

H. Bâki İz

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Academic Background

Ph.D., Geodetic Science, The Ohio State University, Columbus, Ohio, 1987.

M.Sc., Geodetic Engineering, The Black Sea Technical University, Trabzon, Turkey, 1976.

B.Sc., Mapping Engineering, The Black Sea Technical University, Trabzon, Turkey, 1975.

Current Research Interests

Global mean sea level variations, kinematic geodesy.

Teaching Experience

- Professor, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, July 2010 – to present. Teaching in the areas of site surveying, spatial data analysis and mining, geospatial data mining and knowledge discovery, satellite and physical geodesy, geodetic control.
- Associate Professor, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, June 1995 – June 2010. Taught in the areas of spatial data analysis and mining, geospatial data mining and knowledge discovery, satellite and physical geodesy, geodesy, geodetic control, deformation analysis, analysis of observations, advanced analysis of observations, satellite positioning, mathematics for geomatics, site surveying, and computing.
- Assistant Professor, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, January 1995 – June 1995. Taught in the areas of geodesy and geodetic control.

Professional Experience

- Astronomer, U.S. Naval Observatory, Department of Earth Orientation, Washington DC, June 1999 – May 2000. Involved in the analyses of GPS data for improved orbit predictions and the VLBI data.
- Scientist, Hughes STX Corporation, Greenbelt, Maryland, June 1994 - December 1994. Involved in analyzing COBE (Cosmic Background Explorer) DIRBE (Diffuse Background Infrared Experiment) instrument calibration and modeling systematic variations in time varying photometry. The project shared 2006 Nobel Prize in Physics.
- Senior Engineer, Hughes STX Corporation, Greenbelt, Maryland, May 1993 - June 1994. Analyzed the Navy Satellite Surveillance Program orbit analysis programs for the implementation of a Kalman filter approach. Task leader for the vector magnetometer calibration analysis for the GAMES mission. Also involved in the development of a weighted parameter solution to the Earth's gravity field using SLR, satellite altimetry, and surface gravity data.
- Senior Engineer, Hughes STX Corporation, Greenbelt, Maryland, July 1991 – May 1993. Involved in the analysis of satellite altimetry data over the Mediterranean region. Task leader for the analysis of the VLBI baseline measurement temporal variations and earthquake occurrences, for the error analysis of ambient geomagnetic field recovery from ARISTOTELES magnetometer measurements and for the analysis of polar motion data and earthquake occurrences for the presence of a stochastic relationship between the two events. Task leader for the analysis and evaluation of the Goddard Earth Models (GEM) and the error analysis of the Lunar Scout Mission for the recovery of the lunar gravity field from satellite-to-satellite radio tracking data.
- Senior Engineer, ST Systems Corporation, Lanham, Maryland, July 1989 – July 1991. Task leader for the analysis and evaluation of GEM solutions, and for the analysis of the Viking I and II and Mariner 9 orbit perturbations.
- Senior Analyst/Programmer, ST Systems Corporation, Greenbelt, Maryland, May 1987 – June 1989. Task leader for the error analysis of Mars Observer Mission data for the recovery of Martian gravity field and for the design and error analysis of a space borne gravity gradiometry mission for the determination of the Earth's gravity field.
- Project Leader, The Mineral Exploration Research Institute of Turkey, Ankara, May 1976 – June 1978. Established several tiltmeter stations to monitor vertical crustal movements in tectonically active western Turkey. Designed and surveyed horizontal control networks along the seismically active North Anatolian fault zone in Turkey.

Refereed Publications

- İz H.B., L. Berry, M. Koch, 2011: Reducing Uncertainty in Regional Sea Level Rise Projections with Multiple Station Local Tide Gauge Data (under review).
- İz H.B., X.L. Ding, C.K. Shum, C.L. Dai, 2011: Polyaxial Figures of the Moon, *Journal of Geodetic Science*, 1(4), pp 348-354.
- İz H.B., C.K. Shum, Y.Q. Chen, C.L. Dai, 2011: An Improved Geometrically Best Fitting Lunar Figure from Chang'E-1 and SELENE Laser Altimetry, *Journal of Applied Geodesy*, Vol 5, pp 1-12.
- İz H.B., Y.Q. Chen, X.L. Ding, B.A. King, C.K. Shum, C. Wu, M. Berber, 2011: Assessing Consistency of Chang'E-1 and SELENE Reference Frames using Nearly-cocated Laser Altimetry Footprint Positions, *Journal of Geodesy*, DOI 10.1007/s00190-011-0495-6.
- İz H.B., H.M. Ng, 2011: Empirical Modeling and Impact of Transient Effects on the Mean Sea Level Trend Estimates from the Global Tide Gauge Data, *Journal of Geodetic Science*, 1(3), pp 221-232.

