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Instructors for GNSS Solutions® Tutorials Sept 20-21, 2010,  
prior to ION GNSS 2010, Oregon Convention Center, Portland, Oregon, USA  
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**Dr. Chris G. Bartone, P.E.** is a professor at Ohio University with over 27 years of profession experience in communications, navigation, and surveillance systems. He received his Ph.D.EE from Ohio University in 1998, a MSEE from the Naval Postgraduate School in 1987, and BSEE from Penn State in 1983. He previously worked for the Naval Air Warfare Center, performing RDT&E on CNS systems. Chris received the RTCA William E. Jackson Award in 1998 for his outstanding contribution to aviation in the area of DGPS. At Ohio University, Dr. Bartone has developed and teaches a number of GPS, radar, and wave propagation and antenna classes. His research concentrates on all aspects of navigation. . He is a member of the ION, the IEEE, and the International Loran Association. He is very active with the ION; chaired several programs; served on the ION Council as Chair, ION Outreach Committee; Eastern Region VP, Air Representative, and currently the Editor, ION Virtual Navigation Museum. Chris is a licensed profession engineer in the state of Ohio, and President of GNSS Solutions® Ltd.



**Thomas A. Stansell** is a pioneer of satellite navigation with over 50 years of experience, beginning in 1960 at the Johns Hopkins University Applied Physics Laboratory where he helped develop the Transit Navigation Satellite System, particularly the world's first surface ship satellite navigation receiver and the world's first portable Doppler geodetic survey instrument. At Magnavox, as a staff VP, he led developments including firsts in: microprocessor-based satellite navigation and survey receivers, multi-channel GPS/GLONASS receivers, codeless tracking of L2, and "all-digital" GPS receivers As a VP of Leica Geosystems, he continued GPS technology development, including patents for GPS multipath mitigation. Now as an independent consultant, he has played a key role and contributed crucial ideas to the design of all modernized GPS signals: L5, L2C, M-code, and L1C, with lead roles for L2C and L1C. He is an ION Fellow and has received multiple awards, including: GPS JPO Navstar, ION Weems, IEEE PLANS Kershner, and ION Kepler. Tom is an influential GPS consultant advising the GPS Wing and other organizations on GNSS modernization issues.

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	<p><b>Dr. Sergey G. Revnivykh</b> is Deputy Director General of the Central Research Institute of Machine Building, leading institute of Federal Space Agency, head of PNT Analysis and Information Center. He is a member of the management of the Federal GLONASS Program. Graduated Moscow Aviation Institute, flight dynamic engineer in 1978. Received Ph.D. degree in Moscow Aviation Institute in 2006.</p>
	<p><b>Dmitry Marareskoul</b> after graduated from Tomsk University of Automatic Control System and Radioengineering start worked for ISS Reshetnev as a system engineer and was involved in system development of GLONASS. Since 2000 he is a chief of onboard autonomous GNSS navigation sector. His sectors had developed and launch a GLONASS/GPS onboard autonomous navigation system for GEO, HEO and LEO satellites.</p>
	<p><b>Arcady E. Tyulyakov.</b> Deputy General Director of the Russian Institute of Radionavigation and Time, head of the GLONASS synchronization systems in RIRT. Graduated the Leningrad Aviation Institute in 1968.</p>
	<p><b>Alexey L. Pokhaznikov.</b> Deputy General Director of the Russian Institute of Radionavigation and Time, he is the head of the international affairs of RIRT. Graduated the Leningrad Mechanical Institute in 1979. Flight vehicle engineer.</p>
	<p><b>Dr. Andrey V. Veitsel</b> graduated from Moscow Aviation Institute in 2000 year in Russia, Moscow as an electronics systems engineer. Since 1998 he has been working in the field of satellite navigation technology for digital signal processing of GPS/GLONASS receivers and joined the theoretical department of Javad Positioning Systems. He received his Ph.D. in 2004. Since 2003 he works as a system design team leader in Topcon Positioning System. His work focuses on GNSS receivers design, signal processing for tracking and multipath mitigation. He is the author and co-author of more than 30 publications and patents. He has a part-time job as an associate professor in Moscow Aviation Institute.</p>

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**Dr. Andrey M. Finkelstein** graduated from the Physical Faculty of the Leningrad University in 1966 as a specialist of theoretical physics. Andrey Finkelstein is the director-organizer and the director of the Institute of Applied Astronomy since 1988. In 1990 he was given Doctor of Sciences academic status, 1999 – rank of professor, 2003 – the member of the Russian Academy of Sciences. He is the head of the Radio Astronomy Department of the St. Petersburg Electrotechnical University since 2003. He is the author and co-author of more than 300 publications including 6 monographs.



**Alexander O. Gurko** is General Director of the Joint Stock Company “Navigation-Information Systems” (JSC “NIS”), the first main federal network operator. He is a Vice-Chairman of the Association Board of GLONASS/GNSS Forum. Graduated from Moscow Aviation Institute, the Department of Space and Aircraft in 1994. Received a second degree in the Higher School of Economics in 1996. Received an MBA degree (program “Master of Business Administration”) in 1999.



