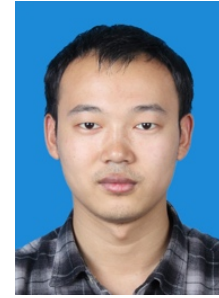


1. Personal details

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2. Education

Date	Degree	Institution
2016.01-2019.03	PhD in Astrodynamics and Space geodesy	University College London
2012.09-2015.06	MSc in Geomatic Engineering and Geodesy	Wuhan University
2008.09-2012.06	BSc in Geomatic Engineering	Henan Polytechnic University

3. Work Experience

Date	Detail of position held	Institution
2019.03-2020.01	Research fellow	University College London
2017.06-2019.01	Teaching assistant	University College London
2015.09-2015.12	GNSS algorithm engineer	RDRNSS (Wuhan) Technology Group

4. Research summary

- 2019 US Air force project: “Enhanced and Novel Space Vehicle Orbit Dynamics for Track Custody” (in collaboration with Applied Defense Solutions and University of Texas). I focus on high accuracy dynamics of GEO satellites including regular force models such as solar radiation pressure, earth radiation pressure, antenna thrust, and novel effects (solar wind effect and Lorentz force)
- 2017 UK DSTL project: New integrators development for space situational awareness” (in collaboration with University of Liverpool). I tested the performance of integrators in various orbits.
- 2016 ESA project: “Solar radiation pressure modelling for long term satellite orbit prediction” (in collaboration with GMV and Positum). The aim of this project is to develop high accuracy solar radiation pressure models for the Galileo satellites.
- 2015 Space Star Technology Co. Ltd: This contract is to develop a CORS (Continuously Operating Reference Station) system. I implemented the core algorithms such as cycle slip detection and repair, double-differenced baseline solution, Observation simulation based on VRS technology and RTK positioning.
- 2014 “Signal processing system for BeiDou-3 experimental satellites”. My task in this project is to simulate observation data and assess the performance of atomic clocks onboard.

5. Research interests

Current research interests include:

- 1) GNSS high accuracy positioning (RTK, PPP, CORS)
- 2) Space vehicle non-conservative force modelling and precise orbit determination
- 3) Long-term evolution of optical properties for space vehicle surface material

4) Space debris distribution and long-term evolution; space debris removal

6. Honour & Award

- 2016.01 Awarded Dean's Prize at UCL and support from China Scholarship Council
- 2015.06 Outstanding graduate award of Wuhan University
- 2014.10 Outstanding student of "Xia Jianbai" scholarship in science innovation
- 2013.12 Awarded second prize of China Post-graduate Mathematical Contest in Modelling
- 2012.06 Outstanding graduate award of Henan Polytechnic University
- 2011.12 Awarded first prize of Henan Province in China Undergraduate Mathematical Contest in Modelling.
- 2011.09 Awarded the National Scholarship
- 2010.09 Awarded third prize of Henan Province in China Undergraduate Mathematical Contest in Modeling
- 2009.09 Awarded the National Scholarship

7. Papers

Li, Z., 2019. Space vehicle radiation pressure modelling: A demonstration on Galileo satellites in GNSS. PhD thesis, University College London.

Li, Z., Ziebart, M., Bhattarai, S., Harrison, D., Grey, S., 2018. Fast solar radiation pressure modelling with ray tracing and multiple reflections. *Adv. Sp. Res.* 61, 2352–2365.
<https://doi.org/10.1016/j.asr.2018.02.019>

Li, Z., Ziebart, M., Bhattarai, S., Harrison, D., 2018. A shadow function model based on perspective projection and atmospheric effect for satellites in eclipse. *Adv. Sp. Res.* 63, 1347–1359. <https://doi.org/10.1016/j.asr.2018.10.027>

Li, Z., Ziebart, M., Grey, S., Bhattarai, S., 2017. Earth Radiation Pressure Modelling for BDS IGSO Satellites, in: *China Satellite Navigation Conference*. Shanghai, pp. 63–67.

Li, Z., Huang, J., 2016. WiFi Positioning Using Robust Filtering with RSSI. *Geomatics Inf. Sci. Wuhan Univ.* 41, 1–6. <https://doi.org/10.13203/j.whugis20130095>

Li, Z., 2015. Research on the key technology of data processing for precision local area GNSS augmentation service system. Master thesis, Wuhan University.

Li, Z., Tan, X., 2015. WiFi Matching Navigation Based on Least Square. *J. Geomatics* 40, 60–62. <https://doi.org/10.14188/j.2095-6045.2015.03.016>

Bhattarai, S., Ziebart, M., Allgeier, S., Grey, S., Springer, T., Harrison, D., Li, Z., 2019. Demonstrating developments in high-fidelity analytical radiation force modelling methods for spacecraft with a new model for GPS IIR/IIR-M. *J. Geod.* <https://doi.org/10.1007/s00190-019-01265-7>

Li Z, Ziebart M, Bhattarai S (2019) DREMT: A new physics-based empirical representation of solar radiation pressure for Galileo satellites. *GPS Solutions*. In review.