- İz H.B., C.K. Shum, X.L. Ding, C.L. Dai, 2010: Orientation of the Geometrically Best fitting Triaxial Lunar Ellipsoid with Respect to the Mean Earth/Polar Axis Reference Frame, *Journal of Geodetic Science*, 1(1), pp 52–58.
- Fok H.S., H. Baki İz, C. K. Shum, Y Yi, O. Andersen, A. Braun, Y. Chao, G. Han, C. Y. Kuo, K. Matsumoto, Y.T. Song, 2010: Evaluation Of Ocean Tide Models Used For Jason-2 Altimetry Corrections, *Marine Geodesy*, 33(S1) pp 285–303.
- İz H.B., Y.Q. Chen, B.A. King, X.L. Ding, C. Wu, 2009: Deformation Analysis of the Unified Lunar Control Networks, *Journal of Applied Geodesy* Vol. 3, pp 231–238.
- İz H.B., 2009: New Parameters of Geometrically Best Fitting Lunar Figures, *Journal of Applied Geodesy*, Vol. 3, pp 155–162.
- İz H.B., 2008: Polar Motion Modeling, Analysis, and Prediction with Time Dependent Harmonic Coefficients *Journal of Geodesy*, Vol. 82, pp 871–881.
- Pang W.T., H.S. Fok, and H.B. İz, 2008: Mapping Impervious Surface Areas from GIS Planimetric Data, *Survey Review*, Vol. 40, No. 308, pp 118-115.
- Fok H.S., H.B. İz and B. Schaffrin, 2008: Comparison of Alternative Geodetic Network Densification Solutions, *Survey Review*, Vol. 41, No. 311, pp 44-56.
- İz H.B. and H.S. Fok, 2007: Use of Bloom’s Taxonomic Complexity in Online MC Tests in Geomatics Education, *Survey Review*, Vol. 39, pp 227-237.
- İz H.B., 2006: Differencing Reveals Hidden Changes in Baseline Time Series, *Journal of Geodesy*, Vol. 80, No. 5, pp 259–269.
- İz H.B., 2006: How do Unmodeled Systematic MSL Variations Affect Long Term Sea Level Trend Estimates from Tide Gauge Data? *Journal of Geodesy*, Vol. 80, No. 1, pp 40-46.
- Tse C.M. and H.B. İz, 2006: Deflection of the Vertical Components from GPS and Precise Leveling Measurements, *Journal of Surveying Engineering*, Vol. 132:3, pp 97-100.
- İz H.B. and H.M. Ng, 2005: Are the Global Tide Gauge Data Stationary in Variance? *Marine Geodesy*, No. 3, pp 209-217.
- Fok H.S., H.B. İz, 2003: A Comparative Analysis of the Performance of Iterative and Non-iterative Solutions to the Cartesian to Geodetic Coordinate Transformation, *Journal of Geospatial Engineering*, Vol. 5, No. 2, pp 61-74.
- Schaffrin B. and H.B. İz, 2002: BLIMPBE and its Geodetic Applications; in: *Vistas for Geodesy in the New Millennium*. J. Ádám/K. Schwarz (eds.), Springer, Berlin, pp 377-381.
- Wang J., H.B. İz and C. Lu, 2002: Dependency of GPS Positioning Precision on the Station Location, *GPS Solutions*, Vol.6, No. 1-2, pp 91-95.
- İz H.B. and B.A. Archinal, 2002: Compatibility of VLBI Measurements from Different Networks Using an Analysis of Variance Model and Their Impact on Baseline Rates, *Journal of Geodetic Society of Japan*, Vol. 48, No. 1, pp 21-33.
- İz H.B. and C.K. Shum 2000: Mean Sea Level Variation in the South China Sea from Four Decades of Tidal Records in Hong Kong, *Marine Geodesy*, Vol. 23, No. 4, pp 221-233.
- Liu, Y., Y. Chen, H.B. İz, 2000: Precision of Precipitable Water Vapor from Radiosonde Data for GPS Solutions, *Geomatica*, vol. 54 No. 2, pp 171-175.
- Liu, Y., H.B. İz, Y. Chen, 2000: Calibration of Zenith Hydrostatic Delay Model for Local GPS Applications, *Radio Sci.* Vol. 35, No. 1, pp 133-140.
- İz H.B. M. Ge, E. Mok, 2000: The Stochastic Estimation of Satellite Clock Correction Information in WADGPS, *Geo-spatial Information Science*, Vol. 3, No. 1, pp 66-69.
- İz H.B. J. Wang, and Y. Chen, 1999: A Regional GPS Network Solution for Monitoring Deformations of the Southeastern Eurasian Plate, *GPS Solutions*, Vol.2, No.4, pp 44-51.
- İz H.B. and Y. Chen, 1999: VLBI Rates with First Order Autoregressive Disturbances, *Journal of Geodynamics*, Vol. 28, No. 2-3, pp 131-145.

