

CURRICULUM VITAE

Tepei OKUMURA

PERSONAL DETAILS

Nationality: Japanese Phone: +886-2-2366-5401
Date of birth: June 8th, 1980 E-mail: tokumura@asiaa.sinica.edu.tw
Place of birth: Osaka, Japan Webpage: <http://idv.sinica.edu.tw/tepei/>
Present Address: Institute of Astronomy and Astrophysics, Academia Sinica (ASIAA)
11F of AS/NTU Astronomy-Mathematics Building, No.1, Sec. 4, Roosevelt Rd, Taipei 10617, Taiwan

ACADEMIC APPOINTMENTS

- 2017.8 - present • **Kavli IPMU, The University of Tokyo**, Visiting Scientist
2017.1 - present • **ASIAA**, Associate Research Fellow [equivalent of Associate Professor]
2014.1 - 2016.12 • **Kavli IPMU, The University of Tokyo**, Project Researcher, advised by Masahiro Takada
2009.12 - 2013.12 • **IEU, Ewha Womans University, KOREA**, Postdoctoral Fellow, advised by Uros Seljak
• **UC Berkeley and LBNL**, Long-term guest (1 year in total), hosted by Uros Seljak
2008.4 - 2009.11 • **Shanghai Astronomical Observatory**, Postdoctoral Fellow, advised by Yipeng Jing
• **Max Planck Institute for Astrophysics**, Long-term guest (2 months), hosted by Simon White
2005.4 - 2008.3 • **Nagoya University, JAPAN**, Research Assistant

EDUCATION AND DEGREES

- 2005.4 - 2008.3 • **Nagoya University, JAPAN**, Ph.D in Physics, supervised by Prof. Takahiko Matsubara.
Thesis: “Cosmological Analysis from Large-Scale Anisotropic Correlation Function of the Sloan Digital Sky Survey”
2003.4 - 2005.3 • **Nagoya University, JAPAN**, M.S. in Physics, supervised by Prof. Satoru Ikeuchi
1999.4 - 2003.3 • **Kwansei Gakuin University, JAPAN**, B.S. in Physics, supervised by Prof. Takashi Okamura

HONORS AND AWARDS

- 2019 - 2023 Academia Sinica Career Development Award, TAIWAN
2018 The PASJ Excellent Paper Award (Okumura et al. 2016, PASJ, 68, 38)
2013 Vaidya-Raychaudhuri Postdoctoral Fellowship, Inter-University Centre for Astronomy and Astrophysics (IUCAA), INDIA (declined)

SCIENTIFIC ACTIVITY SINCE JOINING ASIAA (30 months: 2017.1 - 2019. 7)

Number of refereed publications: **13**

3 first-author publications [**TO**, Takada et al ('17), **TO**, Nishimichi, Umetsu et al ('18), **TO**, Taruya et al ('19)]

5 second-author publications [Sugiyama, **TO**, Spergel ('17, '18), Tonegawa, **TO** et al ('18), Arroja, **TO** et al ('18), Agrawal, **TO** et al ('19)]

2 third-author publications [Shiraishi, Sugiyama, **TO** ('17), Sugiyama, Shiraishi, **TO** ('18)]

OBTAINED RESEARCH FUNDING

- 2019.1-2021.12 Academia Sinica Career Development Award, R. O. C., 6,000,000TWD (\simeq 200,000\$)
Project: “*Probing dark side of the universe with cosmological large-scale structure*”
- 2017.10-2020.7 Ministry of Science and Technology (MoST), R. O. C., 3,033,000TWD (\simeq 100,500\$)
Project: “*Precision modeling of galaxy clustering in large-scale structure of the Universe and cosmological tests on dark energy properties and gravity theories*”
- 2014.4-2016.3 Start-up grant of the Japan Society for the Promotion of Science (JSPS), 2,500,000JPY (\simeq 25,000\$)
Project: “*Precise modeling of redshift space distortion effect in galaxy surveys and testing gravity theories*”
- 2010.1-2010.12 The Research Fellowship for International Young Scientists,
National Natural Science Foundation of China, 250,000RMB (\simeq 37,000 US \$), (declined)
Project: “*Pairwise velocity dispersion of luminous red galaxies and of dark matter halos*”
- 2006.4-2007.3 Research Grant for Young Researchers, Nagoya University, 250,000JPY (\simeq 2,700 US \$),
Project: “*Cosmological analysis using anisotropy in the correlation function of SDSS galaxies*”

