



WaterLossEurope2012

Ferrara, Italy may 23-25 2012

The Specialist Water Loss Conference

DAY 1 - Wednesday, May 23, 2012

TECHNICAL PROGRAMME

Venue: **University of Ferrara** Via Savonarola, 9 - 44121 Ferrara

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|---|---|--|---|---|--|
| Opening Session <i>Room: AulaMagna 250 seats</i> | | | | | |
| 8.30-9.30 | Open doors Registration | | | | |
| 09:30 | Welcome Opening University of Ferrara | | | | |
| 09:40 | Introduction to the WaterLossEurope Conference - Marco Fantozzi | | | | |
| 10:10 | KeyNote Speech - Tim Waldron | | | | |
| 10:40 | KeyNote Speech - Marco Franchini | | | | |
| 11:10 | coffee break | | | | |
| NRW Case Studies, Regulation & Communication - Tim Waldron <i>Room: AulaMagna 250 seats</i> | | | Early Career Water Loss Symposium - Marco Franchini <i>Room: Copernico 80 seats</i> | | |
| Hour | # | Speech | # | Speech | |
| 11:40 | 1 | Reducing NRW in Urban Water Utilities: Lessons from Experiences in Morocco and in MENA Region. A. Zerouali, J.G. Janssens and P. Marin | 5 | Hydraulic characterization of leaks in pressurised pipes M. Ferrante (ITA), C. Massari, B. Brunone, S. Meniconi | |
| 12:00 | 2 | Implementing IWA methodology for NRW management: the experience of Iren Reggio Emilia Paolo Reggiani (ITA), Francesco Ferretti, Paolo Boiardi, Francesco Calza | 6 | Interactions between Non Revenue Water management and asset management Claire Fuvelle (FRA), David Duccini | |
| 12:20 | 3 | Leakage Reduction through the Application of Advanced Pressure Management Techniques Sofia Kanellopoulou (GRC), B Charalambous | 7 | The Cost of Lost Water S. Schrotter (AUT), F. Friedl, D. Fuchs-Hanusch | |
| 12:40 | 4 | Performance Based Contract for a comprehensive non-revenue water reduction project - Contract Model and Results. H. Chisca (BRA), L.E. Suman, K.C.O Arikawa | 8 | Water resources in Israel and Palestine Region Rossella Monti (ITA) | |
| 13.00 - 14.00 | lunch break | | | | |