- Wang, J., H.B. İz, 1999: A Practical GPS Network Adjustment Method, *Survey Review*, Vol. 35, No. 272. pp 127-133.
- İz H.B., Y. Chen, 1999: Tailored Seven-Parameter Datum Transformation Model from Locally Distributed Data, *Journal of Surveying Engineering*, Vol. 125, No. 1, pp 25-35.
- İz H.B., M. Ge, and Y. Chen, 1998: A Grid Point Search Algorithm for Fast Integer Ambiguity Resolution, *Journal of Geodesy*, Vol. 72, Issue 11, pp 639-643.
- Xiufeng, H., Chen Y., H.B. İz, 1998: A Reduced Order Model for Integrated GPS/INS, *IEEE AES Systems Magazine*, Vol. 13, No. 3, pp 40-45.
- İz H.B., 1994: A Quick Look into the Two-Dimensional Power Spectrum of a Patch on the Sky. *HSTX Technical Report, prepared for GSFC - CDAC, No. NASA: 3049-0905-40.*
- İz H.B., T. Kelsall, 1994: Modeling and Analysis of Peak Transit DIRBE Calibration. *HSTX Technical Report, prepared for GSFC - CDAC, No. NASA: 3049-0905-40.*
- İz H.B., T. Kelsall, 1994: Random DIRBE Photometry Errors as Inferred from the Analysis of Time Probes. *HTX Technical Report, prepared for GSFC - CDAC, No. NASA:3049-0905-40.*
- Lerch F.J., H.B. İz, J.C. Chan, 1993: Gravity Model Solution Using SLR Data Based upon Eigenvalue Analysis: Alternative Methodology, *Contributions of Space Geodesy to Geodynamics: Earth Dynamics, Geodynamics 24*, pp 213-219.
- Lerch F.J, R.S. Nerem, B.H. Putney, S.M. Klosko, G.B. Patel, R.G. Williamson, H.B. İz, J.C. Chan, E.C. Pavlis, 1993: Improvements in the Accuracy of Goddard Earth Models (GEM), *Contributions of Space Geodesy to Geodynamics: Earth Dynamics, Geodynamics 24*, pp 191-212.
- İz H.B., 1993: A Preliminary Error Analysis of the Gravity Field Recovery from a Lunar Satellite-to-Satellite Tracking Mission. *Bulletin Geodésique*, Vol. 67, pp 173-177.
- İz H.B., Langel R.A., 1993: The Influence of Unaccounted Satellite Magnetic Sources on the Recovery of the Ambient Field as Measured by the ARISTOTELES Magnetometers, *HSTX Technical Report, NAS5-30440.*
- İz H.B., Langel R.A., 1992: ARISTOTELES: Preliminary Error Analysis of the Ambient Magnetic Field Recovery in the Presence of Satellite Magnetic Field Effects, *HSTX Technical Report, No. NAS5-30440.*
- İz H.B., 1992: Conditions for Improved Prediction when Erroneous Prior Information is used about the Expected Values of Stochastic Parameters, *Manuscripta Geodaetica*, Vol.17, pp 124-134.
- İz H.B., J.C. Chan, 1991: The Influence of Zones outside of a Cap on the Radial Component of the Gravitational Tensor as Measured by a Spaceborne Gradiometer, *Manuscripta Geodaetica*, Vol. 16., pp 54-62.
- Smith D.E., F.J. Lerch, J.C. Chan, D.S. Chinn, H.B. İz, A. Mallama, G.B. Patel, 1990: Error Analysis of the Mars Gravity Field from Radio Tracking of Mars Observer, *J. Geophys. Res.*, Vol.95, No.B9, pp 14155-14167.
- İz H.B., 1987: User's Guide for the Local Gravity Anomaly and Geoid Undulation Error Analysis Programs, Prepared for NASA, NAS5-29393, G&G-8801.
- İz H.B., 1987: An algorithmic Approach to Crustal Deformation Analysis, *The Ohio State University, Geodetic Science Dept.* Report No. 382, Columbus, Ohio.
- İz H.B., 1984: Optimal Station Configurations in Determining Earth Orientation Parameters Using Satellite Laser Ranging and Range Rate Observations, Working Paper, *The Ohio State University Geodetic Science Dept.*, Columbus, Ohio.
- İz H.B., 1977: Güncel EDM Sistemlerinin Bazılarla Değerlendirilmesi (Translation), No.41, *Journal of HKMO*, Ankara, Turkey.
- Arpat, E., F. Saroglu, and H.B. İz, 1977: 1976 Çaldıran Earthquake, *Yeryuvarı ve İnsan*, 2, 29- 41.
- İz H.B., 1976: Türkiye Ulusal Jeodezi-Jeofizik Birliği Jeodezi Komisyonu (Discussion), No. 38, 39, *Journal of HKMO*, Ankara, Turkey.