TEACHING EXPERIENCE

- 2019 Lecturer for ASIAA Summer Student Program at ASIAA, Taiwan, July 30, 2019: “*Cosmology*”
- 2018 Lecturer for ASIAA Summer Student Program at ASIAA, Taiwan, July 26, 2018: “*Cosmology*”
- 2018 Invited Lecturer for undergraduate course of cosmology at NTHU, Taiwan (3 hours), May 8, 2018.
Lecture title: “*Probing the accelerating expansion of the universe with large-scale structure*”
- 2017 Lecturer for ASIAA Summer Student Program at ASIAA, Taiwan, July 27, 2017: “*Cosmology*”
- 2012 Supervising of one graduate student for her master degree, with the thesis project “Redshift-space distortions” at Ewha University, Korea (co-supervised by Prof. Chanju Kim and Prof. Uros Seljak)
- 2011 Tutoring of one graduate student (spring semester) for the course “Modern Cosmology”, with a project “Sunyaev-Zel’dovich effect” at Ewha Womans University, Korea

ACADEMIC SOCIETY AND CONTRIBUTIONS

- Membership
 - Astronomical Society of Japan
 - Rironkon (Theoretical Astronomy and Astrophysics community in Japan)
- Referee
 - Journal referee for: *The Astrophysical Journal (ApJ)*, American Astronomical Society, USA
 - Journal referee for: *Journal of Cosmology and Astroparticle Physics (JCAP)*, SISSA, Italy
 - Journal referee for: *Monthly Notices of the Royal Astronomical Society (MNRAS)*, UK
 - Journal referee for: *Nature Astronomy*, Nature Publishing Group, UK
 - Journal referee for: *Progress of Theoretical Physics (PTP)*, The Physical Society of Japan, Japan
 - Observing proposal referee for: *Subaru Telescope*
- Thesis committee
 - Shu-Rong CHen, National Taiwan University (Master, July 2019)
 - KaHou Leong, National Taiwan University (Master, January 2018)
 - James Chan, National Taiwan University (Ph.D., August 2017)

EVENT ORGANIZING AND MANAGEMENT ACTIVITIES

Organizer	Joint colloquium committee at ASIAA/NTU/NTNU/LeCosPA, Taiwan (1/2019 – present)
Member	Research manpower (postdoc hiring) committee at ASIAA, Taiwan (1/2019 – present)
Chair	weekly-lunch seminar at ASIAA, Taiwan (9/2017 – 8/2018)
Member	Colloquium committee at ASIAA, Taiwan (1/2017 – present)
Co-organizer	APCTP-IEU Focus program on Cosmology and Fundamental Physics IV at APCTP Postech, Korea (12/2013)
Organizer	weekly seminar in theoretical astrophysics group in Nagoya University (4/2004 – 3/2007)
Deputy Head	Summer School in Astronomy & Astrophysics (over 400 participants, 8/2005 – 12/2006)

ADDITIONAL SKILLS AND EXPERIENCES

- Programming: FORTRAN, Parallel Computing (MPI, OpenMP), Gnuplot, Shell, Python
- Data Analysis: Advanced skills in analyzing large observational data and N -body simulations

PRESENTATIONS

Invited conference and workshop talks

- [1] “TBD”
The first Shanghai Assembly on Cosmology and Galaxy Formation, Shanghai Jiao Tong University, China, (November, 2019)
- [2] “Galaxy clustering analysis of the Subaru FastSound survey”
Cosmology workshop on galaxy redshift surveys, NAOJ, Japan (August, 2019)
- [3] “Large-scale intrinsic alignments of halo orientations with velocity field”
PTchat@Kyoto, YITP, Kyoto University, Japan (April, 2019)
- [4] “Cosmology with large-scale structure using Subaru: FMOS FastSound and PFS surveys”
EAO Subaru Science Workshop, KASI, Korea (January, 2019)
- [5] “Probing physical boundaries of dark matter halos from cosmic density and velocity fields”
The 8th KIAS Workshop on Cosmology and Structure Formation, Korea Institute for Advanced Study, Korea (November, 2018)
- [6] “Probing physical boundaries of dark matter halos from cosmic density and velocity fields”
Cosmology Frontier in Particle Physics: Astroparticle Physics and Early Universe, National Taiwan University, Taiwan (September, 2018)
- [7] “Recent progresses on studies of the splashback radius of dark matter halos” **[Review talk]**
Workshop on dark matter halos, NAOJ, Japan (August, 2018)
- [8] “Probing physical boundaries of dark matter halos from cosmic density and velocity fields”
5th Korea-Japan workshop on Dark Energy, KASI, Korea (August, 2018)
- [9] “Probing physical boundaries of dark matter halos from cosmic density and velocity fields”
The Nonlinear Universe 2018, Smartno, Slovenia (July, 2018)
- [10] “Probing physical boundaries of dark matter halos from cosmic density and velocity fields”
Sesto 2018 workshop on galaxy clustering, Sexten Center for Astrophysics, Italy (July 2018)
- [11] “Reconstruction of halo power spectrum from redshift-space galaxy distribution”
2017 Rencontres du Vietnam on Cosmology conference, Quy Nhon, Vietnam (July, 2017)

