



# Hongjin HE

*Curriculum Vitae*

## PERSONAL DETAILS

---

Name            Hongjin HE (何洪津)  
Birth            August 09, 1984  
Status           Married  
Address        School of Science, Hangzhou Dianzi University, Xiasha Higher  
                  Education Zone, Hangzhou, 310018, China  
地址            浙江省杭州市下沙高教園區杭州電子科技大學理學院  
Phone          (+86) 13067822608  
Email          [hehjmath@hdu.edu.cn](mailto:hehjmath@hdu.edu.cn) or [hehjmath@hotmail.com](mailto:hehjmath@hotmail.com)

## EDUCATION

---

**Ph.D in Computational Mathematics** 09/2007–06/2012

*School of Mathematical Sciences, Nanjing Normal University, Nanjing, China.*

Dissertation: Some Efficient Numerical Methods for Convex Programming and Variational Inequality Problems with Their Applications.

Supervisors: Professor **Wenyu Sun** and Professor **Deren Han**

**B.S. in Information and Computing Science** 09/2003–06/2007

*School of Mathematical Sciences, Xinyang Normal University, Xinyang, China.*

## WORK EXPERIENCE

---

**Assistant Professor** 06/2012–Present

*School of Science, Hangzhou Dianzi University, Hangzhou, China.*

**Postdoctoral Fellow** 08/2013–08/2014

*Department of Applied Mathematics, National Sun Yat-sen University, Taiwan.*

Mentor: Professor **Hong-Kun Xu**.

**Research Assistant** 04/2011–08/2011

*Department of Mathematics, Hong Kong Baptist University, Hong Kong.*

Mentor: Professor **Xiaoming Yuan**.

## RESEARCH INTERESTS

---

- Numerical optimization and its applications in inverse problems such as  $\ell_1$  regularization problems, image processing, statistical learning and machine learning.
- Variational inequalities and complementarity problems and their applications in traffic assignment and economic management.

## PUBLICATIONS

---

1. **Hongjin He**, Chen Ling, and Hong-Kun Xu, A relaxed projection method for split variational inequalities, *Journal of Optimization Theory and Applications*, to appear.
2. **Hongjin He**, Xingju Cai, and Deren Han, A class of nonlinear proximal point algorithms for variational inequality problems, *International Journal of Computer Mathematics*, to appear.
3. Lin Zhang, **Hongjin He**, and Yuanhong Tao, Quantum marginal inequalities and the conjectured entropic inequalities, *International Journal of Theoretical Physics*, to appear.
4. Deren Han, **Hongjin He**, Hai Yang, and Xiaoming Yuan, [A customized Douglas-Rachford splitting algorithm for separable convex minimization with linear constraints](#), *Numerische Mathematik*, **127** (2014) 167–200.
5. Deren Han, **Hongjin He**, Lingling Xu, A proximal parallel splitting method for minimizing sum of convex functions with linear constraints, *Journal of Computational and Applied Mathematics*, **256** (2014) 36–51.
6. Chen Ling, Guifeng Wang, and **Hongjin He**, A new Levenberg-Marquardt type algorithm for solving nonsmooth constrained equations, *Applied Mathematics and Computation*, **229** (2014) 107–122.
7. **Hongjin He**, Deren Han, Wenyu Sun, and Yannan Chen, [A hybrid splitting method for variational inequality problems with separable structure](#), *Optimization Methods and Software*, 28 (2013) 725–742.
8. Dan Xue, Wenyu Sun, and **Hongjin He**, A structured trust region method for nonconvex programming with separable structure, *Numerical Algebra, Control and Optimization*, **3** (2013) 283–293.
9. Gang Qian, **Hongjin He**, and Deren Han, A progressive equilibrium algorithm for general market equilibrium problems under constraints, *Asia-Pacific Journal of Operational Research*, 30 (2013) 1340006 (18 pages).
10. **Hongjin He**, Deren Han, and Zhibao Li, [Some projection methods with the BB step sizes for variational inequalities](#), *Journal of Computational and Applied Mathematics*, **236** (2012) 2590–2604.
11. Ming Zhang, Deren Han, **Hongjin He**, and Yannan Chen, A new alternating direction method for solving separable variational inequality problems (in Chinese). *Scientia Sinica Mathematica*, **42** (2012) 133–149.
12. **Hongjin He**, Hongchao Zhang, and Deren Han, An improved self-adaptive projection method for solving variational inequalities, *Advanced Modeling and Optimization*, **13** (2011) 277–289.

13. Xiaohuan Li, **Hongjin He**, and Deren Han, An improved self-adaptive projection method for generalized Nash equilibrium (in Chinese), *Journal of Nanjing Normal University (Natural Science Edition)*, **34** (2011) 10–14.
14. Gang Qian, Deren Han, and **Hongjin He**, Congestion control with pricing in the absence of demand and cost functions: An improved trial and error method, *Journal of Industrial and Management Optimization*, **6** (2010) 103–121.

## **SUBMITTED / UNDER REVIEW**

---

1. **Hongjin He**, Xingju Cai, and Deren Han, A fast splitting method tailored for Dantzig selector, 2013.
2. **Hongjin He** and Deren Han, A distributed Douglas-Rachford splitting method for multi-block convex minimization problems, 2013.
3. **Hongjin He**, Chen Ling, and Hong-Kun Xu, An implementable splitting algorithm for the  $\ell_1$ -norm regularized split feasibility problem, 2013.
4. **Hongjin He** and Hong-Kun Xu, A projection-based splitting method for structured variational inequality problems, 2014.
5. Kai Wang, Jitamitra Desai, and **Hongjin He\***, A note on augmented Lagrangian-based parallel splitting method, 2014.

## **GRANTS**

---

- Some new operator splitting algorithms and their applications in separable optimization problems, National Natural Science Foundation of China, 2014–2016, Principal Investigator.
- Algorithms for structured, nonsmooth and constrained equations and optimization problems, Zhejiang Provincial Natural Science Foundation of China, 2014–2017, Co-Principal Investigator (Principal Investigator: Professor **Chen Ling**).

## **COURSES**

---

Probability and Statistics

Spring 2013

Linear Algebra

Spring 2013

Probability and Statistics

Fall 2012

Linear Algebra

Fall 2012

## **REVIEWER**

---

- Multiscale Modeling and Simulation;
- Optimization;
- Numerical Algebra, Control and Optimization;
- Bulletin of the Iranian Mathematical Society.