İz H.B., 1976: Determination of Astrogeodetic Deflection of Vertical Components from Simultaneous Zenith Observations, *M.Sc. Thesis, The Black Sea Technical University, Dept. of Mapping Engineering, Trabzon, Turkey.*

Proceedings and Presentations

- Shum, C., H. Fok, Y. Yi, G. Wu, H. Araki, K. Matsumoto, S. Sasaki, B. Iz, X. Ding, J. Ping, and L. Wang. Lunar topography modeling using laser altimetry from multiple orbiters, Asian-Pacific Space Geodynamics Project (APSG) Workshop 2011, Melbourne, Australia, June 25–27, 2011.
- Shum, C., G. Wu, Y. Yi, S. Goossens, C. Dai, H. Fok, L. Wang, H. Araki, Y. Chen, X. Hu, B. Iz, K. Matsumoto, J. Ping, S. Sasaki, and J. Wang, Lunar topography modeling using multiple altimetry data, The 5th KAGUYA (SELENE) Science Working Team Meeting, Waseda University, Tokyo, Japan, January 17–19, 2011.
- Wu, G., C. Shum, Y. Yi, H. Fok, S. Goossens, K. Matsumoto, H. Araki, C. Dai, X. Hu, B. Iz, and the Lunar study Team, Lunar topography and regional gravity field modeling using multiple platform laser altimetry and crossovers, Geophysical Research Abstracts, EGU General Assembly, Vol. 13, EGU2011-13022-3, Vienna, Austria, April 3–8, 2011.
- Wu, G., C. Shum, H. Fok, Y. Yi, H. Araki, S. Goossens, X. Hu, B. Iz, K. Matsumoto, G. Neumann, J. Ping, S. Sasaki, J. Wang, Lunar topography modeling using laser altimetry data, Abstract # P51D-1478, Fall AGU meeting, San Francisco, CA, December 13–17, 2010.
- Iz H.B., C.K. Shum, X.L. Ding, C.L. Dai, 2011: Recent Geometric Figures of the Moon, 5th KAGUYA (SELENE) Science Working Team (SWT-5) Meeting, Tokyo Japan.
- Iz H.B., C.K. Shum, X.L. Ding, 2011: Lunar Reference Frames Realized by the Footprint Positions of Laser Altimetry Measurements, 5th KAGUYA (SELENE) Science Working Team (SWT-5) Meeting, Tokyo Japan.
- Gongyou W., C.K. Shum, Y. Yi, H.S. Fok, S. Goossens, K. Matsumoto, H. Araki, C. Dai, X. Hu, H. Baki Iz, J. Ping, S. Sasaki, K. Shang, J. Wang, L. Wang, 2011,: Lunar Topography and Regional Gravity Field Modeling Using Multiple Platform Laser Altimetry and Crossovers, EGU General Assembly, 3-8 April 2011, Vienna, Austria.
- İz H.B., C.K. Shum, Y.Q. Chen, and C.L. Dai, 2010: Sub-meter Precision Lunar Figures from Chang'E-1 and SELENE Laser Altimetry, Geophysical Research Abstracts, Vol. 12, EGU General Assembly 2010.
- Shum C.K., H. Fok, Y. Yi, H. Araki, S. Goossens, K. Matsumoto, H. Noda, J. Ping, Q. Huang, H.B. İz, Y. Chen, J. Williams, 2010: Lunar Topography Model Refinement Combining Laser Altimetry from Lunar Orbiters The 4th Kaguya (SELENE) Science Working Team Meeting, Japan.
- İz H.B., Y. Chen, B.A. King, X.L. Ding, W. Chen 2009: A Synoptic View of the New Lunar Control, ULCN 2005, as an Affine Deformation of the Old Unified Lunar Control Networks, *Sixth European Conference on Geoscientific Cartography and Information System, EUROGEO*, Bayerisches Landsamt für Umwelt, Munich, Germany, 9-12 June 2009, pp.331, Vol. 1.
- Schaffrin, B. and H.B. İz, 2008: Towards Total Kalman Filtering For Mobile Mapping, *Proceedings of the 5th International Symposium on Mobile Mapping Technology, 2007*, Padua, Italy, Proceedings, of the Intl. Archives in Photogrammetry, Remote Sensing and the Spatial Information Sciences, Vol. 36, Part 5/C55, pp 270-274.
- İz H.B, C.K. Shum, H.S. Fok, Y. Yi, 2008: Spatial-Temporal Parametric Model with Covariance Structure based on Multiple Satellite Altimetry for Predicting and Interpolating Sea Surface Heights in the South China Sea, *IAG International Symposium on Gravity, Geoid & Earth Observation*, Crete Greece.
- İz H.B, Y. Chen, 2008: Web-assisted Teaching in the Department of Land Surveying and Geoinformatics at the Hong Kong Polytechnic University. *International Workshop Sharing Good*