| Pressure Management & Case Studies - Marco Fantozzi <i>Room: AulaMagna 250 seats</i> | | | NRW Modelling - Bruno Brunone <i>Room: Copernico 80 seats</i> | |
|--|---|--|---|---|
| Hour | # | Speech | # | Speech |
| 14:00 | 9 | Ongoing Developments in analysing, predicting and validating benefits of Pressure Management A. Lambert (GBR), M. Fantozzi, J. Thornton, J. Kovac | 14 | Synthetic generations of cross-correlated water demand time series N. Ansaloni (ITA), S. Alvisi, M. Franchini |
| 14:20 | 10 | Pressure Management: the importance to assure reliability Francesco Calza (ITA) | 15 | Water Network Sectorization based on genetic algorithm and minimum dissipated power paths A. Di Nardo (ITA), M. Di Natale, G.F. Santonastaso, V.G. Tzatchkov, V.H. Alcocer Yamanaka |
| 14:40 | 11 | Experience made in Salerno's water distribution network with costs and benefits analysis Alfredo Iodice Delgado (ITA) | 16 | First results on the application of a linear stochastic estimator to a real pipe system Christian Massari (ITA), T. C. Jim Yeh, Marco Ferrante, Bruno Brunone, Silvia Meniconi |
| 15:00 | 12 | Optimization of the water system in Trento Matteo Frisinghelli (ITA) | 17 | A new algorithm for the real time logic control of pressure in water distribution networks E. Creaco (ITA), M. Franchini |
| 15:20 | 13 | Economic benefits of pressure management: results achieved by CCAM water utility. Andrea Mesturini (ITA), Roberto Francone | 18 | Bayesian modelling to the water loss management decisions Camelia Gavrilă (ROM), Narcisa Teodorescu |
| 15:40 | coffee break | | | |
| Water Loss: European Research and Projects - Nicola Bazzurro <i>Room: AulaMagna 250 seats</i> | | | NRW Modelling - Marco Ferrante <i>Room: Copernico 80 seats</i> | |
| Hour | # | Speech | # | Speech |
| 16:00 | 19 | Water Supply Sanitation Technology Platform and the water loss initiative Nicola Bazzurro (ITA), Mike Farrimond | 24 | Economic Level of Leakage Modelling in the UK Stuart Trow (GBR) |
| 16:20 | 20 | Aquaknight EC funded project: knowledge and innovation transfer for water saving in the mediterranean basin. Marco Fantozzi (ITA), Manthos Bimpas, Nicola Bazzurro | 25 | Water loss analysis - Croatian practice Drazen Vouk (HRV), Ivan Halkijevic, Zivko Vukovic |
| 16:40 | 21 | Autoleak - evaluating leakage economically and environmentally Alessandro Bettin (ITA), Dewi Rogers | 26 | Frequency pressure regulation in water supply systems Halkijevic (HRV), Zivko Vukovic, Drazen Vouk |
| 17:00 | 22 | PALM Project- Defining the optimum level of leakage Dewi Rogers (ITA), Alessandro Bettin | 27 | A method for estimating average pressure in the water distribution network In-hwan Hyun (KOR), Kyong-hwan Lee, Duck-hyun Kim, Seock Dockko, Suing-il Choi and Doo-il Kim |
| 17:20 | 23 | Eureau and European regulation on water loss Roberto Zocchi (ITA) | 28 | GIS software module for leakage monitoring and analyses Albin Bacun (HRV), Biljana Bacun, Jurica Kovac |
| 17:40 | close | | | |
| 19:00 | Welcome Reception, Castle of Ferrara, Center of Ferrara | | | |