- [12] “Baryon acoustic oscillations and the structure of the Universe at the highest redshifts” **[Review talk]**
Astronomical Distance Determination in the Space Age, International Space Science Institute-Beijing, China (May, 2016)
- [13] “New constraint on gravity theory at $z \sim 1.4$ from the Subaru FMOS/FastSound galaxy redshift survey”
3rd Korean-Japan Workshop on Dark Energy, Korea Institute for Advanced Study, Korea (April, 2016)
- [14] “Modeling nonlinear power spectrum of galaxies in redshift space”
Measuring and Modelling Redshift-Space Distortions in Galaxy Surveys, Sexten Center for Astrophysics, Sesto, Italy (July, 2014)
- [15] “Galaxy Survey and Redshift-space distortions,” **[Review talk]**
2nd Observational Cosmology Workshop, National Astronomical Observatory of Japan (December, 2013)
- [16] “Distribution function approach to redshift space distortions ”
The 5th KIAS Workshop on Cosmology and Structure Formation, Korea Institute for Advanced Study, Korea (October, 2012)
- [17] “Distribution function approach to redshift space distortions: N-body simulations ”
Perturbative approaches to redshift space distortions, University of Zurich, Switzerland (July, 2012)
- [18] “Distribution function approach to redshift space distortions: N-body simulations ”
WKYC 2012 Conference , Daejeon, Korea (June, 2012)
- [19] “Numerical analysis of redshift-space distortions in galaxy redshift surveys”
The KASI-APCTP joint mini-workshop on Science and Technology of BigBOSS , Jeju, Korea (May, 2012)
- [20] “Dark Energy and Modified Gravity from Large-scale Structure”
QG2010 NIMS-APCTP Joint International Workshop String Theory and Cosmology, Daejeon, Korea (September, 2010)
- [21] “Systematic effects on determination of dark energy and modified gravity from galaxy surveys”
Recent Progresses in Dark-Universe and Astrophysics, APCTP-Seoul-Branch, Korea (August, 2010)
- [22] “3D Galaxy Clustering (BAO)” **[Review talk]**
National Cosmology Workshop, Institute for High Energy Physics and National Astronomical Observatory of China, Beijing, China (December, 2008)
- [23] “Large-Scale Anisotropic Correlation Function of the SDSS”
Conference for Hyper-Suprime Cam, Mie, Japan (March, 2008)

Invited colloquium and seminar talks

- [1] “Large-scale intrinsic alignments of dark matter halo orientations with velocity field”
Cosmology seminar at Stanford, Stanford University, USA (April 2019)
- [2] “Probing physical boundaries of dark matter halos from cosmic density and velocity fields”
LeCosPA Cosmology and Particle Astrophysics Seminar, National Taiwan University, Taiwan (May, 2018)
- [3] “Probing physical boundaries of dark matter halos from cosmic density and velocity fields”
High Energy Theory Group Seminar, Academia Sinica Institute of Physics, Taiwan (May, 2018)
- [4] “Reconstructing power spectrum of dark matter halos from galaxy distribution”
IANCU Colloquium, National Central University, Taiwan (November, 2017)

