng'98 Oslo International Conference, organised by EurAgEng 24-27 August 1998, Oslo, Norway

- Conference Irrigation and Research: Progress in the Use of Water Resources, organised by GRUSI (Italian Group of Research on Irrigation) and EurAgEng ,1-2



October 1998, Bari, Italy

- International Conference Subsoil Compaction and Soil Dynamics: Processes and Environmental Consequences ,organised by IUSS and EurAgEng ,24-26 March 1999, Kiel, Germany
- 2nd Inter-Regional Conference Emerging Technology for Sustainable Land Use and Water Management ,organised by CIGR, EurAgEng and ICID ,1-3 September 1999, Lausanne, Switzerland
- 17th ICID International Congress ,organised by ICID ,11-19 September 1999, Granada, Spain
- International Workshop Modelling of Transport Processes in Soils organized by EurAgEng ,24-26 November 1999, Leuven, Belgium
- 8th International Workshop on Drainage ,organised by ICID, CIGR and EurAgEng ,31 January-4 February 2000, New Delhi, India
- 3rd Inter-Regional Conference Water Resources Management in the 21st Century, organised by ICID European Regional W.G ,CIGR and EurAgEng., 1-3 June 2000, Budapest, Hungary
- International Workshop on Control of Adverse Impacts of Fertilizers and Agrochemicals ,organized by ICID,22-27 October 2000,Cape Town ,South Africa
- 29th International Symposium Actual Tasks on Agricultural Engineering, organised by the Croatian Agricultural Engineering Society, CIGR, EurAgEng and AAAE,6-9 February 2001,Opatija,Croatia
- 19th European Regional Conference Sustainable Use of Land and Water ,organised by the Czech ICID Committee, CIGR and EurAgEng,4-8 June 2001,Brno,Czech Republic
- International Conference Sustainable Land Management: Environmental Protection, organised by IUSS,CIGR and EurAgEng,2-7 July 2001,Florence,Italy
- International Workshop on Wastewater Reuse Management ,organized by ICID ,The World Bank,EurAgEng,NOWRA,19-20 September ,Seul,Korea
- International Conference Water and Irrigation Development, organised by Lombardia Region, ANBI, ICID and EurAgEng,25-27 September 2001,Cremona,Italy
- 1st World Congress Conservation Agriculture ,organised, by FAO,ECAF (European Conservation Agriculture Federation) and EurAgEng,1-5 October 2001,Madrid, Spain
- 30th International Symposium Actual Tasks on Agricultural Engineering ,organised by the Croatian Agricultural Engineering Society, CIGR, EurAgEng and AAAE,12-15 March 2002,Opatija, Croatia
- International Conference Drought Mitigation and Prevention of Land Desertification ,organised by the ICID Slovenian National Committee, CIGR and EurAgEng ,21-25 April 2002,Bled, Slovenia
- International Workshop Crop Water Management for Food Production Under Limited Water Supplies ,organised by the ICID W.G. on Sustainable Use of Natural Resources for Crop Production., and EurAgEng ,21-28 July 2002, Montreal, Canada
- 31st International Symposium Actual Tasks on Agricultural Engineering organised by the Croatian Agricultural Engineering Society,CIGR, EurAgEng and AAAE , 24-28 February, 2003, Opatija, Croatia.



- 3rd International Workshop Research on Irrigation and Drainage organised by the Macedonian National ICID Committee and EurAgEng, 19 March 2003, Skopje, Macedonia.
 - International Conference. Land Reclamation and Water Resources Development, organised by Lombardia Region, ANBI, ICID, CIGR and EurAgEng, 27-29 May 2003, Mantua, Italy
 - 6th Inter-Regional Conference on Environment-Water Land and Water Use Planning and Management, organised by the University of Castilla La Mancha, CIGR and EurAgEng, 3-5 September 2003, Albacete, Spain
 - 9th International Drainage Workshop Drainage for Secure Environment and Food Supply organised by ILRI, ICID, CIGR and EurAgEng, 10-13 September 2003, Utrecht, The Netherlands
 - International Workshop Improved Irrigation Technologies and Methods: Research Development and Testing, organised by CEMAGREF, ICID and EurAgEng, 17-19 September 2003, Montpellier, France
 - International Conference Land is Thirsty, organised by ANBI and FAO and EurAgEng, 29 October 2003, Rome, Italy
 - 32nd International Symposium Actual Tasks on Agricultural Engineering, organised by Croatian Agricultural Engineering Society, CIGR, EurAgEng and AAE, 23-27 February 2004, Opatija, Croatia
 - 4th International Workshop Research on Irrigation and Drainage, organised by the Macedonian National ICID Committee and EurAgEng, 24-25 March 2004, Skopje, Macedonia
 - International Conference Energy Efficiency and Agricultural Engineering 2004, organised by the Bulgarian National Society of Agricultural Engineers, CIGR and EurAgEng, 3-5 June 2004, Rousse, Bulgaria
 - International Conference on Olympics of Agricultural Engineering 2004, organized by CIGR, 11-14 October 2004, Beijing, China
 - World Congress Agricultural Engineering for a Better World, organized by CIGR, EurAgEng, VDI, FAO, 3-7 September 2006, Bonn, Germany
 - First International Conference on Monitoring, Simulation, Prevention and Remediation of Dense and Debris Flows, organized by WIT, EurAgEng, CIGR, June 2006, Rhodes, Greece
 - First International Conference on Sustainable Irrigation Management, Technologies and Policies, organized by WIT, September 2006, Bologna, Italy
 - 22nd European Regional Conference on Water Resources Management and Irrigation and Drainage Systems in the European Environment organized by ICID, EurAgEng, CIGR, FAO, September 2007, Pavia, Italy
 - Second International Conference on Monitoring, Simulation, Prevention and Remediation of Dense and Debris Flows, organized by WIT, EurAgEng, CIGR, June 2008, The New Forest, UK
 - First International Conference on Flood Recovery, Innovation and Response, organized by WIT, University of Wolverhampton, July 2008, London, UK
- Co-editor Books :



