
Bridge the gap between theoretical education and practical work experience with this hands-on guide to GNSS. A clear, practical presentation of GNSS theory is provided, with emphasis on GPS, GLONASS, and QZSS, together with the key applications in navigation and geophysics.

Whether you are a practicing engineer, a researcher, or a student, you’ll gain a wealth of insights from the authors’ 25 years of experience in the GNSS field. You’ll also get hands-on user experience with a bundled real-time software receiver and signal simulator, enabling you to create your own GNSS lab for research or study.

Numerous practical examples and case studies are provided, which you can explore using the real signal data provided or generated by you using the signal simulator. Also covered are issues related to GNSS signal propagation and its use in geophysics, including ionosphere mapping, atmosphere monitoring, scintillation measurements, earthquake prediction, and more.

Ivan G. Petrovski works on GNSS applications development at iP-Solutions, Japan. He has been involved in the GNSS field for more than 25 years. Prior to working at iP-Solutions, he worked as Associate Professor with Moscow Aviation Institute (MAI), as Japan Science and Technology Agency (STA) Fellow with Japan National Aerospace Laboratory (NAL), directed the Institute of Advanced Satellite Positioning in Tokyo University of Marine Science and Technology (TUMST), and led GNSS-related R&D for DX Antenna and GNSS Technologies Inc. He received his Ph.D. in aerospace navigation from MAI in 1993.

Toshiaki Tsujii is the Head of Navigation Technology Section, Aviation Program Group, at the Japan Aerospace Exploration Agency (JAXA), where he has been investigating aspects of satellite navigation and positioning for more than 20 years. He was at the Satellite Navigation and Positioning (SNAP) Group, University of New South Wales, Australia, as a visiting research fellow from 2000 to 2002. He received his Dr. Eng. in applied mathematics and physics from Kyoto University in 1998.