WaterLossEurope2012

Ferrara, Italy may 23-25 2012

The Specialist Water Loss Conference

DAY 2 - Thursday, May 24, 2012 TECHNICAL PROGRAMME

Venue: **AccaDueO – Ferrara Fair** Via della Fiera, 11 - 44124 Ferrara

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|---------------|---|--|--|--|
| 08:30 | Transfer by BUS from Castle of Ferrara in front of Hotel Ferrara to Ferrara Fair. | | | |
| | NRW in the Balkans: Regulation & case studies - Jure Kovac <i>Room: B</i> | | Metering Technologies - Alex Rizzo <i>Room: C</i> | |
| Hour | # | Speech | # | Speech |
| 09:20 | 29 | Changes in Water Loss Management in Western Balkan Region Jurica Kovac (HRV) | 1 | Free Workshop by Itron: Smart Metering Contribution in Water Loss Control |
| 09:40 | 30 | Inter-municipal activities in water loss management in SE Europe Aleksandar Krstic (SRB), Jurica Kovac | 2 | Free Workshop by Maddalena: Tendenze normative in Italia per la sostituzione periodica dei contatori di acqua e calore e assetto del nuovo codice della metrologia. Lettura a distanza dei consumi di acqua e calore: la situazione e le tendenze in Italia nella misura dell'acqua e del calore - Legal Metrology in Italy: new trends in the lifetime of water meters and thermal energy meters; new Code for Metrology AMR systems: situation and tendencies in Italy in water and thermal energy. Sandro Marcon - Maddalena |
| 10:00 | 31 | Water loss management in Novi Sad, Serbia - case study Zlatko Arvaji (SRB), Ikonija Karadzic | 3 | Free Workshop by ARI: Reduction of meters under registration using the Unmeasured-Flow Reducer (UFR) |
| 10:20 | 32 | Case studies regarding nrw management carried out in the city of Skopje, Macedonia Bojan Ristovski (MKD) | 4 | Free Workshop by Isoil: "FLOWIZ": Misura e trasmissione wireless integrata della portata, pressione, livello e qualità acque nelle reti e nei distretti idrici - "FLOWIZ Next": THE COMPLETE SOLUTION FOR WATER METERING Diego Benvenuti - Isoil Industria |
| 10:40 | 33 | Developing a metering needs assessment and program "to channel" and supports Reducing Non-Revenue Water in Albania Enkelejda Gjinali (ALB), Vilma Biboli, Hermann Plumm | 5 | Free Workshop by Sensus |
| 11:00 | coffee break - free time at exhibition | | | |
| | Technologies for Active Leakage Control - Malcolm Farley <i>Room: B</i> | | Innovative NRW Technologies & Methodologies - Tim Waldron <i>Room: C</i> | |
| Hour | # | Speech | # | Speech |
| 11:40 | 34 | Innovation in Technology for Monitoring, Detecting and Repairing Leaks Malcolm Farley (GBR) | 6 | Free Workshop by i2O Water: Soluzioni innovative per la gestione della pressione ed il risparmio energetico - Advanced Pressure Management: A Case Study for Leakage, Burst and Energy Reduction. Dean Hansford - i2O Water - UK |
| 12:00 | 35 | Practical validation of an innovative method for the detection of leaks in buried pipes Andrea Cataldo (ITA), Giuseppe Cannazza, Egidio De Benedetto, Marcello Miraglia, Danilo Ancora, Nicola Giaquinto | 7 | Free Workshop by Miya: Improving the efficiency of water networks - case studies |
| 12:20 | 36 | Leak Localization by Active Acoustic Principles Gösta Lange (SWE) | 8 | Free Workshop by Rubinetterie Bresciane: Sistemi di allaccio utenze acqua e riduzione delle perdite non misurate. - Solution of connection water meter and end-user and unmeasured flow reducer. Renato Brocchetta, Donato Pintossi - Rubinetterie Bresciane |
| 12:40 | 37 | Innovative network monitoring technologies to support the never-ending task of water loss management Joerg Koelbl (AUT), Peter Martinek | 9 | Free Workshop by Cimberio |
| 13.00 - 14.00 | lunch break - free time at exhibition | | | |

