

## Academic Background

- 9/2014 - Present      **PhD student, Doctoral Studies: Urban Planning**  
**Faculty of Environment, School of Planning, University of Waterloo, Canada**
- **Specialization:** Exploring the impacts of light rail transit (LRT) on residential housing market
  - **Supervisor:** Dr. Dawn Parker
- 9/2011 – 7/2014      **Master of Science: Geography**  
**Institute of Geographic Sciences and Natural Resources Research (IGSNRR),**  
**Chinese Academy of Sciences (CAS), China**
- **Thesis:** Research on carbon sequestration potential in Inner Mongolia grassland ecosystem
  - **Supervisor:** Dr. Dai Erfu
- 9/2007 – 7/2011      **Bachelor of Science: Resources & Environment and Urban and Rural Planning**  
**Chang'an University (CHD), China**
- **Honours Thesis:** Land-use dynamics in Loess Plateau of Northern Shaanxi: a case study in Yan'an City
  - **Supervisor:** Dr. Yao Huarong

## Publications

1. Parker, D., Filatova, T., **Huang, Y.**, Jin, X., & Huang, Q (in preparation). The implications of land-market representation for the interpretation of empirical land-use change models.
2. Dai, E., **Huang, Y.**, Wu, Z., & Zhao, D. (2016). Spatial-temporal features of carbon source-sink and its relationship with climate factors in Inner Mongolia grassland ecosystem. *Journal of Geographical Science*, (03), 297-312. DOI: 10.11821/dlxb201601002
3. Dai, E., **Huang, Y.**, & Zhao, D. (2015). Review on soil carbon sequestration potential in grassland ecosystems. *Journal of Ecological Science*, 35(12), 3908–3918.
4. Tian, Z., Wu, X., Xie, R., & **Huang, Y.** (2014). Comparison of soil organic carbon density of main grassland types in Inner Mongolia. *Science of Soil and Water Conservation*, 12(4), 8–13.
5. Yang, Y., Wang, P., **Huang, Y.**, Zhang, Y., & Guo, C. (2013). Assessment of Ecosystem Services Value in Hotan Oasis, Xinjiang. *Agricultural Science & Technology*, 14(03), 39–46.

## Conferences and Presentations

1. Parker, D., **Huang, Y.**, Babin, R., Casello, J., Jin, X., Pi, X., & Sullivan, V (in preparation). A novel approach to parameterizing utility functions for agent-based market models of resource choice. *The 8th International Congress on Environmental Modelling and Software* held by iEMSs (International Environmental Modelling & Software Society) Toulouse, France, July 10-14, 2016.
2. Babin, R., Parker, D., Antanaitis, A., Casello, J., Fard, P., **Huang, Y.**, Jin, X., Moos, M., Ogden, E., Pi, X., Sullivan, V., Tamer, F., Tran, J., & Yeung, K. Investigating Homebuyer Preferences Under Regional Intensification: a first-stage hedonic model for an integrated land-use transport model AAG (*American Association Geographers*) San Francisco, America, March 29-April 2, 2016.
3. Parker, D., Filatova, T., **Huang, Y.**, Jin, X., & Huang, Q. The implications of land-market representation for the interpretation of empirical land-use change models. Presented at the workshop “*Advancing Metropolitan Modeling*”, Riverside, Canada, January 16-17, 2015.
4. **Huang, Y.** Explore the potential real-world implications of using hedonic regression models to project land-use change-An exploratory study based on the LUXE model. *Coupled human and natural systems (CHANS) Working Group*, University of Waterloo, March 4, 2015.
5. **Huang, Y.** The ODD+D Protocol for Describing Individual-Based and Agent-based Models. *Coupled human and natural systems (CHANS) Working Group*, University of Waterloo, November 26, 2014.

## Report

1. **Huang, Y.**, Babin, R., Pi, X., & Antanaitis, A. Investor confidence (A metric of Investment). *Baseline Monitoring Report-Central Transit Corridor Monitoring Program: Kitchener-Cambridge-Waterloo*, November, 2015.
2. **Huang, Y.**, Babin, R., & Pi, X. Light rail transit (LRT) and Property Values. *Baseline Monitoring Report-Central Transit Corridor Monitoring Program: Kitchener-Cambridge-Waterloo*, November, 2015.
3. **Huang, Y.**, Babin, R., & Pi, X. Light rail transit (LRT) and real estate development. *Baseline Monitoring Report-Central Transit Corridor Monitoring Program: Kitchener-Cambridge-Waterloo*, November, 2015.

