

**IWAGPR 2013, 7th International Workshop on Advanced Ground Penetrating Radar,  
July 2-5, 2013, Nantes, France**

**Tuesday July 02, 2013**

<b>14:00-16:30</b>	<b>Field demonstration (Ifsttar test sites)</b>
<b>18:00-19:00</b>	<b>Icebreaker</b>

**Wednesday July 03, 2013**

<b>08:15-09:00</b>	<b>Registration</b>
<b>09:00-09:20</b>	<b>Opening ceremony</b>

<b>09:20-10:20</b>	<b>Session 1: Advanced Modelling, Processing and Inversion I</b> Chairmen: J. Van der Kruk & L. Laguerre
09:20-09:40	GPR wave field decomposition, synthesis and imaging for lossless layered vertically transverse isotropic media - <i>Evert Slob and Kees Wapenaar</i>
09:40-10:00	Towards physically-based filtering of the soil surface, antenna and coupling effects from near-field GPR data for improved subsurface imaging - <i>Laurence Mertens, Anh Phuonh Tran and Sébastien Lambot</i>
10:00-10:20	Cylindrical-Wave Approach for Line-Source Electromagnetic Scattering by Buried Dielectric Cylinders - <i>Fabrizio Frezza, Lara Pajewski, Cristina Ponti and Giuseppe Schettini</i>

<b>10:20-10:50</b>	<b>Coffee</b>
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<b>10:50-12:30</b>	<b>Session 2: Student Prize</b> Chairmen: C. Le Bastard & M. Ramdani
10:50-11:10	Topographic migration of GPR data with variable velocities - <i>Niklas Allroggen, Jens Tronicke, Marcel Delock and Urs Böniger</i>
11:10-11:30	Road inspection using full-wave inversion of far-field ground-penetrating radar data - <i>Mohammad Reza Mahmoudzadeh Ardekani, Jean-Baptiste Got, Colette Grégoire and Sébastien Lambot</i>
11:30-11:50	2D full waveform inversion of GPR surface data: permittivity and conductivity imaging.- <i>François Lavoué, Romain Brossier, Ludovic Métivier, Stéphane Garambois and Jean Virieux</i>
11:50-12:10	An Evaluation of the Early-Time GPR Amplitude Technique for Electrical Conductivity Monitoring- <i>Carlotta Ferrara, Davide Comite, Pier Matteo Barone, Sebastian Emanuel Lauro, Elisabetta Mattei, Giuliano Vannaroni, Alessandro Galli and Elena Pettinelli</i>
12:10-12:30	Detecting Subsurface Contamination Using Ground Penetrating Radar and Amplitude Variation with Offset Analysis - <i>Esther Babcock and John Bradford</i>

<b>12:30-14:00</b>	<b>Lunch</b>
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<b>14:00-14:40</b>	<b>Exhibitors &amp; Poster « Flash » Presentations</b> Chairmen: X. Dérobert
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<b>14:40-15:40</b>	<b>Poster Session</b>
<p>Use of radar in road investigation - BRRC experience - <i>Colette Gregoire and Carl Van Geem</i></p> <p>Applications of a reconfigurable stepped frequency GPR in the Chapel of the Holy Spirit, Lecce (Italy) - <i>Raffaele Persico, Giovanni Leucci, Loredana Matera, Marcello Ciminale, Devis Dei, Filippo Parrini and Massimiliano Pieraccini</i></p> <p>The discovery of a forgotten vault in the church of Sainte-Mesme (Les Yvelines) - <i>Nerouz Boubaki, Emmanuel Léger and Albane Saintenoy</i></p> <p>Quantifying GPR transient waveforms in the intermediate zone - <i>Nectaria Diamanti, Peter Annan and David Redman</i></p> <p>The effect of the height of the GPR antennas on the diffraction curve - <i>Raffaele Persico, Giovanni Leucci and Francesco Soldovieri</i></p> <p>Sub-millimeter resolution GPR - <i>Vincent Utsi</i></p> <p>A comparison of phase-shift and one-port coaxial cell permittivity measurements for GPR applications - <i>Wayne Muller and Xavier Derobert</i></p> <p>A Subspace Leakage Suppression Technique for High Resolution Processing of Dispersive GPR Signals - <i>Khaled Chahine, Vincent Baltazart and Yide Wang</i></p> <p>Analysis of Time Interpolation for Enhanced Resolution GPR Data - <i>Andrew Strange</i></p> <p>Design of Receiver with Wide Dynamic Range for Deep Ground Penetrating Radar - <i>Xu Wei, Lu Min and Huang Chunlin</i></p>	

