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Education

Ph.D. in Physics, The University of Texas at Austin, USA — 2009
Adviser: Professor Paul R. Shapiro
Title: 'Gravitational Dynamics of Halo Formation in a Collisional vs Collisionless Cold Dark Matter Universe'

Bachelor of Science in Physics, Kyoto University, Japan — 2002

Research Interests

Large-Scale Structure, Redshift-Space Distortions, Peculiar velocity field
Cosmological N-body Simulations, Multiple realizations of mock galaxy catalogs

Employment

Postdoctral Research Fellow — 2014 – present
INAF - Osservatorio Astronomico di Brera

Postdoctoral Research Associate — 2011 – 2014
Centre for Astrophysics and Supercomputing, Swinburne University of Technology

Postdoctoral Fellow — 2009 – 2011
Department of Astronomy, The University of Texas at Austin

Professional Activities

Co-supervisor of a Graduate Student — 2012 – present
Supervision of a Vacation Student — Summer 2012
Vacation Student Organizer — 2012 – 2013

Teaching

Assistant Instructor, Mechanics and Heat for non-science majors (PS303) — 2006 – 2007 & 2009
Head Teaching Assistant, Physics laboratory course for engineers (PHY103N) — 2004 – 2006
Teaching Assistant (PHY103N) — 2002 – 2004

Grants

The Chandra X-ray Observatory Theory Project Cycle 9 (Co-I; PI Prof. Paul R. Shapiro) — 2008
'Simulations of the Merging Bullet Cluster: Testing ΛCDM and the Dynamics of Cluster Plasma'

Publications

Submitted / Refereed Publications

[1] Koda, J., Blake, C., Beutler, F., Kazin, E., & Marin, F. 2016, "Fast and accurate mock catalogue generation for low-mass galaxies," *MNRAS*, **459**, 2118

[2] Johnson, A., Blake, C., Dossett, J., Koda, J., Parkinson, D., & Joudaki, S. 2016, "Searching for modified gravity: scale and redshift dependent constraints from galaxy peculiar velocities," *MNRAS*, **458**, 2725

[3] Scrimgeour, M. I., Davis, T. M., Blake, C., Staveley-Smith, L., Magoulas, C., Springob, C. M., Beutler, F., Colless, M., Johnson, A., Jones, D. H., Koda, J., Lucey, J. R., Ma, Y.-Z., Mould, J., & Poole, G. B. 2016, "The 6dF Galaxy Survey: bulk flows on 50-70 h^{-1} Mpc scales," *MNRAS*, **455**, 386

[4] Marín, F. A., Beutler, F., Blake, C., Koda, J., Kazin, E., & Schneider, D. P. 2016, "The BOSS-WiggleZ overlap region - II. Dependence of cosmic growth on galaxy type," *MNRAS*, **455**, 4046

[5] Beutler, F., Blake, C., Koda, J., Marín, F. A., Seo, H.-J., Cuesta, A. J., & Schneider, D. P. 2016, "The BOSS-WiggleZ overlap region - I. Baryon acoustic oscillations," *MNRAS*, **455**, 3230

[6] Park, H., Komatsu, E., Shapiro, P. R., Koda, J., & Mao, Y. 2016, "The Impact of Nonlinear Structure Formation on the Power Spectrum of Transverse Momentum Fluctuations and the Kinetic Sunyaev-Zel'dovich Effect," *ApJ*, **818**, 37

[7] Koda, J., Blake, C., Davis, T., Magoulas, C., Springob, C. M., Scrimgeour, M., Johnson, A., Poole, G. B., & Staveley-Smith, L. 2014, "Are peculiar velocity surveys competitive as a cosmological probe?," *MNRAS*, **445**, 4267

[8] Johnson, A., Blake, C., Koda, J., Ma, Y.-Z., Colless, M., Crocce, M., Davis, T. M., Jones, H., Magoulas, C., Lucey, J. R., Mould, J., Scrimgeour, M. I., & Springob, C. M. 2014, "The 6dF Galaxy Survey: cosmological constraints from the velocity power spectrum," *MNRAS*, **444**, 3926

[9] Kazin, E. A., et al. 2014, "The WiggleZ Dark Energy Survey: improved distance measurements to z = 1 with reconstruction of the baryonic acoustic feature," *MNRAS*, **441**, 3524

[10] Shapiro, P. R., Mao, Y., Iliev, I. T., Mellema, G., Datta, K. K., Ahn, K., & Koda, J. 2013, '*Will Nonlinear Peculiar Velocity and Inhomogeneous Reionization Spoil 21 cm Cosmology from the Epoch of Reionization?*', *Physical Review Letters*, **110**, 151301

[11] Ahn, K., Iliev, I. T., Shapiro, P. R., Mellema, G., Koda, J., & Mao, Y. 2012, '*Detecting the Rise and Fall of the First Stars by Their Impact on Cosmic Reionization*', *ApJ*, **756**, L16

[12] Iliev, I. T., Mellema, G., Shapiro, P. R., Pen, U.-L., Mao, Y., Koda, J., & Ahn, K. 2012, '*Can 21-cm observations discriminate between high-mass and low-mass galaxies as reionization sources?*', *MNRAS*, **423**, 2222

[13] Mao, Y., Shapiro, P. R., Mellema, G., Iliev, I. T., Koda, J., & Ahn, K. 2012, '*Redshift-space distortion of the 21-cm background from the epoch of reionization - I. Methodology re-examined*', *MNRAS*, **422**, 926

[14] Koda, J., & Shapiro, P. R. 2011, '*Gravothermal collapse of isolated self-interacting dark matter haloes: N-body simulation versus the fluid model*', *MNRAS*, **415**, 1125

[15] Koda, J., Milosavljevic, M., & Shapiro, P. R. 2009, '*On the Survival and Abundance of Disk-dominated Galaxies*', *ApJ*, **696**, 254

[16] Milosavljevic, M., Koda, J., Nagai, D., Nakar, E., & Shapiro, P. R. 2007, '*The Cluster-Merger Shock in 1E 0657-56: Faster than a Speeding Bullet?*', *ApJ*, **661**, L131

PhD Thesis

[11] Koda, J. 2009, '*Gravitational Dynamics of Halo Formation in a Collisional Versus Collisionless Cold Dark Matter Universe*', PhD thesis, The University of Texas at Austin

References

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