**Dr. Gary J. Edwards, J.D.**, is a partner in Haynes and Boone's Intellectual Property Practice Group in San Jose, CA, USA. He has extensive experience in patent, patent litigation, patent prosecution, and IP licensing. He has represented clients in various matters related to development, enforcement, defense, and monetization matters. Dr. Edwards works with high technology companies to protect their technology, build intellectual property portfolios, assert those portfolios, and defend against the assertions of competitors. He has a strong background in Physics and Materials Science and has broad experience in protecting diverse technologies including semiconductor devices, semiconductor processing, telecommunications, nanotechnologies (e.g., MEMS), electronic circuits, imaging technologies, remote sensing devices, and information technologies. Dr. Edwards received his Juris Doctor degree from The University of Pittsburgh School of Law, 1997, his Ph.D. and M.S. in Physics from The University of Connecticut, 1989, and 1982, respectively, and a B.S., Physics, from The University of Vermont, cum laude in 1981. Dr. Edwards has co-authored 28 publications for refereed journals and holds bar membership with

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	the California Bar Association and the U.S. Patent and Trademark Office.
	<p><b>Steve Levitan, J.D.</b>, a partner in the Intellectual Property Practice Group in the San Jose, CA, USA office of Haynes and Boone, specializes in intellectual property litigation and licensing. Steve has extensive experience in patent, trademark, copyright, trade secret, antitrust, unfair competition, false advertising, and technology contract disputes. His litigation experience encompasses trial and appellate work in federal courts, California and Oregon state courts, and the International Trade Commission, as well as arbitrations conducted by the International Chamber of Commerce and the American Arbitration Association. Steve has representative experience with a wide variety of U.S. and international hardware and software technologies including GPS. Steve received his Juris Doctor degree from The University of Michigan Law School, <i>cum laude</i>, and a B.A. from Stanford University. He is a member of the State Bar of California and the Santa Clara County Bar Associations.</p>

	<p><b>Dr Tony Pratt</b> has over 40 year of experience with Signal Processing and GPS. He graduated with a B.Sc. and Ph.D. in Electrical Engineering from Birmingham University, UK in 1967. He has held teaching positions at Loughborough University, UK, Yale University; IIT, New Delhi, University of Copenhagen, and holds a full special professorship at University of Nottingham; his teaching is primarily in signal processing, electronics, probability theory, and satellite navigation system design. He has worked for or consulted to industry for Navstar Ltd, Peek, Parthus, QinetiQ Ltd, UK, Cambridge Positioning Systems, now part of the CSR plc group, and European Space Agency. Dr. Pratt is a Consultant to the UK Government in the development of the Galileo Satellite System and has played key roles in the signal design and international negotiations. He runs two companies, OrbStar Consultants and OrbStar Ltd providing various services to the GNSS sector. Dr Pratt has published numerous papers on signal processing, sonar, and satellite navigation. He published more than 50 papers and holds over 40 patents.</p>
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**Dr. Christophe Macabiau** graduated as an electronics engineer in 1992 from the ENAC (Ecole Nationale de l'Aviation Civile) in Toulouse, France. Since 1994, he has been working on the application of satellite navigation techniques to civil aviation. He received his Ph.D. in 1997 and has been in charge of the signal processing lab of the ENAC since 2000. His research now also applies to vehicular, pedestrian and space applications, and includes advanced GNSS signal processing techniques for acquisition, tracking, interference and multipath mitigation, GNSS integrity, as well as integrated GNSS-inertial systems and indoor GNSS techniques.



**Dr. Olivier Julien** is an assistant professor with the Signal Processing and Telecommunications laboratory of ENAC, Toulouse, France. He received his PhD from the Department of Geomatics Engineering at the University of Calgary, Canada. He is involved in many R&D projects including GNSS receiver design, multipath and interference mitigation techniques, and GNSS interoperability. He is the recipient of the 2006 Bradford W. Parkinson award.



**Dr. Sanjeev Gunawardena** is a Senior Research Engineer and Co-Principal Investigator with the Ohio University Avionics Engineering Center (AEC). He is the primary developer of multi-frequency instrumentation-grade GNSS receiver RF front-ends, field programmable gate array (FPGA)-based next-generation GNSS processors, and high performance multi-sensor data collection systems for scientific research at AEC. In 2002, he demonstrated the first-documented realtime continuously-processing implementation of the FFT-based GNSS parallel code correlation algorithm and the first known realtime reconfigurable GPS receiver employing both time and frequency-domain processing in its baseband processor. He was awarded the 2007 RTCA William E. Jackson Award for his outstanding contribution to aviation for the application of transform-domain GNSS receiver technology for high-fidelity GPS performance monitoring. Dr. Gunawardena received B.S. in engineering physics, B.S.E.E., M.S.E.E. and Ph.D. in electrical engineering from Ohio University. He has taught courses in ASIC design,

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	VHDL, FPGA design, GNSS signal processing and advanced satellite navigation.
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**Dr. Matthew Lashley** is a research engineer with Navigation Technology Associates, Inc. and a former member of the GPS and Vehicle Dynamics Lab (GAVLAB) at Auburn University. He received his B.S., M.S., and Ph.D. from Auburn University in electrical engineering in 2004, 2006, and 2009, respectively. His research at has focused on vector tracking algorithms and deep integration architectures for GPS receivers, and his areas of research interest are navigation, signal processing, radar, and optimal estimation.



