

# WATERSPY

High sensitivity, portable photonic device for pervasive water quality analysis



## FINAL WORKSHOP

Tue 11 February 2020, 9:00 – 17:00  
Istituto Italiano della Saldatura,  
Via Lungobisagno Istria 15, Genoa, Italy

## WHAT IS WATERSPY?

WaterSpy is a device for pervasive and on-line monitoring of tap water.

For many contaminants, which will lead to human health hazards, good measurement devices are available. For bacterial contamination the situation is worse. Water utilities, public authorities and regulators rely heavily on trustable and fast water analysis. Especially *E. Coli*, *Salmonella* and *P. aeruginosa* are of interest for human health. Currently time-consuming and expensive laboratory analysis have to be performed. WaterSpy focuses on these three strains of bacteria and develops an add on device for currently available quality monitoring platforms. The device is able to perform automated and fast quality analysis for bacterial contaminants in water.

## PROGRAM

8:30 – 9:00	<b>Registration</b>	13:00 – 14:00	<b>Lunch Break</b>
9:00 – 10:15	<b>Welcome and project introduction</b> <i>Panayiotis Philimis, CyRIC (Project Coordinator)</i>	14:00 – 14:15	<b>Testing and validation</b> <i>Antonio Varriale, CNR</i>
10:15 – 10:25	<b>The need</b> <i>Nicola Bazzurro, IREN</i>	14:15 – 14:30	<b>Novel sensing of Oil-in-Water using Quantum-Cascade-Lasers</b> <i>Wolfgang Ritter, QuantaRed Technologies</i>
10:25 – 10:40	<b>The use of online monitoring devices applied to water safety plants</b> <i>Luca Lucentini, Istituto Superiore di Sanità</i>	14:30 – 14:45	<b>Environmental, medical and industrial trace gas sensing using quantum cascade lasers</b> <i>Béla Tuzson, EMPA</i>
10:40 – 10:50	<b>WaterSpy System Overview</b> <i>Alessandro Giusti, CyRIC</i>	14:45 – 15:00	<b>Wrap-up and future opportunities</b> <i>Panayiotis Philimis, CyRIC</i>
10:50 – 11:00	<b>The pre-concentration module</b> <i>Panayiota Demosthenous, CyRIC</i>		<b>Discussion – Conclusions</b>
11:00 – 11:30	<b>Coffee Break</b>	~ 15:15	<b>End of Workshop</b>
11:30 – 11:45	<b>The incubator, sample delivery and overall fluidics handling modules. Integration with the TRITON and user interface</b> <i>Alexandros Antonerias, AUG</i>	<b>Visit of the Waterspy Demonstrator (Via ai Filtri, 25)</b>	
11:45 – 12:00	<b>The acoustofluidic cell</b> <i>Bernhard Lendl, TUW</i>	15:30	Transfer to the demonstrator by shuttle
12:00 – 12:50	<b>The optical setup</b> <ul style="list-style-type: none"> <li>➤ The QCLs, <i>Stephane Blaser, ALPES</i></li> <li>➤ The photodetectors and electronics, <i>Artur Trajnerowicz, VIGO</i></li> <li>➤ Overall setup, <i>Bernhard Schmauss, FAU</i></li> </ul>	16:00 – 17:00	Visit of the demo (split in two groups)
12:50 – 13:00	<b>The processing &amp; control unit</b> <i>Anastasios Doulamis, NTUA</i>	17:15	Shuttle back to the city centre
<b>Registration</b>			
<b>Participation is free.</b> For organisational reasons, please register before 04/02/2020 at <a href="mailto:d.policastro@gisig.it">d.policastro@gisig.it</a> (please specify name, organisation, participation in the demo visit Yes/No).			