<b>15:40-16:10</b>	<b>Coffee</b>
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<b>16:10-17:50</b>	<b>Session 3: Advanced Modelling, Processing and Inversion II</b> Chairmen: E. Slob & A. Litman
16:10-16:30	3D Characterization of an Aquifer Using Full-Waveform Inversion and Amplitude Analysis - <i>Anja Klotzsche, Jan van der Kruk, Harry Vereecken, Niklas Linde and Joseph Doetsch</i>
16:30-16:50	Full 3-D Electromagnetic Subsurface Imaging using Ground Penetrating Radar - <i>Ilaria Catapano, Antonio Affinito, Lorenzo Crocco, Gianluca Gennarelli and Francesco Soldovieri</i>
16:50-17:10	<i>Experimental results of a Microwave Tomography approach applied to a Differential Measurement Configuration</i> - <i>Francesco Soldovieri, Raffaele Persico, Ilaria Catapano and Gennadiy Pochanin</i>
17:10-17:30	RASCAN holographic radar for detecting and characterizing dinosaur tracks - <i>Lorenzo Capineri, Timothy Bechtel, Sergey Ivashov, Colin Windsor, Masaharu Inagaki, Vladimir Razevig and Fabiana Zandonai</i>

## Thursday July 04, 2013

<b>08:30-09:00</b>	<b>Invited Talk 1</b>
GPR case history and known physical principles - <i>D. J. Daniels, E. Utsi</i>	
<b>09:00-10:20</b>	<b>Session 4: Antennas 1</b> Chairmen: A. Giannopoulos & F. Soldovieri
09:00-09:20	Use End Reflections to Improve the Radiation Efficiency of Bow-Tie Antenna - <i>Jian Wang, Shiping Zhu and Yi Su</i>
09:20-09:40	Evaluation of an UWB Ground-Coupled Radar in the Detection of Discontinuities Using Polarization Diversity: FDTD Modeling and Experiments - <i>Florence Sagnard, Elias Tebchrany and Vincent Baltazart</i>
09:40-10:00	<i>Intrinsic modeling of radar antennas: from far-field to near-field conditions - Sébastien Lambot, Anh Phuonh Tran and Frédéric André</i>
10:00-10:20	
<b>10:00-10:20</b>	<b>Proposal for next IWAGPR2015</b>
<b>10:20-10:50</b>	<b>Coffee</b>
<b>10:50-11h30</b>	<b>Session 5: Antennas 2</b> Chairmen: S. Lambot & C. Fauchard
10:50-11:10	Ultra Wide Band TEM Horn and Reflector Antenna Designs for Down and Forward Looking Ground Penetrating Radars - <i>Ahmet Serdar Turk, Ahmet Kenan Keskin, Mustafa Dagcan Senturk, Abdullah Magat, Mehmet Burak Ozakin and Serkan Aksoy</i>
11:10-11:30	A reconfigurable stepped frequency GPR (GPR-R): the antenna subsystem - <i>Filippo Parrini, Massimiliano Pieraccini, Daniele Mecatti, Devis Dei, Giovanni Macaluso, Alessandro Spinetti, Raffaele Persico and Giovanni Leucci</i>
<b>11:30-12:30</b>	<b>Session 6: Bore-hole antennas</b> Chairmen: S. Ebihara
11:30-11:50	Singlehole Borehole Radar Measurement with a Thin Directional Borehole Radar Sonde - <i>Satoshi Ebihara, Yuta Kimura, Takaaki Shimomura and Ryota Uchimura</i>
11:50-12:10	A Directional Monostatic Borehole Radar System - <i>Matthias Böger and Albrecht Glasmachers</i>
12:10-12:30	A Robust Phase Unwrapping Method for 3D Borehole Radar Interferometric imaging - <i>Hou Qiang and Pan He Ping</i>
<b>12:30-14:00</b>	<b>Lunch</b>