## Technical Skills

1. Extensive research experience in land-use change modeling and assessment using multiple methodologies, especially under the context of global climate change
2. Proficient in conducting spatial analysis by applying relevant software, including ArcGIS, ENVI, ERDAS, auto CAD, Illustrator, and PCI Geomatica
3. Adept at programming with C, Matlab, JAVA, Python, and GIS re-development and capable of developing agent-based models based on RePast platform
4. Skilled in applying software R, SPSS and Origin to conduct statistical and econometric analysis

## Research Experience

9/2014 - Present

### Doctoral Researcher

**Project:** Light rail transit and core-area intensification: Unpacking causal relationships

**Funding source:** SSHRC Partnership Development Grant (SSHRC # 890-2013-0034)

- Completed the housing market section for the government report “*Baseline Monitoring Report*” to examine the relationship between light rail transit and its impacts on housing market via extensive literature review
- Designed the home buyer and home seller survey to explore heterogeneous household perceptions about the upcoming LRT system in Kitchener Waterloo, and thus to examine the relationship between the presence of LRT and residential location choice
- Assisted in designing developer survey to explore how LRT has influenced land development in Kitchener Waterloo

9/2014 - Present

### Doctoral Researcher

**Project:** Urban intensification vs. suburban flight: An integrated residential land-use and transportation model to evaluate residential land market form and function (Waterloo Regional Model, WARM)

**Funding source:** SSHRC Insight Grant (SSHRC # 435-2012-1697)

- Initially designed home buyer and home seller survey questionnaire to explore disaggregate household preference and behaviour in residential location choice, and thus to parameterize the empirical agent-based land market model (WARM)
- Tested the vector-based land market model and wrote the ODD-protocol paper
- Designed experiments to investigate the heterogeneity effects on land market dynamics and co-wrote a conference paper

9/2011 - 7/2014

### Masters Researcher

**Project:** Function and potential of soil carbon sequestration of natural forests and grassland

**Funding source:** National 863 High Technology Programs of China

- Collected remote sensing data and processed spatial data using GIS and RS software, conducted field surveys and collected soil and grass samples in Inner Mongolia, and implemented statistical analysis using Matlab and R software
- Analyzed carbon sink and source changes in the past decade in Inner Mongolia grassland ecosystem and explored the relationship between carbon stock changes and major climate factors
- Applied CENTURY model to simulate carbon sequestration potential of the grassland ecosystem under different climate scenarios based on IPCC report
- Provided a scientific basis for climate change mitigation

9/2011 - 2/2012

### Masters Researcher

**Project:** Simulation and optimization of regional land use change using agent-based model - in the Pearl River Delta

**Funding source:** Key laboratory of agricultural information technology, Ministry of Agriculture, China

- Assisted in developing a RePast model based on Java script
- Generated land use change maps for the project

## **Research Interests**

Land use change	Residential location choice	Land-use and transportation interaction
Agent-based modeling	Urban growth management	Transit-oriented development
Human-environment system	Land use planning	Spatial analysis

## **Scholarships and Awards**

1. Graduate Research Studentship (3,200 CAD) per term, University of Waterloo, 09/2014 – present
2. International Doctoral Student Award (3,900 CAD) per term, University of Waterloo, 09/2014 – present
3. State scholarship (76, 800 CAD) student supported by Chinese Scholarship Council of the Ministry of Education, China, 05/2014
4. Outstanding Graduates (top 5%) in Shaanxi Province, China, 01/2011
5. Pioneer of Excellent Graduates in CHD, China, 01/2011
6. National Scholarship (1,600 CAD), China, 2010
7. National Scholarship (1,600 CAD), China, 2009
8. National Scholarship (1,600 CAD), China, 2008
9. Third Prize in National English Contest for College Students, China, 2010
10. Third Prize in Mathematical Contest in Modeling in CHD, China, 06/2009

## **Associations**

1. Student member of Canadian Institute of Planners (CIP)
2. Student member of Ontario Professional Planners Institute (OPPI)
3. Student member of International Association for China Planning (IACP)

## **Volunteer and Leadership Experience**

1. Volunteer, University of Waterloo, Canada, 2015 - present
2. Expositor, Geographic Science Museum, Beijing, 04/2014
3. Secretary, Graduate Student Union, IGSNRR, China, 2013 - 2014
4. Counsellor Assistant, Faculty of Land and Resources, CHD, China, 2010 - 2011
5. Propaganda Minister, Service Association of Youth Volunteers, CHD, China, 2009 - 2010
6. Class President, Department of Geography Information, CHD, China, 2008 - 2010