| NRW Manag. International Experiences - B. Charalambous Room: B | | | NRW Software Tools & Active Leakage Control - Malcolm Farley Room: C | | |
|---|---|--|---|--|--|
| Hour | # | Speech | # | Speech | |
| 14:00 | 38 | Water Balance - From the Desktop to the Field B Charalambous (GBR), S Hamilton | 10 | Free Workshop by Bentley : Applicazione di strumenti di modellazione per la riduzione delle perdite. Esempi e casi studio. - Application of modeling tools for the reduction of losses. Examples and case studies. Pedro Pina, Account Manager, Bentley Water | |
| 14:20 | 39 | District Water Audits Elio F. Arniella (USA) | 11 | Free Workshop by ILMSS / Marco Fantozzi : Gestione innovativa dell'acqua non fatturata mediante software avanzati e innovativi metodi di formazione/consulenza. - Non Revenue Water management by means of advanced softwares and innovative training/consultancy methods. Marco Fantozzi, Studio Marco Fantozzi | |
| 14:40 | 40 | Benchmarking six Mediterranean water pipe networks performance assessment results highlighting the role of the management practices applied by the local water utilities V. Kanakoudis (GRC), S. Tsitsifli, P. Samaras, A. Zouboulis | 12 | Free Workshop by Martinek : WLM – Water-Loss-Management – the most unique, efficient and integral measuring system which ensure water supply to connected consumers! | |
| 15:00 | 41 | Improving efficiency from a big distribution network sectorization project. A big challenge" Francisco Cubillo (ESP), Humberto Sanchez, Bruno Rodriguez | 13 | Free Workshop by Bimatik | |
| 15:20 | 42 | Regulation of water service and efficient use of water Renato Drusiani (ITA), Marco Gatta | 14 | Free Workshop by Seba : Monitoraggio idrico e ricerca sistematica delle perdite in Italia. Tecnologie e applicazioni proposte in Italia da Seba KMT attraverso la ditta Volta Spa - Research and systematic monitoring of water loss in Italy. Technology applications and proposals in Italy by Seba KMT through the company Volta Spa | |
| 15:40 | coffee break - free time at exhibition | | | | |
| NRW Management Internat. experiences - Orazio Giustolisi Room: B | | | Communication, SCADA & Energy - Francesco Bosco Room: C | | |
| Hour | # | Speech | # | Speech | |
| 16:10 | 43 | The hidden costs of resorting to intermittent supplies B Charalambous (CYP) | 15 | Free Workshop by Telecom : La Nuvola Italiana per il servizio di Tele-gestione dell'Acqua. - The "Nuvola Italiana", the cloud computing of Telecom Italia, for water management services. Relatore/Speaker: Francesca Mondello, Telecom Italia, Top Clients&Public Sector, Marketing, Vertical Solutions | |
| 16:30 | 44 | Active pressure management in a touristic costal area: Riccione (Italy) case study Martinini Pierpaolo (ITA), Andrea Casadio | 16 | | |
| 16:50 | 45 | Coaching: An emerging need in Water Loss Management Jurica Kovac (HRV), Bambos Charalambous | 17 | Free Workshop by Grundfos : Soluzioni di pompaggio Grundfos per la riduzione delle perdite idriche. - Grundfos pumping solutions for the reduction of waterloss. Gabriele Brioschi - Grundfos | |
| 17:10 | 46 | Development of NRW management strategies in AQP and evolution of the approach in implementation and management of distribution system rehabilitation projects Costantino Bellantuono (ITA), Antonio Carbonara, Serena Spagnuolo, Teresa Trimigliozzi | 18 | Free Workshop by ABB : The ABB solutions for integrated and efficient water system | |
| 17:30 | 90 | Apparent water losses related with unmeasured consumption in collective housing Angela Bajcsi (SRB), Milenko Radovanov | | | |
| 17:50 | free time at exhibition | | | | |
| 18:00 | Transfer by BUS from Ferrara Fair to Castle of Ferrara in front of Hotel Ferrara. | | | | |
| 20:00 | Conference Banquet, Ristorante Il Don Giovanni - La Borsa, Corso Ercole I D'Este, 1 44121 Ferrara | | | | |



Venue: **AccaDueO – Ferrara Fair** Via della Fiera, 11 - 44124 Ferrara

| 08:30 | | | | | | |
|---|----|---|--|--|---|--|
| Transfer by BUS from Castle of Ferrara in front of Hotel Ferrara to Ferrara Fair. | | | | | | |
| Apparent Losses 1 - Alex Rizzo <i>Room: B</i> | | | Breaks & Modelling - Stuart Trow <i>Room: C</i> | | Innovative Technologies - Marco Franchini <i>Room: D</i> | |
| Hour | # | Speech | # | Speech | # | Speech |
| 09:20 | 47 | The Impact of air penetration due to leaks repair on water metering Mordecai Feldman (ISR) | 52 | Causes analysis of PE pipes breakages and consequent improvement plans: results of a constructive partnership between Hera, Politecnico di Milano and LyondellBasell Claudio Anzalone (ITA), Davide Gadani, Davide Nascetti, Roberto Frassine, Patrizio Coldani, Roberto de Palo | 19 | Free Workshop by Lacroix : District Metering Area and Telemetry solutions to improve water network efficiency |
| 09:40 | 48 | Statistical sampling of water uses for leakage assessment via water budget A.Fortunato (ITA), C.Arena, M.R. Mazzola | 53 | Non-Invasive Non-Revenue Water Reduction using Analytics and Optimization Segev Wasserkrug (ISR), Susara Van Den Heever, Eitan Israeli, Sergey Zelytn, Alexander Zadorojniy, Bradley Eck, Martin Mevissen | 20 | Free Workshop by Galcon : Dynamic Pressure Management - Optimizing Pressure to Save Water |
| 10:00 | 49 | Reduction of Apparent Losses Using AMR (Automatic Meter-Reading) System with UFR (Unmeasured-Flow Reducer) - Htanur Case Study Sharon Yaniv (ISR) | 54 | Hidden leakage. Detection criteria F. Ravelli (ITA), F. Zanolla | 21 | Free Workshop by Enolgas : L'importanza degli allacciamenti delle utenze idriche per ridurre le perdite occulte. "Leak Detection System" per rilevare e prevenire le perdite idriche nelle abitazioni. - Technology connections for water users. LDS "Leak Detection System" Liquid Leakages Prevention System. Gaetano Licciardello - ENOLGAS Bonomi |
| 10:20 | 50 | Study on Apparent losses at the Water Services Corporation Malta Stefan Riolo (MLT), Ronald Pace | 55 | Detailed analyses of water loss management processes in support of network asset management Joerg Koelbl (AUT), Heimo Theuretzbacher-Fritz, Stephan Schrotter, Daniela Fuchs-Hanusch | 22 | Free Workshop by Sabic : RELY-able HDPE water pipes with improved energy efficiency |
| 10:40 | 51 | Apparent Losses: Basically, a Utility Management Issue M.E. Vermersch (FRA), A.G. Rizzo, E.H. Johnson | 56 | Polyethylene pipes weird bursts: from the problem to the solution Robert Bertozzi (ITA), Nadia Fontani, Vittorio Sartori, Paolo Torre | | |
| 11:00 | | | | | | |
| coffee break - free time at exhibition | | | | | | |

