

# Curriculum Vitae

Juhan Kim

## PERSONAL

Date of Birth: June 6<sup>th</sup>, 1970  
Citizenship: Korean (Republic of Korea)  
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## Education

Mar 99 – Aug 03 Ph. D., Department of Astronomy, Seoul National University, Korea  
Mar 93 – Feb 98 M. SC., Department of Astronomy, Seoul National University, Korea  
Mar 90 – Feb 93 B. Sc., Department of Astronomy, Seoul National University, Korea

## Career

Sep 08 – Now Visiting Post-doctor to Canadian Institute for Theoretical Astrophysics  
Nov 04 – Aug 08 Research Fellow, Korea Institute for Advanced Study  
Sep 03 – Aug 04 Postdoctoral Fellowship, Korea Astronomical Observatory  
Aug 00 – Feb 01 Visiting Student to Canadian Institute for Theoretical Astrophysics

## Research Interests and Skills

**Research fields:** Cosmology and the large-scale structures using N-body simulations

**Research interests:** topology of cosmic objects, two-point correlation, halo & subhalo internal statistics, galaxy formation using simulated subhalos, & redshifted 21cm line from the Dark Age

**Simulation experience:** three  $4120^3$ -particle and ten  $1024^3$ -particle simulations with the GOTPM code (a hybrid combining the PM and Tree schemes) on the Linux Beowulf and IBM SP3

### **Computational Skills & Background experience**

1. Programming languages: high level of C and Fortran77 with OpenMP and MPI packages & GPU language (CUDA) and basic level of Fortran90
2. Experience of OS's: Solaris, Linux, Mac, Windows, AIX, and IRIX on computers from laptops to massive supercomputers
3. One-year computer management of the Solaris systems, IRIX, and Linux systems in the Department of Astronomy at Seoul National University

# Juhan Kim – Publication List

## BIBLIOGRAPHY

Journal Abbreviations: ApJ – Astrophysical Journal; MNRAS – Monthly Notice of Royal Astronomical Society

### Refereed Publications

1. **Kim, J.**, Park, C., & Choi, Y.-Y. 2008, ApJ, 683, 123  
*A Subhalo-Galaxy Correspondence Model of Galaxy Biasing*
2. Cervantes-Sodi, B., Hernandez, X., Park, C., & **Kim, J.** 2008, MNRAS, 388, 863  
*Environment and mass dependencies of galactic  $\lambda$  spin parameter: cosmological simulations and observed galaxies compared*
3. Gott, J.R. III, Hambrick, D.C., Vogeley, M.S., **Kim, J.**, Park, C., Choi, Y.-Y., Cen, R., Ostriker, J.P., & Nagamine, K. 2007, ApJ, 675, 16  
*Topology of structure in the Sloan Digital Sky Survey: model testing*
4. **Kim, J.** & Park, C. 2006, ApJ, 639, 600  
*A New Halo Finding Method for N-body Simulations*
5. Park, C., Choi, Y.-Y., Vogeley, M.S., Gott, J.R. III, **Kim, J.**, Hikage, C., Matsubara, T., Park, M.-G. Suto, Y., & Weinberg, D.H. 2005, ApJ, 633, 11  
*Topology Analysis of the Sloan Digital Sky Survey. I. Scale and Luminosity Dependence*
6. Park, C., **Kim, J.**, & Gott, J.R. III 2005, ApJ, 633, 1  
*Effects of Gravitational Evolution, Biasing, and Redshift Space Distortion on Topology*
7. Dubinski, J., **Kim, J.**, Park, C., & Humble, C.B. 2003, New Astronomy, 9, 111,  
*GOTPM: a parallel hybrid particle-mesh treecode*
8. Park, C. & **Kim, J.** 1998, ApJ, 501, 23  
*Diffuse Dark and Bright Objects in the Hubble Deep Field*
9. Park, C. & **Kim, J.** 1997, Journal of Korean Astronomical Society, 30, 83,  
*Galaxy Formation in the Hubble Deep Field*

### Non-Refereed Publications

1. Park, C. & **Kim, J.** 2007, Revista Mexicana de Astronomía y Astrofísica, 28, 93  
*The Hubble-Depth Survey*

### Preprints

1. **Kim, J.**, Park, C., Gott, J.R., & Dubinski, J. 2008, submitted to ApJ, astro-ph/0812.1392  
*The Horizon Run N-body Simulation: Baryon Acoustic Oscillations and Topology of Large Scale Structure of the Universe*
2. Gott, J.R., Choi, Y.-Y., Park, C., & **Kim, J.** 2008, submitted to ApJ Letters, astro-ph/0812.1406  
*3D Genus Topology of Luminous Red Galaxies*

## Talks & Conferences

1. **Kim, J.**, Park, C., Choi, Y.-Y. 2006, In Cosmic Void Workshop, Aspen,  
*A Simple Method to Build Mock Galaxies*
2. **Kim, J.**, Gott, J.R. III, Hambrick, D.C., Vogeley, M.S., Park, C., Choi, Y.-Y., Cen, R., Ostriker, J.P.,  
& Nagamine 2006, In SDSS Collaboration Meeting, Seoul,  
*Topology of Structure in SDSS: Model test*
3. **Kim, J.** & Park, C. 2007, In the 9<sup>th</sup> High Performance Computing International Conference  
& Exhibition, Seoul,  
*Cosmological N-body Simulations*