**Dr. Jiti Gupta** received his BS (ECE) from Punjab University, India, in 1975, his MS (EE) from the Indian Institute of Technology, Kanpur; India in 1977 and his Ph.D. from The Ohio State University in 1982. Since 1979 he has been with the Department of Electrical and Computer Engineering of The Ohio State University. He currently holds the position of a Research professor. He is a Fellow of the IEEE, a Fellow of the Institute of navigation (ION), and an Edmond S. Gillespie Fellow of the Antenna Measurement Techniques Association (AMTA). He is the recipient of 2007 AMTA Distinguished Achievement Award. He has also received The Ohio State University College of Engineering Lumley Research Award for 1991, 1998, and 2005. Dr. Gupta's research interests include radar imaging, EM scattering, compact range technology, adaptive antennas and target identification. He has worked extensively on adaptive antenna arrays for radio frequency interference suppression and multipath mitigation in communication systems and navigation systems. Currently, he is working on GPS antennas and antenna electronics.

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**Dr. Kevin Dutton** received his BS in Aeronautical Engineering from Rensselaer Polytechnic Institute in 1988 and his MS degree in Astronautics from the George Washington University in 1993. In 1989 he began work at NASA Langley Research Center on advanced spacecraft trajectory optimization. In 1993 he worked in the area of GPS to obtain his PhD in EE from Ohio University in 2003, studying various aspects of the GPS and INS, including attitude determination, relative navigation, and tightly coupled GPS/INS Kalman filter design. In 2004, Dr. Dutton accepted a position with Honeywell in Clearwater, Florida as the lead designer of the Sea-Based JPALS GPS/INS relative navigation Kalman filter. He is also involved in the Navy Unmanned Combat Air System (UCAS) ship system design and inertial sensor modeling and simulation for the Joint Strike Fighter program.



**Dr. David Bevly** received his B.S. from Texas A&M University in 1995, M.S. from Massachusetts Institute of Technology in 1997, and Ph.D. from Stanford University in 2001 in mechanical engineering. He joined the faculty of the Department of Mechanical Engineering at Auburn University in 2001 and is currently an associate professor. Dr. Bevly's research focuses on vehicle dynamics as well as modeling, control, and navigation of ground vehicle systems. Specifically, Dr. Bevly has developed methods for identifying critical vehicle parameters using GPS and inertial sensors as well as algorithms for control of off-road vehicles including participation in the past DARPA Grand Challenges.



**Dr. Andrey Soloviev** is a Research Assistant Professor at the University of Florida. Previously he served as a Senior Research Engineer at the Ohio University Avionics Engineering Center. He holds B.S. and M.S. in Applied Mathematics and Physics from Moscow University of Physics and Technology and a Ph.D. in Electrical Engineering from Ohio University. His current research focuses on all aspects of multi-sensor integrated navigation and applications of synthetic aperture signal processing techniques for GNSS. Andrey currently serves as the ION Land Representative. He received the RTCA William E. Jackson Award in 2002 for the development of frequency-domain INS algorithms and the ION Early Achievement Award in 2006 for outstanding contributions to deeply integrated Inertial/GPS and advanced GPS signal

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**Dr. Mohinder S. Grewal, P.E.**, coauthored Kalman Filtering: Theory & Practice Using MATLAB Third Edition (Wiley & Sons, 2008) and Global Positioning Systems, Inertial Navigation, & Integration Second Edition (Wiley & Sons, 2007). Dr. Grewal has consulted with Raytheon Systems, Geodetics, Boeing Company, Lockheed-Martin, and Northrop on application of Kalman filtering. He has published over 60 papers in IEEE and ION refereed journals and proceedings, including the Institute of Navigation's Redbook. Currently, Dr. Grewal is Professor of Electrical Engineering at California State University, Fullerton, in Fullerton, California, where he received the 2009 Outstanding Professor award. He is an architect of the GEO Uplink Subsystem (GUS) for the Wide Area Augmentation System (WAAS), including the GUS clock steering algorithms, and holds two patents in this area. His current research interest is in the area of application of GPS, INS integration to navigation. Dr. Grewal is a member of the Institute of Navigation, Senior Member of IEEE, and a Fellow of the Institute for the Advancement of Engineering.

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