| Apparent Losses 2 - Gabriele Freni <i>Room: B</i> | | | Investments in Water Industry in Italy after referendum <i>Room: C</i> | | WOP-SEE meeting & RoundTable - Aleksandar Krstic <i>Room: D</i> | |
|--|--|--|---|--|---|---|
| Hour | # | Speech | # | Speech | # | Speech |
| 11:40 | 57 | A mathematical model to evaluate apparent losses due to water meter under registration in a urban distribution network De Marchis M. (ITA), Fontanazza C.M., Freni G., Faso G., Notaro V., Puleo V. | 11:40 - 13:00 | Free entry Round Table on Investments in Water Industry in Italy after referendum Tavola rotonda gratuita sugli Investimenti nell'Industria dell'acqua in Italia dopo il referendum. organized by Jindal Saw Italia Spa - Participation of: Dr. Leonardo Montesi, Jindal Saw Italia SpA; Prof. Mario Rosario Mazzola, Mediterranea delle Acque; Ing. Stefano Cetti, Metropolitana Milanese; Ing. Franco Sami, GruppoHERA; Ing. Andrea Bossola, ACEA Roma; Prof. Antonio Massarutto, Univ. Udine; Jonathan Hadar, Consigliere per gli Affari Commerciali, Ministero Industria Commercio e Lavoro Israeliano | 11:40 - 13:00 | WOP-SEE meeting & RoundTable. WOPs for Water Loss Reduction: how to improve learning process by joining utilities in action Water Operators' Partnerships for South East Europe (WOP-SEE) is a network of partners working to facilitate WOPs in South East Europe. Our overall goal is to make it easier, and more rewarding, for utilities to learn from one another on a not-for-profit basis. |
| 12:00 | 58 | Prediction of water saving through pressure reduction S. Kara (TUR), I.E. Karadirek, A. Muhammetoglu, H. Muhammetoglu | | | | |
| 12:20 | 59 | Losses, metering and save energy Francesco Albasser (ITA) | | | | |
| 12:40 | 60 | IWA Guidance for Apparent Loss reduction: Filling the Knowledge Gap E.H. Johnson (FRA), M.E. Vermersch | | | | |
| 13:00 | lunch break - free time at exhibition | | | | | |
| Modelling Pressure Leakage and Demand - Marco Ferrante <i>Room: B</i> | | | Leak Detection & Modelling - Silvia Meniconi <i>Room: C</i> | | IWA Water Loss Specialist Group Meeting - Tim Waldron <i>Room: A</i> | |
| Hour | # | Speech | # | Speech | # | Speech |
| 14:00 | 61 | Combining hydraulic modelling and district meter area's management to plan leakage reduction activities in the water supply system of province of Ferrara. Francesco Ruggeri (ITA), Riccardo Resca, Alessio Benini, Poli Daniele | 66 | Determination of the Leakage Exponent (N1) in the Pressure-Leakage Power Relationship and the Hour-Day Factor (HDF) using Selected ZMAs in the Saltpond Water Distribution System in Ghana Amoatey (DEU), P. K., Steinmetz, H. and Minke, R. | 14:00 - 15:40 | IWA Water Loss Specialist Group Meeting - Tim Waldron |
| 14:20 | 62 | Comparison between dynamic and steady-state models for evaluating the real and apparent water losses De Marchis M. (ITA), Fontanazza C.M., Freni G., Notaro V., Puleo V. | 67 | Sectorization (DMA) and Automatic Meter Reading (AMR) in Arezzo's network Mirco Bernardini (ITA), Michele Lodovichi | | |
| 14:40 | 63 | Determining leakage by analysing demand changes over time Peter van Thienen (NLD), Ilse Pieterse-Quirijns, Jan Vreeburg, Karel Vangeel, Zoran Kapelan | 68 | Lead joint socket rehabilitation of grey cast iron pipes in drinking water supply systems C. Schoberleitner (AUT), V.-M. Archodoulaki, T. Koch, S. Lüftl, M. Vincze, Luis A. Mateos, M. Werderitsch, G. Kuschnig | | |
| 15:00 | 64 | Detecting pipe bursts by monitoring water demand M. Bakker (NLD), J.H.G. Vreeburg, M. Van der Roer, V. Sperber | 69 | Acoustic Methods for Determining Remaining Pipe Wall Thickness in Asbestos Cement, and Ferrous Pipes Marc Bracken (USA), Dave Johnston | | |
| 15:20 | 65 | Management of the pressures: a new valve and the phenomenon of reduction of breakage installments Federico Dell'Orfano (ITA), Vincenzo Esposito, Francesco Monaco, Guelfo Pulci Doria | 70 | What do we know about Real Losses on Transmission Mains' Kevin Laven (CAN), Allan Lambert, David Johnston | | |
| 15:40 | coffee break - free time at exhibition | | | | | |