- Water and Irrigation Development,2001 ,Editor : Lombardy Region;
 - Crop Water Management for Food Production under Limited Water Supplies, 2002 ,Editor : ICID;
 - Land Reclamation and Water Resources Development, 2003, Editor : Lombardy Region;
 - Sustainable Irrigation Management ,Technologies and Policies , 2006 ,Editor :WIT Press;
 - Water Resources Management and Irrigation and Drainage Systems Development in the European Environment, 2007,Editor : ICID;
 - Monitoring , Simulation, Prevention and Remediation of Dense and Debris Flow II ,2008 ,Editor : WIT Press.
- International Expert :
- Question 39 "Irrigation and Drainage of Problems Soils" ,Fort Collins ,USA, 1984 ,
 - Question 48 "Irrigation under Conditions of Water Scarcity" ,Granada., Spain, 1999, of the International Commission on Irrigation and Drainage.
- Co-leader of world-wide (FAO-ICID-EurAgEng) investigations : -
- "Conjunctive Use of Surface and Groundwater" 2002,in cooperation with Costantino Fasso,Hon. Vice Pres. ICID ;
 - "Irrigation and Drainage Systems : Research and Development in the 21st Century", 2002, in cooperation with Bart Schultz ,Pres. ICID;
 - "Global Warming and Drainage Development", 2004 ,in cooperation with Reinder Feddes ,Wageningen University,The Netherlands;
 - "Climate Variability Agriculture and Food Security : A World-wide View" ,2004 ,in cooperation with Bart Schultz,Reinder Feddes, and Ragab Ragab,Wallingford Institute,UK.
- Memberships:
- International Commission of Agricultural Engineering (Section 1 : Land and Water Engineering, 1995 - , Executive Board, 2004 -2012);
 - International Commission on Irrigation and Drainage (Working Group on Drainage, 1988 -2006, Permanent Committee for Technical Activities, 2005 -2012 ,Working Group of the EB Journal Irrigation and Drainage ,1998-)
 - European Society of Agricultural Engineers (Chairman of the Field of Interest on Soil and Water, 1993-2006; Chairman of the Fields of Interest, 1999 - 2004; President, 2002 - 04; Past President 2004- ;Hon. Chairman of the Field of Interest on Soil and Water 2006-)
- Editorial Boards of International Journals :
- Irrigation and Drainage, 1998 -;
 - Progress in Agricultural Engineering Sciences, 2004 - ;
 - Journal of Agricultural Engineering, 1998 - ;
 - International Journal of Agricultural and Biological Engineering, 2009- ;
 - International Journal of Safety and Security Engineering,2010 -;
 - International Journal of Smart Grid and Renewable Energy ,2010-;
 - International Journal of Agricultural Sciences (Editor-in-Chief) ,2010.
- As President of the European Society of Agricultural Engineers he established



Agreements with national, regional and world-wide Organisations:

- AESEE (Association of Agricultural Engineering in South-Eastern Europe),Rousse ,Bulgaria , October 2002
- CIHEAM (Centre International de Hautes Etudes Agronomiques Méditerranéennes) Valenzano, Italy, January,2003;
- CIOSTA (Commission International pour l'Organisation Scientifique du Travail in Agriculture) ,Tourin, Italy, October 2002;
- CIGR (International Commission of Agricultural Engineering) Rome, April,2003;
- ESA (European Society of Agronomy) ,Taastrup, Denmark September 2003;
- FAO (Food and Agriculture Organisation of the United Nations) Rome, Italy, April,2003;
- ICID (International Commission on Irrigation and Drainage) ,Montreal, Canada, July 2002;
- IUSS (International Union of Soil Sciences) Reading,UK,March,2004;
- VDI-MEG (German Association of Agricultural Engineering), Leuven, Belgium ,September ,2004;
- RURALIA (Italian Association for the Unitary - Restoring of Rural Heritage and Sites), Milan, Italy, September 2004.

Listed in: -Who's Who in the World, 23rd ,24th and 25th Editions,

Research fields

The scientific activity deals with the following fields of interest:

- performance assessment of sprinkler irrigation systems;
- modelling and fluid-dynamics of debris and hyper-concentrated flows;
- desertification and environmental impact of climate change.



Most significant publications

(Publications available on "Archivio Istituzionale della Ricerca")

1. De Wrachien D., Feddes R. (2004). Global warming and drainage development: Perspective and challenges. *Irrigation and Drainage*, 53, 215-224.
2. Lorenzini G., De Wrachien D. (2005). Performance assessment of sprinkler irrigation systems: A new indicator for spray evaporation losses. *Irrigation and Drainage*, 54, 295-305.
3. De Wrachien D., Lorenzini G. (2006). Modelling jet flow and losses in sprinkler irrigation: Overview and perspective of a new approach. *Biosystems Engineering*, 94, 297-309.
4. Mambretti S., Larcan E., De Wrachien D. (2008). 1D modelling of dam-break surges with floating debris. *Biosystems Engineering*, 100, 297-308.
5. Mambretti S., Larcan E., De Wrachien D. (2008). Theoretical and experimental analysis of debris flow: Rheology and two-phase modelling. *Irrigation and Drainage*, 57, 555-570.