- practices: e-learning in Surveying, Geo-information Sciences and Land Administration*. Organized by FIG, Commission 2 and 7, and the International Inst. for Geo-information Sci. and Earth Observation (ITC), Enscheda, Holland.
- Pang, W.T., H.S. Fok, and H.B. İz, 2006: Mapping Impervious Surface Areas from GIS Planimetric Data, Presented at the 6th Asia Pacific Space Geodynamics (APSG) Workshop, Jeju, Korea.
- İz H.B, Y. Chen, H.S. Fok, A. Tsang, 2006: A Parking Inquiry System for Hong Kong Drivers, 8th Asia-Pacific Intelligent Transport System Forum: Sustainable ITS Development in Environment and logistics, Hong Kong, China.
- İz H.B. and H.M. Ng, 2006: (Invited Paper) A Recent Global Shift in the Mean Sea Level, VI Hotine-Marussi Symposium of Theoretical and Computational Geodesy: Challenge and Role of Modern Geodesy, Wuhan, China.
- Fok H.S., H.B. İz, and B. Schaffrin, 2006: Performance of Alternative Geodetic Network Densification Solutions under Biased Reference Station Coordinates of Various Precisions, VI Hotine-Marussi Symposium of Theoretical and Computational Geodesy: Challenge and Role of Modern Geodesy, Wuhan, China.
- İz H.B. and H.S. Fok 2005: An Online Multimedia MC Program for Facilitating Assessment in Large Classes, *Assessment Conference*, HKPU, Hong Kong, July 2005.
- İz H.B. and H.S. Fok, 2004: Alternative ITRF Combination Formulation Based on the Strength of Different Space Geodesy Techniques, *AGU Fall Meeting*, San Francisco, USA.
- Ng H.M. and H.B., İz, 2004: (Invited paper) Iteratively Re-weighted Least Squares Estimates for Mean Sea Level Changes from PSMSL Tide Gauge Data. *Joint AOGS 1st Annual Meeting & APHW 2nd Conference, Singapore*.
- İz H.B., 2004: Concurrent Analyses of GPS and KSP VLBI Baselines for Cursory Variations Prior to Seismic Activity at Izu Islands in the Summer of 2000. *The 32 International Geological Congress: from The Mediterranean Area toward a Global Geological Renaissance, Geology, Natural Hazards, and Cultural Heritage*, Florence, Italy.
- İz H.B., and H.N. Ng, 2003: Is the Global Tide Gauge Data Stationary in Variance? *EGS-AGU-EUG Joint Assembly*, Nice, France.
- İz H.B., 2002: Differential Orbit Prediction. Abstracts of *EGS, XXVII Geophysical General Assembly*, Nice, France.
- Schaffrin, B. and H.B. İz, 2001: BLIMPBE and its Geodetic Applications. *IAG 2001 Scientific Assembly*, Budapest, Hungary.
- İz H.B. and C.K. Shum, 2001: An Operational Realization of a Global Vertical Datum for MSL Studies using VLBI Baselines and its Stability. *The Seventh session of the IOC Group of Experts on the Global Sea Level Observing System (GLOSS), The Klaus Wyrtki Workshop: Observations and Integrations, Asia-Pacific Space Geodynamic Project (APSG) and Geodynamic Project (APSG) Sea Level Workshop and a GPS at Tide Gauges Workshop*, Honolulu, Hawaii, USA.
- İz H.B. and B. Schaffrin, 2001: The Accuracy of Earth Orientation Parameters Estimated from VLBI Data Using Variate Differencing, *Geophysical Research Abstracts 26th General Assembly*, Volume 3, 2001.
- Schaffrin, B. and H.B. İz, 2000: Integrating Heterogeneous Data Sets with Partial Inconsistencies. *The IAG International Symposium on Gravity, Geoid and Geodynamics 2000*, Banff, Alberta, Canada.
- İz H.B. and M. Eubanks, 2000: Space-time Deformations of Global Tetrahedra from USNO Baselines and their Contributions to the Reference Frame Realization. Abstracts of *EGS, XXV General Assembly, Millennium Conference on Earth, Planetary and Solar System Sciences*, Nice, France.
- İz H. B. and B.A. Archinal, 2000: VLBI Baseline Rates from Baseline Measurements of Colocated Antennas using Composite Models, *International VLBI Service for Geodesy and Astrometry 2000*