<b>14:00-15:40</b>	<b>Session 7: Advanced Modelling, Processing and Inversion III</b> Chairmen: Y. Wang & A. Benedetto
14:00-14:20	Steering kernel regression: an adaptive denoising tool to process GPR data - <i>Jens Tronicke and Urs Böniger</i>
14:20-14:40	Dual Frequency Data Blending in Real-Time - <i>David Cist and Michael Jeffords</i>
14:40-15:00	Near-subsurface imaging from a multistatic/single frequency scanner - <i>Soufiane Nounouh, Christelle Eyraud, Hervé Tortel and Amélie Litman</i>
15:00-15:20	Time delay and surface roughness estimation by subspace algorithms for pavement survey by radar - <i>Meng Sun, Nicolas Pinel, Cédric Le Bastard, Vincent Baltazart, Amine Ihamouten and Yide Wang</i>
15:20-15:40	GPR and ERT combined analysis on the basis of advanced wavelet methodology: The Montagnole testing area - <i>Leonid Alperovich, Lev Eppelbaum, Valery Zheludev, Jean Dumoulin, Francesco Soldovieri, Monica Proto, Massimo Bavusi and Antonio Loperte</i>
<b>15:40-16:10</b>	<b>Coffee</b>
<b>16:10-17:10</b>	<b>Session 8: Structures / Pavements 1</b> Chairmen: T. Kind & G. Villain
16:10-16:30	GPR characterization of water transfers in Tuffeau walls - <i>Amine Ihamouten, Cédric Le Bastard, Nathalie Boutet, Géraldine Villain and Xavier Derobert</i>
16:30-16:50	Effect of penetration of water under pressure in hardened concrete on GPR signals - <i>Rosa Martínez-Sala, Isabel Rodriguez Abad and Isabel Del Val Muedra</i>
16:50-17:10	Soil Moisture Mapping using GPR for Pavement Applications - <i>Andrea Benedetto, Fabio Tosti, Bianca Ortuani, Mauro Giudici and Mauro Mele</i>
<b>17:10-17:50</b>	<b>Session 9: Buried Objects 1</b> Chairmen: L. Capineri & J.P. Balayssac
17:10-17:30	A circular survey for 3D Ground Penetrating Radar to map hidden cylinders - <i>Shiping Zhu, Jian Wang, Yi Su and Motoyuki Sato</i>
17:30-17:50	Radar for vital signs characterization: a comparison between two different frequency band systems - <i>Lesya Anishchenko, Sergey Ivashov, Ilaria Catapano, Lorenzo Crocco, Gianluca Gennarelli and Francesco Soldovieri</i>
<b>18:30-20:00</b>	<b>Sightseeing tour</b> Rendez-vous at « Machines de l'île » (GPS 47°12' 23"N, 1°33' 53"W) 2 Boulevard Léon Bureau, 44200 Nantes <a href="http://www.lesmachines-nantes.fr/">http://www.lesmachines-nantes.fr/</a>
<b>20:00-23:00</b>	<b>Gala Dinner</b> <b>Rendez-vous at Téo Restaurant</b> (GPS 47°12' 8"N, 1°34' 22"W) 21 quai des Antilles Le Hangar à Bananes 44200 Nantes phone 02 40 08 90 28; mobile: 06 73 15 36 76 <a href="http://www.restaurant-teo.fr/">http://www.restaurant-teo.fr/</a>

## Friday July 05, 2013

<b>08:30-09:00</b>	<b>Invited Talk 2</b>
Applications of Ground Penetrating Radar in Civil Engineering – COST Action TU1208 - <i>Lara Pajewski, Andrea Benedetto, Xavier Derobert, Antonis Giannopoulos, Andreas Loizos, Guido Manacorda, Marian Marciniak, Christina Plati, Giuseppe Schettini and Immo Trinks</i>	
<b>09:00-10:20</b>	<b>Session 10: Geology</b> Chairmen: D. Leparoux & L. Eppelbaum
09:00-09:20	Analysis of tectonic and karst formations as geological hazard for exploitation of flyschoid rocks by Ground Penetrating Radar, the case of Anhovo-Rodež quarry (W Slovenia) - <i>Marjana Zajc, Željko Pogačnik and Andrej Gosar</i>
09:20-09:40	The Mt. Pollino Fault (southern Apennines, Italy): GPR signature of Holocene earthquakes in a “silent” area - <i>Maurizio Ercoli, Cristina Pauselli, Emanuele Forte, Alessandro Frigeri and Costanzo Federico</i>
09:40-10:00	Ground-penetrating radar technique to investigate historic eruptions on the Mt. Etna volcano (Sicily, Italy) - <i>Pier Matteo Barone, Carlotta Ferrara, Elisabetta Mattei, Sebastian Emanuel Lauro, Cristina Proietti, Marco Viccaro and Elena Pettinelli</i>
10:00-10:20	Temporal monitoring of the soil freeze-thaw cycles over snow-cover land by using off-ground GPR - <i>Khan Zaib Jadoon, Sebastien Lambot, Marin Dimitrov, Lutz Weihermueller, Davood Moghadas and Harr Vereecken</i>
<b>10:20-10:50</b>	<b>Coffee</b>
<b>10:50-11:30</b>	<b>Session 11: Buried Objects 2</b> Chairmen: A. Ihamouten & U. Böniger
10:50-11:10	Advanced Background Subtraction Techniques for the Detection of Buried Landmines - <i>Gebremichael T. Tesfamariam and Abdelhak M. Zoubir</i>
11:10-11:30	Holographic Subsurface Radar RASCAN-5 - <i>Andrey Zhuravlev, Sergey Ivashov, Vladimir Razevig, Igor Vasiliev and Alexander Bugaev</i>
<b>11:30-12:30</b>	<b>Session 12: Structures / Pavements 2</b> Chairmen: J.M. Simonin & V. Baltazart
11:30-11:50	<i>Correlation of internal salt structures with GPR amplitudes</i> - <i>Volker Gundelach, Norbert Blindow, Ulrich Buschmann and Christina Salat</i>
11:50-12:10	Non destructive Assessment of Hot Mix Asphalt compaction with a Step Frequency Radar: Case study - <i>Cyrille Fauchard, Bruno Beaucamp and Laurent Laguerre</i>
12:10-12:30	Use of electromagnetic non-destructive techniques for monitoring the chloride ingress into concrete - <i>Géraldine Villain, Raelize Du Plooy, Amine Ihamouten, Sergio Palma-Lopes, Benoit Thauvin and Xavier Dérobert</i>
<b>12:30-14:00</b>	<b>Lunch</b>