| Hydraulics & Modelling - Dewi Rogers <i>Room: B</i> | | | NRW & Modelling - Jo Parker <i>Room: C</i> | | IWA Water Loss Specialist Group Meeting - Tim Waldron <i>Room: A</i> | |
|---|---|---|--|--|---|---|
| Hour | # | Speech | # | Speech | # | Speech |
| 16:00 | 71 | A Study on efficient Minimum Night Flow analysis using Bayesian Method Teaho Choi (KOR), Mijin Hong, Jayong Koo, Akira Koizumi, Hyundong Lee, Suingill Choi, Inhwan Hyun, Dooil Kim | 75 | Modelling application to water networks management system: Enia Reggio Emilia - Iren Group Paolo Boiardi (ITA) | 16:00 - 17:00 | IWA Water Loss Specialist Group Meeting - Tim Waldron |
| 16:20 | 72 | Management of change. Coping with Non-Revenue Water in a Georgian water utility Monika Konatar (DEU), Matthias Hitzel | 76 | Economical design of DMAS - methodology and algorithms A. Anton (ROM), D. Cornea | | |
| 16:40 | 73 | Assessment of the energy impact of water loss C. Lenzi (ITA), C. Bragalli & S. Artina | 77 | Final Design and Construction Interim Results of Taebaek Region Water Distribution System Rebuilding Project in Korea K W Kwon (KOR), G B Kang, W R Wi, S J Park, B N Kim, H R Lee | | |
| 17:00 | Final remarks and Conclusions in Room B | | | | | |
| 17:40 | free time | | | | | |
| 18:00 | Transfer by BUS from Ferrara Fair to Castle of Ferrara in front of Hotel Ferrara. | | | | | |