General Meeting Proceedings, edited by N.R. Vandenberg and K.D. Baver, NASA/CP-2000-209893, pp 362-367.

- Y. Liu, H.B. İz, and Y. Chen, 1999: Remote Sensing Water Vapor Content Based on GPS data in Hong Kong. *The 22nd General Assembly of the International Union of Geodesy and Geophysics*, UK.
- İz H.B., Y. Chen, 1998: A Tailored Seven-Parameter Datum Transformation Model from Locally Distributed Data, *WPGM AGU*, Taipei, Taiwan.
- İz H.B., and C.K. Shum, 1998: Sea level and GPS projects in Hong Kong and East China Sea, GLOSS Regional Sea Level Meeting, Taipei, Taiwan.
- He X. F., Y. Chen and H.B. İz, 1997: An Improved Filter for High Order Integrated GPS/INS Based on the U-D Factorization, *Proceedings of the International Symposium on Kinematic Systems in Geodesy, Geomatics and Navigation*, M.E. Cannon and G. Lachappelle (eds.), pp 257-263.
- İz H.B., Y.Q. Chen, J. Wang, 1997: Assessing the Stability of the New Marine DGPS Station of Hong Kong and its Connection to the WGS84 Datum, *PACON International*, Hong Kong, 1997.
- İz H.B., Y.Q. Chen, 1995: Estimation of Present-day Plate Motions from Combination of VLBI Measurements and Geological Rates Using a Random Effect Model, *the AGU 1995 Spring Meeting, EOS Transactions*, Vol. 76 No.17, pg.88.
- Chao B.F., H.B. İz, 1991: Does the Polar Motion Influence the Occurrence of Earthquakes? The AGU 1992 Spring Meeting, *EOS Transactions*, Vol.73, No.14, pg.79.
- Heirtzler J.R., H.B. İz, 1992: Seismicity on the Mid-Atlantic Ridge and Changes in Transatlantic Baselines. The AGU San Francisco Meeting, *EOS Transactions*, Vol.73, No.43, pg.120.
- Lerch F.J., H.B. İz, J.C. Chan, 1990: Estimating Earth's Gravity Field from Satellite Data: Alternative Methodologies. The AGU Annual Meeting at Baltimore, *EOS Transactions*, Vol.71, No.17, pg. 476.
- Smith D.E, F.J. Lerch, J.C. Chan, D.S. Chinn, H.B. İz, A. Mallama, G.B. Patel, 1990: Error Analysis of the Mars Gravity Field from Radio Tracking of Mars Observer. The Fourth International Conference on Mars, Tucson, Arizona.
- Kahn W., H.B. İz, R. Brown, 1988: Estimation of Local Mean Gravity Anomaly Errors Using a Space born Gravity Gradiometer. The AGU Baltimore Meeting, *EOS Transactions*, Vol.69, No.16, pg.339.