- [5] “Precision cosmology with galaxy redshift surveys”
LeCosPA Cosmology and Particle Astrophysics Seminar, National Taiwan University, Taiwan (May, 2017)
- [6] “Theoretical modeling of redshift space distortions for galaxies toward precision cosmology”
Cosmology seminar, Yale University, USA (December, 2016)
- [7] “New constraint on gravity theory at $z \sim 1.4$ from the Subaru FMOS galaxy redshift survey (FastSound)”
Astronomy Colloquium, The University of Tokyo, Japan (February, 2016)
- [8] “Observational and theoretical studies of large-scale structure of the Universe using galaxy redshift surveys”
ASIAA Colloquium, Academia Sinica Institute of Astronomy and Astrophysics, Taipei, Taiwan (Dec 2, 2015)
- [9] “Probing dark energy and modified gravity from large-scale structure of the Universe”
Tsinghua Center for Astrophysics Colloquium, Tsinghua University, Beijing, China (March, 2015)
- [10] “Modeling nonlinear power spectrum of dark matter halos and galaxies in redshift space”
Cosmology seminar, YITP, Kyoto University, Japan (March 2015)
- [11] “Nonlinear velocity statistics and redshift-space distortions in peculiar velocity surveys”
Astronomy-Cosmology-Particle Physics (ACP) Seminar, Kavli IPMU, U. of Tokyo, Japan (February, 2014)
- [12] “Intrinsic ellipticity correlation of luminous red galaxies on large scales”
Berkeley cosmology seminar, UC Berkeley, USA (December, 2009)

Selected contributed talks

- [1] “Intrinsic alignments of halo orientations with velocity field and the baryon acoustic oscillation features”
Annual Conference in Astronomical Society of Japan, Kumamoto Univ., Japan (September, 2019)
- [2] “Splashback radius of non-spherical dark matter halos from cosmic density and velocity fields”
Annual Conference in Astronomical Society of Japan, Chiba Univ., Japan (March, 2018)
- [3] “Intrinsic Alignments and Splashback Radius of Dark Matter Halos from Cosmic Density and Velocity Fields”
The Nonlinear Universe, Smartno, Slovenia (July, 2017)
- [4] “Reconstruction of power spectrum of dark matter halos from galaxy distribution in redshift surveys”
Annual Conference in Astronomical Society of Japan, Ehime Univ., Japan (September, 2016)
- [5] “The Subaru FMOS galaxy redshift survey (FastSound). New constraint on gravity theory from redshift space distortions at $z \sim 1.4$ ”
Subaru Users’ Meeting FY2015, Atami, Japan (January, 2016)
- [6] “Reconstructing halo power spectrum from redshift-space galaxy distribution”
Theoretical and Observational Progress on Large-scale Structure of the Universe: MPA/ESO/MPE/Excellence Cluster Universe Joint Conference 2015, ESO, Garching, Germany (July, 2015)
- [7] “Peculiar velocities in redshift space: formalism, N-body simulations and perturbation theory”
The 10th Sino-German Workshop on Galaxy Formation and Cosmology, Xi’an, China (May, 2014)
- [8] “Nonlinear velocity statistics and redshift-space distortions in peculiar velocity surveys”
CosKASI Conference 2014, Korea Astronomy and Space Science Institute, Korea (April, 2014)
- [9] “Formulation of velocity statistics in redshift space”
Annual Conference in Astronomical Society of Japan, International Christian Univ., Japan (March, 2014)

- [10] “Peculiar velocity statistics in real and redshift space: N-body simulations and perturbation theory”
LSS13 Theoretical Challenges in Large Scale Structure, Ascona, Switzerland (July, 2013)
- [11] “Peculiar velocity statistics in real and redshift space: N-body simulations and perturbation theory”
IEU Cosmology Conference 2013, IEU Ewha Womans University, Korea (June, 2013)
- [12] “Modeling redshift-space power spectrum using phase space distribution function approach”
Annual Conference in Astronomical Society of Japan, Kagoshima University, Japan (September, 2011)
- [13] “Intrinsic ellipticity correlation of luminous red galaxies”
Annual Conference in Astronomical Society of Japan, Osaka Prefecture University, Japan (March, 2009)
- [14] “Intrinsic Ellipticity Correlation of Luminous Red Galaxies and Misalignment with their Host Dark Matter Halos”
The 8th Sino-German workshop on galaxy formation and cosmology, Kunming, China (February, 2009)
- [15] “Systematic Effects on Determination of the Growth Factor from Redshift-space Distortions”
IEU Workshop on Cosmology and Fundamental Physics, IEU Ewha Womans University, Korea, (May, 2010)
- [16] “Large-Scale Anisotropic Correlation Function of SDSS Luminous Red Galaxies”
1st Korea-Japan Workshop on Galaxy Evolution, Yonsei University, South Korea (February, 2008)
- [17] “Anisotropic Correlation Function of Large-scale Galaxy Distribution from the SDSS LRG Sample”
Outstanding Questions for the Standard Cosmological Model, Imperial College London, UK (March, 2007)
- [18] “Anisotropic Correlation Function in the LRG”
SDSS-II Collaboration Meeting, Seoul National University, Korea (September, 2006)
- [19] “Cosmological Parameters from Anisotropy of SDSS LRG Correlation Function”
SDSS-II Collaboration Meeting, Santa Fe, USA (March, 2006)
- [20] “Cosmological Analysis with Baryonic Acoustic Oscillations in the Correlation Function of SDSS Galaxies and Future Galaxy Redshift Surveys”
The 1st China-Japan-Korea Joint Workshop on Cosmology, Large Scale Structure and Galaxy Formation: Numerical Simulations, Shanghai, China (November, 2005)
- [21] “Cosmological Analysis with Anisotropy of Correlation Function of SDSS Galaxies”
Annual Conference in Astronomical Society of Japan, Sapporo, Hokkaido, Japan (October, 2005)

