

The Board of Directors and the officers of the International Loran Association welcome you to the 38th Annual Convention and Technical Symposium of the organization! We know you will enjoy not only the meeting but your stay in the Portland, ME area. Thank you for your interest in Loran and your support of the ILA.

**Registration and Fees:** if you have not yet paid your registration fees for any of the activities or your guests attendance please check in at the registration desk to complete these transactions.

**Meeting Proceedings:** ILA-38 Proceedings will be published on Compact Disk media only. Cost for the proceedings is included with the full registration to ILA-38, and additional copies may be purchased separately. Check with the Registration Desk or the ILA Operations Center.

**ILA-38 Sponsors:** The Association gratefully acknowledges the sponsoring organizations and the individuals who contributed time and money toward this meeting.

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### Convention Committee, ILA-38

Chairman: Zachariah Conover, zconover@crossrate.com  
Technical Chairman: Chris Bartone, PHD, bartone@ohio.edu  
RTCM-127 Chairman: Ben Peterson, PHD, benpeterson@aol.com  
Awards: Gerard Offermans, PHD, g.offermand@relektronika.nl  
Registration: Ellen Lilley, ila@loran.org

## Convention Sponsors



## International Loran Association 38th Annual Convention and Technical Symposium

October 13-15, 2009

Sable Oaks Marriott  
South Portland, ME

*A Future With eLoran*



Tuesday October 13, 2009	
Time	Activity/Location
0800-1400	Registration/Information Desk Open <i>Foyer</i>
0800-1600	Booth Setup <i>Foyer/Salon C</i>
0900-1400	RTCM-127 Meeting <i>Salon B</i>
1400-1700	ILA Board Meeting <i>Cape Elizabeth Room</i>
1800	Bus Departs for Welcome Reception <i>Hotel Entrance</i>
1830-2030	Welcome Reception <i>Gulf of Maine Research Institute (GMRI)</i>
2030	Bus Departs for Hotel <i>GMRI Entrance</i>
Wednesday, October 14, 2009	
<i>All General Sessions are in Salon D</i>	
Time	Activity/Location
0700	Speakers Breakfast <i>Cape Elizabeth Room</i>
0800	Registration/Information Desk Open <i>Foyer</i>
0830	Opening Remarks: Zachariah Conover, Dr. Chris Bartone, Langhorne Bond
0900	Senator Susan M. Collins Remarks <i>(invited)</i>
0930	Round Table: eLoran Markets <i>Moderator: Sally Basker</i>
	Panelists: Chuck Schue, Erik Johanessen, Arthur Helwig, Charles Curry, Zachariah Conover
1030	Break/Booths are Open <i>Foyer</i>
1045	<b>Session 1: World Status Updates</b>
	Norwegian Loran Activities and Status Update Roger Aarmo, Norway
	United States LORAN-C Performance and Automated Loran System Implementation <i>Captain Ed Thiedeman, USCG</i>
	UK eLoran Status <i>Dr. Sally Basker, GLA of UK and Ireland</i>

Time	Activity/Location
	FERNS Update <i>Prof. Seung-Gi Gug, Korea Maritime University</i>
1230	Lunch <i>Salon E</i>
1330	<b>Session 2: eLoran System Perspective</b> <i>Chair: Dr. Greg Johnson, Alion Science and Tech.</i>
	Perspective on eLoran <i>James Doherty, IDA</i>
	Loran Update from the Hill <i>Erik Johanessen, Megapulse</i>
	eLoran + GNSS: Robust, Resilient & Cost-effective PNT <i>Dr. Sally Basker, GLA of UK and Ireland</i>
1500	Break/Booths are Open <i>Foyer</i>
1530	<b>Session 3: eLoran System Level Considerations</b> <i>Chair: Dr. Arthur Helwig, Reelektronika</i>
	Crime, GNSS Jamming and Enhanced Loran <i>Prof. David Last, Consultant</i>
	Robust Geotag Generation Algorithms from Noisy Loran Data for Security Applications <i>Di Qiu, Stanford University</i>
	Cross-Rate Interference and Implications for Core eLoran Service Provision <i>Jan Šafář, GLA of UK and Ireland</i>
1800-2000	<b>Cocktail Reception/Booths Open</b> <i>Salon C/Foyer</i> <b>Sponsored by Nautel and UrsaNav</b>
Thursday, October 15, 2009	
<i>All General Sessions are in Salon D</i>	
Time	Activity/Location
0700	Speakers Breakfast <i>Cape Elizabeth Room</i>
0800	Registration/Information Desk Open <i>Foyer</i>
0830	<b>Session 4: System Performance Evaluation</b> <i>Chair: Di Qiu, Stanford University</i>
	GAARDIAN - A UK Government Funded R&D Project Using eLoran to Investigate GPS Interference <i>Charles Curry, Chronos Technologies</i>
	eLoran Processing Algorithm Development for GAARDIAN Remote Probes <i>Chris Hargreaves, GLA of UK and Ireland</i>
	eLoran Performance in the Orkney Archipelago <i>Dr. Paul Williams, GLA of UK and Ireland</i>
1000	Break/Booths are Open <i>Foyer</i>

Time	Activity/Location
1030	<b>Session 5: eLoran Transmissions</b> <i>Chair: Erik Johanessen, Megapulse</i>
	Operational Next Generation Transmitter Technology for (e)LORAN <i>Tim Hardy, Nautel</i>
	A Small Antenna for a Temporary Short Range Loran System <i>John Pinks, Nautel</i>
	Designing, Developing, and Deploying a Temporary eLoran System <i>Chuck Schue, UrsaNav</i>
	Integrated GPS-eLoran simulator <i>Dr. Greg Johnson, Alion Science and Technology</i>
1200	Lunch <i>Salon E</i>
1330	<b>Session 6: Loran Receiver &amp; Antenna Technologies Part 1</b> <i>Chair: Linn Roth, Locus</i>
	Current and foreseeable Loran system capabilities <i>Dr. Arthur Helwig, Reelektronika</i>
	Position, Velocity and Heading Solutions through the Integration of Independent Positioning Systems <i>Dr. David Rubenstein, Maine Aerospace Consulting</i>
	Performance Results of the eLGPS1110 <i>Basavaraj Hiremath, CrossRate Technology</i>
	Analysis and Modeling of Skywave Behavior <i>Dr. Sherman Lo, Stanford University</i>
1500	Break/Booths are Open <i>Foyer</i>
1530	<b>Session 7: Loran Receiver &amp; Antenna Technologies Part 2</b> <i>Chair: Linn Roth, Locus</i>
	A Miniaturized Loran H-field Antenna for Handheld Devices <i>David Lorenzo, Stanford University</i>
	RTCM SC-127: Maritime eLoran Receiver Minimum Performance Standards <i>Dr. Ben Peterson, Peterson Integrated Geopositioning</i>
	Defining Primary, Secondary, Additional Secondary Factors for RTCM Minimum Performance Specifications <i>Dr. Sherman Lo, Stanford University</i>
1800	Bus Departs for Formal Dinner <i>Hotel Entrance</i>
1830	Formal Dinner <i>Portland Yacht Services (PYS)</i>
2030	Bus Departs for Hotel <i>PYS Entrance</i>