Research in Progress

- Analysis of satellite orbit perturbation errors using circular orbit theory.
- Rotary component analysis of GPS orbit prediction errors.
- The interaction between polar motion and earthquakes.
- New estimates for the secular drift of the Earth's mean rotation axis.
- Optimal estimation of regional mean sea level variations from local tide gauges.
- Bias corrections to the mean sea level trends inferred from satellite altimetry.
- A new model for estimating global mean sea level rise during the last century from the TG data.

Funded Research Projects

- Reference Frame Transformations for Chang'E 1, SELENE, LRO, Lunar Laser Altimetry Measurements and ULCN2005 Data toward a Unified Selenodetic Control for High Resolution Lunar Mapping, HKD105,000.
- Modeling the secular motion of the Earth's mean rotation axis, HKD150,000.

- Impact of the Far-side Lunar Gravity Perturbations on Chang'E Spacecraft's Orbit Predictions, HKD150,000.
- Coastal Ocean Tide Modeling for the Hong Kong and South China Seas Using Multiple Mission Satellite Altimetry, HKD360,000.
- Development of Lunar Mapping Techniques: PI of the lunar topography and lunar gravity investigations, HKD1,500,000.
- The Interaction between Polar motion and Earthquakes: An Unsolved Chicken-and-Egg Problem, HKD50,000.
- Real Time Parking Inquiry System using Wireless Technologies, HKD200,000.
- Impervious Surface Area Change Detection using Medium Resolution Satellite Imagery, HKD165,000.
- Significance of Reference Frame Deformations in the Realization of ITRF, HKD200,000.
- Analysis of Daily GPS Orbit Predictions Using Circular and Nearly Circular Orbit Theory, HKD155,000.
- Controlling the Influence of Large Data Sets in Combined Least Squares Solutions Through Variance Components, HKD52,000.
- Large Equipment Grant: Digital Workstation for SAR and INSAR Applications, HKD300,000.
- Spectral Analysis of North-Point Tide Gauge Data for Modeling Systematic and Random Effects Affecting the Sea Level Variations, HKD200,000.
- Asia-Pacific Space Geodynamics Project Processing Center, HKD200,000.
- A Tailored Datum Transformation Model for Locally Distributed Data, HKD57,000.
- The Stochastic Estimation of Satellite Clock Correction Information in WADGPS, HKD186,000.
- Refined GPS Orbits from Broadcast Ephemerides for Long Baseline and Multi-session Relative Positioning, HKD200,000.
- A Preliminary Regional GPS Network Solution for Monitoring Deformations of the Southeastern Eurasian Plate, HKD200,000.
- Remote Sensing of Atmospheric Vapor Using GPS Data in the Hong Kong Region, Co-I, HKD605,000.
- Continuous Monitoring of Tsing Ma Bridge Periodic Motions and Deformations Using GPS Technology for Life Cycle Safety, HKD500,000.
- Stochastic Correction Methods for LDGPS & WDGPS Applications, HKD197,000.
- Modeling Spatial & Temporal Correlations in Geodetic Networks, HKD472,000.

Funded Teaching Projects

- Online Program Development award for the online development of the Analysis of Observations, HKD150,000.
- Online Program Development award for web-based teaching Practical Surveying, HKD300,000.

Academic Service

- Deputy leader for MSc Program in GIS and Geomatics, 2009 –to present.
- Faculty eLearning advocate, 2009 – 2010.
- Faculty Board Member, 2007 – 2009.
- Department Teaching and Learning Committee Chair, 2002 – 2005.
- LSGI Senate Member, 2001 – 2004.
- Faculty Learning and Teaching Committee (LTC) Representative, 2003.
- University LTC Member, 2003.

- LSGI Non-head Representative, 2001 – 2002.
- Department Research Committee Chair, 1995 – 1997.

Academic and Professional Honors

- NASA Group Achievement Award: Joint Gravity Model-1 (JGM-1), 1993.
- NASA Group Achievement Award: Goddard Earth Model (GEM-T3), 1992.
- NATO Scholarship for Advanced Studies in Geodesy, 1975.

Languages

English, French, Turkish.

Professional Affiliations

American Geophysical Union.

Personal

Married. US Citizen. Hong Kong Permanent Resident.