Smarter Catchment Monitoring, Cleaner waters

London 4-7th September 2019

Wednesday 4th September

Time		
15:00	**Registration opens**	
16:00 – 17:00	**The INTCATCH concept Walkthrough** Seminar Room 1 1.02 An opportunity to discuss the context of the conference in relation to novel approaches for the monitoring of catchments	
17:00 – 118:00	Networking Drinks reception with canapés and Ground floor Here East	
18:00 - 20:00	Conference Welcome – Dr Mark Scrimshaw/Prof Alessandro Farinelli **Why do we monitor and who should be involved?** Keynote Speakers Prof. Uta Wehn and Prof. John Sumpter Panel discussion with Dr Nathalie Gilbert (Thames21) and Dr Mario Carere (Istituto Superiore di Sanità and the WFD CIP group)	

Thursday 5th September

Time	**Session 1: Smart Freshwater Monitoring Tools (Chair: Geoff Brighty)**	**Session 1a: Cloud Data & Visualization (Chair: Alessandro Farinelli)**
	Lecture centre 0.01	Lecture centre 1.04
09.00-09.20	Development of a portable genomic laboratory for water metagenomic analysis (Rossato et al.)	The development of the DSS application for water quality investigative monitoring (Bettinetti et al.)
09.20-09.40	The simultaneous determination of COD & DOC in the water using closed reflux oxidation followed by spectrophotometric & potentiometer analysis (Kang et al.)	Cloud-based data streaming from mobile sensors for water quality monitoring (Farinelli et al)
09.40-10.00	Early event detection & prediction tools for surface drinking water catchment protection (Baquero et al. PRESENTED BY Albert Serra-Compte)	Going large in Greece (Adam Whalley, Environment Agency)
10.00-10.20	Estimation of Pollutant Sources Reduction Effect on Water Quality in Hapcheon Dam Watershed Using HSPF Model Simulation (Cho & Kim)	Multi-Parameter river monitoring with unmanned boats: towards an integrated, holistic understanding of our river systems (Nick Everard, Environment Agency)

10:20 – 11:00	Networking with refreshments Ground floor Here East	
	Session 2: Stormwater/Runoff Treatment (Chair: Francesco Fatone)	**Session 2a: Innovative Freshwater Monitoring Strategies (Chair: Richard Walmsley)**
	Lecture centre 0.01	Lecture centre 1.04
11.00-11.20	Treatment strategies for combined sewer overflows in multifunctional reactors (Venditto et al.)	Integrated Approach for Innovative Monitoring Strategies of Reservoirs & Lakes (Warner et al.)
11.20-11.40	Sewer management & INTCATCH new tools for one of the most sensitive & touristic area of Europe: Lake Garda (Voi & Cordioli)	The water quality of Greek catchments. Robotic boats as an ultimate solution of lakes & rivers environmental protection (Samios et al.)
11.40-12.00	A review on Combined Sewer Overflows (CSOs) treatments: existing technologies, challenges & possible future studies (Botturi et al.)	Smart genomic technology to prompt identification of pollution sources in aquatic ecosystem when extreme weather events happen (Marcheggiani et al.)
12.00-12.20	Advanced compact treatment of combined sewer overflows (CSOs) for removing physical & chemical pollutants: case study of Lake Garda in northern Italy (Daneshgar et al.)	A new approach to gathering & using environmental information in the Environment Agency (R Walmsely)
12.20-12.40	Evaluation of the Impact of Residential Urban Patterns on Stormwater Management in Federal District, Brazil (Brito et al.)	SmartRivers: Leveraging the Internet of Things to assess the effectiveness of Natural Flood Management (van Soesbergen et al.)
12:40 – 14:00	Lunch Ground floor Here East **Outdoor demonstration activity of water monitoring with boats on the River Lee**	
	Session 3: Citizen Science in Water Management (Chair: Paul Leonard)	**Session 3a: Case studies in Water Monitoring (Chair: Lorenzo Proia)**
	Lecture centre 0.01	Lecture centre 1.04
14.00-14.20	Engaging citizens on water sustainability actions using Digital Social Platforms (Dr. Janet Riley, DeMontfort University / POWER Project)	Development & implementation of an Innovative Water Quality Monitoring Strategy for Lake Yliki, Greece (Lytras et al.)
14.20-14.40	The use of Citizen Scientists to add value & engagement to environmental monitoring data managed by regulators, industry & policy makers (Leonard et al.)	Influence of water flow & light availability on intracellular biofilm geosmin formation (Espinosa et al.)
14.40-15.00	Case study for the river Lark (G. Brighty)	Industrial vs Urban vs Reservoir trophic state of Greek lakes paradigm shifts by autonomous boats (Lytras et al.)
15.00-15.20	Community Based Modelling (J.Bryden, Thames21)	Preliminary study to assess microplastics' retention by a decentralized wastewater treatment unit in Greece (Lytras et al.)
15:20 –	Networking with refreshments	