Media press release

- [1] Press release on “Decoding the gravitational evolution of dark matter halos”
- Date : January 13th, 2015
 - Place : Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo
 - Contents : Shun Saito and I made a press release based on the refereed paper [15] Saito et al., published by Physical Review D, editor’s suggestion (See the publication list in the next page). After it was released at the website of The University of Tokyo, it was also forecasted by web news in Japan, The USA, Italy Turkey, Spain and China, and also forecasted by YouTube.
- [2] Press release on “New test by deepest galaxy map finds Einstein’s theory stands true”
- Date : May 11th, 2016
 - Place : Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo

- Co-released from the following institutes:
 - Astronomy department, The University of Tokyo;
 - Physics department, Kyoto University;
 - National Astronomical Observatory of Japan;
 - Astronomy department, Tohoku University
- Contents : I made a press release based on the refereed paper [22] Okumura et al., published by PASJ (See the publication list in the next page).

LIST OF PUBLICATIONS

Refereed Papers

- Number of publications: **36** [**995** citations] (citations taken from either NASA ADS or HEP INSPIRES).
- Number of first and second authored publications: **19** [**684** citations].
- **1** first author publication with > 150 citations and **6** first author publications with > 50 citations

- [1] A. Agrawal, **T. Okumura**, & T. Futamase
“Constraining neutrino mass and dark energy with peculiar velocities and lensing dispersions of Type Ia supernovae”
Submitted to *Physical Review D*. [arXiv:1907.02328] 0 citation
- [2] **T. Okumura**, A. Taruya & T. Nishimichi
“Intrinsic alignment statistics of density and velocity fields at large scales: Formulation, modeling and baryon acoustic oscillation features”
Submitted to *Physical Review D*. [arXiv:1907.00750] 0 citation
- [3] S. H. Suyu, T.-C. Chang, F. Courbin, & **T. Okumura**
“Cosmological distance indicators”
Space Science Reviews, 214, 91 [arXiv:1801.07262] 5 citations [INSPIRES]
- [4] **T. Okumura**, T. Nishimichi, K. Umetsu & K. Osato
“Splashback radius of nonspherical dark matter halos from cosmic density and velocity fields”
Physical Review D., 98, 023523, [arXiv:1807.02669] 5 citations
- [5] K. Umetsu, M. Sereno, S.-I. Tam, I.-N. Chiu, Z. Fan, S. Ettori, D. Gruen, **T. Okumura**, E. Medezinski, M. Donahue, M. Meneghetti, B. Frye, A. Koekemoer, T. Broadhurst, A. Zitrin, I. Balestra, N. Benitez, Y. Higuchi, P. Melchior, A. Mercurio, J. Merten, A. Molino, M. Nonino, M. Postman, P. Rosati, J. Sayers, & S. Seitz
“The Projected Dark and Baryonic Ellipsoidal Structure of 20 CLASH Galaxy Clusters”
The Astrophysical Journal, 860 (2018) 104 [arXiv:1804.00664] 5 citation [NASA ADS]
- [6] M. TONEGAWA, **T. Okumura**, T. Totani, G. Dalton & K. Yabe
“The Subaru FMOS galaxy redshift survey (FastSound). V. Intrinsic alignments of emission line galaxies at $z \sim 1.4$ ”
Publication for Astronomical Society of Japan (2018) 70, 41, [arXiv:1708.02224] 4 citations
- [7] K. Osato, T. Nishimichi, M. Oguri, M. Takada & **T. Okumura**
“Strong orientation dependence of surface mass density profiles of dark haloes at large scales”
Monthly Notices of the Royal Astronomical Society 477 (2018) 2141-2153 [arXiv:1712.00094] 7 citations [NASA ADS / INSPIRES]
- [8] F. Arroja, **T. Okumura**, N. Bartolo, P. Karmakar & S. Matarrese
“Large-scale structure in mimetic Horndeski gravity”
Journal of Cosmology and Astroparticle Physics, 05 (2018) 050 [arXiv:1708.01850] 9 citations [NASA ADS / INSPIRES]
- [9] N. S. Sugiyama, **T. Okumura**, & D. N. Spergel
“A direct measure of free electron gas via the Kinematic Sunyaev-Zel’dovich effect in Fourier-space analysis”
Monthly Notices of the Royal Astronomical Society, 475 (2018) 3764-3785 [arXiv:1705.07449] 4 citations (INSPIRES)

