ION 2016 FELLOW MEMBERSHIPS

The (US) Institute of Navigation (ION) announced the recipients of the 2016 fellow memberships during the ION International Technical Meeting (ITM) and Precise Time and Time Interval Systems and Applications (PTTI) in Monterey, California held from 25-28 January.

Election to Fellow membership recognizes the distinguished contributions of The Institute of Navigation members to the advancement of the technology, management, practice and teaching the arts and science of navigation; and/or lifetime contributions to the Institute:

**Dr Anthea J Coster** has been elected for contributions to the development of global GPS TEC database and for utilizing GPS measurements for ionospheric and space weather studies.

**Karl Kovach** has been elected for significant contributions to the development of GPS, its signals, interface and specifications and performance standards.

**Dr. Gary McGraw** has been elected for sustained contributions to the development of high accuracy and high-integrity Positioning, Navigation and Timing technologies for a variety of military and civil aviation applications.

ION ANNUAL AWARD WINNERS

The Institute of Navigation also announced winners of its 2015 Annual Awards at the ION International Technical Meeting.

This Awards Programme is sponsored by The Institute of Navigation to recognize individuals making significant contributions or demonstrating outstanding performance relating to the art and science of navigation:

**Dr Alexander A Trusov** received the Early Achievement Award for research, development and demonstration of ultra-low dissipation inertial MEMS sensors that may enable low-cost IMUs with North-finding and inertial navigation grade performance. The Early Achievement Award is presented in recognition of outstanding contributions made early in one’s career.
Captain Nicholas Rayl received the Superior Achievement Award for performing above and beyond the call of duty navigating hostile airspace to engage a hostile anti-aircraft artillery (AAA) piece that represented a threat to aircraft. The Superior Achievement Award is presented to an individual demonstrating outstanding accomplishments as a practicing navigator.

Dr Ramsey, M Faragher and Dr Robert K Harle received the Dr Samuel M Burka Award for their paper Towards and Efficient, Intelligent, Opportunistic Smartphone Indoor Positioning System published in the Spring 2015 issue of NAVIGATION: Journal of The Institute of Navigation, Vol. 62, No. 1, pp. 55-72. The Dr Samuel M Burka Award recognizes outstanding achievement in the preparation of a paper contributing to the advancement of the art and science of positioning, navigation and timing.

Dr Inder J Gupta received the Captain P V H Weems Award for pioneering theoretical and experimental work on anti-jam antennas and signal processing techniques for interference suppression in GNSS receivers. The Captain P V H Weems Award is presented to individuals for continuing contributions to the art and science of navigation.

Dr James L Garrison received the Tycho Brahe Award for contributions to developing and applying GNSS and other signals-of-opportunity, reflectometry methods for space-based and airborne remote sensing, in oceanography, agriculture, and hydrology. The Tycho Brahe Award is presented to recognize outstanding contributions to the science of space navigation, guidance and control.

Carolyn McDonald received the Norman P Hays Award for the development and production of over thirty years of engineering tutorials in the field of satellite navigation, timing and inertial navigation; and for development and sustained support of the ION’s conference programs. The Norman P Hays Award is given in recognition of outstanding encouragement, inspiration and support contributing to the advancement of navigation.

Tim Murphy received the Thomas L Thurlow Award for significant contributions to Global Navigation Satellite Systems for aviation. The Thomas L Thurlow Award recognizes outstanding contributions to the science of navigation.

Donald Mitchell received the Distinguished Service Award for his coordination between the PTTI user community and hardware developers, and contributions to the organization and operation of the PTTI meeting. The Distinguished
Service Award is presented for extraordinary service to The Institute of Navigation.

**Francine Vannicola** received the Distinguished Service Award for representing the timing community and facilitating the incorporation of the Precise Time and Time Interval (PTTI) Systems and Applications Meeting into the ION’s meeting programs. The Distinguished Service Award is presented for extraordinary service to The Institute of Navigation.

**About ION**
The Institute of Navigation is one of the world’s premier professional societies dedicated to advancement of the art and science of positioning, navigation and timing. The Institute is a national organization whose membership spans worldwide. Additional information about the ION can be found at [http://www.ion.org](http://www.ion.org).

Picture caption
*From left to right: Karl Kovach, Dr Anthea J Coster, Dr Gary McGraw.*