15:50		
16.00-16:50	**Plenary session on Water Quality** Caroline Whalley (European Environment Agency) “Scaling it up - chemical monitoring at the European level” Mario Carere (Istituto Superiore di Sanità and the WFD CIP group) "Innovative Monitoring Approaches: Future Perspectives in the Context of the Water Framework Directive"	
18:30-22.30	**Conference Gala Dinner** On board the Dixie Queen (Embark 18.30 promptly) Please ensure you leave enough time to get to Butlers Warfe (1 hour 20 minutes).	

Friday 6th September

	Session 5: Use of Robotic Boats for Water Monitoring (Chair: Alessandro Farinelli)	**Workshop: Development & Application of Novel Sensors & Biosensors for Water (Chair Prof. Arben Merkoçi)**
	Lecture centre 0.01	Seminar Room 2 1.03
09.00-09.20	Autonomous robotic platforms for water monitoring: the INTCATCH experience (Benfatti et al.)	Opening: A.Merkoçi (Objectives of the workshop)
09.20-09.40	Model-based adaptive monitoring of tracers using mobile sensors (Hodgson & Jones)	Luca Sanfilippo: "Technology innovations in the application of optical analytical methods to measure chemical & biological pollutants for near real time water quality monitoring"
09.40-10.00	Industrial vs Urban vs Reservoir trophic state of Greek lakes paradigm shifts by autonomous boats (Lytras et al.)	Fabiana Arduini: ''Paper-based electrochemical (bio)sensors for water control''
10.00-10.20	A smart multi sensor system for environmental investigation on an autonomously driven measuring platform (Knutz)	Roza Allabashi: ''Heavy metal detection in surface water using an integrated robotic system''
10:20 – 11:00	Networking with refreshments Ground floor Here East	
	Session 6 Workshop: "Funding Futures"	**Workshop: Development & Application of Novel Sensors & Biosensors for Water**
	Lecture centre 0.01	Seminar Room 2 1.03
11.00-11.20	Introduction by Michael Joseph & Julia Matskevich (Brunel University London Research and development Office)	Pedro Estrela: ''Electrochemical impedance sensors for wastewater epidemiology''
11.20-11.40	1. Market exploitation / business model canvass 2. EU Projects & Commercialisation	César Fernández-Sánchez: "Compact electroanalytical tools for measuring contaminants in surface waters"
11.40-12.00	Exercise with a Business Canvass	José Bergua: ''Water toxicity evaluation using nanobiosensors''

12.00-12.20	EU funding opportunities	Qiuyue Yang: ''Electrochemical stripping analysis of heavy metals in waters''
12.20-12.40	Framework for actions	ICN2: Heavy metals detection in water (Qiuyue Yang, Ruslan Alvarez)
12:40 – 14:00	Lunch Ground floor Here East **The INTCATCH concept Walkthrough** Seminar Room 1 1.02 To reflect on the conference contents in relation to novel approaches to monitoring and managing catchments	
	Session 7: Nature based Solutions for Water Management (Chair: Simos Malamis)	**Workshop: Development & Application of Novel Sensors & Biosensors for Water; Demo Session**
	Lecture centre 0.01	Seminar Room 2 1.03
14.00-14.20	Combined natural engineered treatment processes support utilities in addressing water management challenges – experiences from the AquaNES project (Wintgens)	Systea: A live demonstration of a compact instrument (Luca Sanfilippo)
14.20-14.40	HYDROUSA project: Recovering water, materials and energy from non-conventional water sources using low cost nature-based solutions (Malamis)	Univ. Tor Vergata: Origami paper-based (bio)sensors for pollutant detection (Veronica Caratelli)
14.40-15.00	Experiences in Wetlands (Masi et al)	CNM, Lab-on-a-chip to measure a heavy metal in waters (Pablo Gimenez)
15.00-15.20	Implementing NBS in Tinos Ecolodge (Bedau et al)	ICN2: Pesticides & bacteria detection in water (José Bergua, Ruslan Alvarez)
15.20-15.40	Lessons learnt from field-based experiments on the improvement of the hydraulic performance of constructed wetlands (Ioannidou)	Workshop Conclusions
15:40 – 16:30	Networking with refreshments	
	INTCATCH conference close	

Saturday 7th September

	Firs farm Wetland Visit	
09.30-13.00	Coach leaves at 9.30am from outside Here East Reception – visit to Firs Farm then return to Here East for 13.00.	