- [10] N. S. Sugiyama, M. Shiraishi, & **T. Okumura**
 “Limits on statistical anisotropy from BOSS DR12 galaxies using bipolar spherical harmonics”
Monthly Notices of the Royal Astronomical Society, 473 (2018) 2737-2752 [arXiv:1704.02868] 14 citations
 [INSPIRES]
- [11] **T. Okumura**, M. Takada, S. More, & S. Masaki
 “Reconstruction of halo power spectrum from redshift-space galaxy distribution: cylinder-grouping method and halo exclusion effect”
Monthly Notices of the Royal Astronomical Society, 469 (2017) 459-475 [arXiv:1611.04165] 6 citations (NASA ADS / INSPIRES)
- [12] **T. Okumura**, T. Nishimichi, K. Umetsu & K. Osato
 “Intrinsic Alignments and Splashback Radius of Dark Matter Halos from Cosmic Density and Velocity Fields”
 Arxiv preprint, [arXiv:1706.08860] 7 citations (NASA ADS / INSPIRES)
- [13] M. Shiraishi, N. S. Sugiyama, & **T. Okumura**
 “Polypolar spherical harmonic decomposition of galaxy correlators in redshift space: Toward cosmic isotropy and homogeneity tests”
Physical Review D., 95 (2017) 063508 [arXiv:1612.02645] 15 citations (NASA ADS / INSPIRES)
- [14] N. S. Sugiyama, **T. Okumura**, & D. N. Spergel
 “Will kinematic Sunyaev-Zel’dovich measurements enhance the science return from galaxy redshift surveys?”
Journal of Cosmology and Astroparticle Physics, 01 (2017) 057 [arXiv:1606.06367] 9 citations (NASA ADS / INSPIRES)
- [15] N. S. Sugiyama, **T. Okumura**, & D. N. Spergel
 “Understanding redshift space distortions in density-weighted peculiar velocity”
Journal of Cosmology and Astroparticle Physics, 07 (2016) 001 [arXiv:1509.08232] 12 citations (INSPIRES)
- [16] H. Okada, T. Totani, M. Tonegawa, M. Akiyama, G. Dalton, K. Glazebrook, F. Iwamuro, K. Ohta, N. Takato, N. Tamura, K. Yabe, A. J. Bunker, T. Goto, C. Hikage, T. Ishikawa, **T. Okumura** & I. Shimizu
 “The Subaru FMOS Galaxy Redshift Survey (FastSound). II. The Emission Line Catalog and Properties of Emission Line Galaxies”
Publication for Astronomical Society of Japan, 68 (2016) 47 [arxiv:1504.05592] 11 citations (INSPIRES)
- [17] **T. Okumura**, C. Hikage, T. Totani, M. Tonegawa, H. Okada, K. Glazebrook, C. Blake, P. G. Ferreira, S. More, A. Taruya, S. Tsujikawa, M. Akiyama, G. Dalton, T. Goto, T. Ishikawa, F. Iwamuro, T. Matsubara, T. Nishimichi, K. Ohta, I. Shimizu, R. Takahashi, N. Takato, N. Tamura, K. Yabe, & N. Yoshida
 “The Subaru FMOS galaxy redshift survey (FastSound). IV. New constraint on gravity theory from redshift space distortions at $z \sim 1.4$ ”
Publication for Astronomical Society of Japan, 68 (2016) 42 [arxiv:1511.08083] 58 citations (NASA ADS)
- [18] **T. Okumura**, N. Hand, U. Seljak, Z. Vlah & V. Desjacques
 “Galaxy power spectrum in redshift space: combining perturbation theory with the halo model”
Physical Review D, 92 (2015) 103516 [arXiv:1506.05814] 25 citations (NASA ADS)
- [19] M. Tonegawa, T. Totani, H. Okada, M. Akiyama, G. Dalton, K. Glazebrook, F. Iwamuro, T. Maihara, K. Ohta, I. Shimizu, N. Takato, N. Tamura, K. Yabe, A. J. Bunker, J. Coupon, P. G. Ferreira, C. S. Frenk, T. Goto, C. Hikage, T. Ishikawa, T. Matsubara, S. More, **T. Okumura**, W. J. Percival, L. R. Spitler, & I. Szapudi
 “The Subaru FMOS Galaxy Redshift Survey (FastSound). I. Overview of the Survey Targeting on H α Emitters at $z \sim 1.4$ ”

- Publication for Astronomical Society of Japan*, 67 (2015) 81 [arxiv:1502.07900] 15 citations (NASA ADS / INSPIRES)
- [20] Y.-S. Song, A. Taruya, E. Linder, K. Koyama, C. G. Sabiu, G.-B. Zhao, F. Bernardeau, T. Nishimichi, & **T. Okumura**
“Consistent Modified Gravity Analysis of Anisotropic Galaxy Clustering Using BOSS DR11”
Physical Review D, 92 (2015) 043522 [arXiv:1507.01592] 18 citations (INSPIRES)
- [21] S. Saito, T. Baldauf, Z. Vlah, U. Seljak, **T. Okumura** & P. McDonald
“Understanding higher-order nonlocal halo bias at large scales by combining the power spectrum with the bispectrum”
Physical Review D, 90 (2014) 123522 [arXiv:1405.1447] 74 citations (NASA ADS)
- [22] Y.-S. Song, C. G. Sabiu, **T. Okumura**, M. Oh & E. V. Linder
“Cosmological Tests using Redshift Space Clustering in BOSS DR11”
Journal of Cosmology and Astroparticle Physics, 12 (2014) 005 [arXiv:1407.2257] 19 citations (INSPIRES)
- [23] Y.-S. Song, **T. Okumura** & A. Taruya
“Broadband Alcock-Paczynski test exploiting redshift distortions”
Physical Review D, 89 (2014) 103541 [arXiv:1309.1162] 17 citations (NASA ADS)
- [24] **T. Okumura**, U. Seljak, Z. Vlah & V. Desjacques
“Peculiar velocities in redshift space: formalism, N-body simulations and perturbation theory”
Journal of Cosmology and Astroparticle Physics, 05 (2014) 003 [arXiv:1312.4214] 24 citations (INSPIRES)
- [25] J. Blazek, U. Seljak, Z. Vlah & **T. Okumura**
“Geometric and dynamic distortions in anisotropic galaxy clustering”
Journal of Cosmology and Astroparticle Physics, 04 (2014) 001 [arXiv:1311.5563] 9 citations (NASA ADS)
- [26] E. V. Linder, M. Oh, **T. Okumura**, C. G. Sabiu & Y.-S. Song
“Cosmological Constraints from the Anisotropic Clustering Analysis using BOSS DR9”
Physical Review D, 89 (2014) 063525 [arXiv:1311.5226] 12 citations (NASA ADS)
- [27] Z. Vlah, U. Seljak, **T. Okumura** & V. Desjacques
“Distribution function approach to redshift space distortions. Part V: perturbation theory applied to dark matter halos”
Journal of Cosmology and Astroparticle Physics, 10 (2013) 053 [arXiv:1308.6294] 31 citations (INSPIRES)
- [28] **T. Okumura**, U. Seljak & V. Desjacques
“Distribution function approach to redshift space distortions. Part III: halos and galaxies”
Journal of Cosmology and Astroparticle Physics, 11 (2012) 014 [arXiv:1206.4070] 58 citations (INSPIRES)
- [29] Z. Vlah, U. Seljak, P. McDonald, **T. Okumura** & T. Baldauf
“Distribution function approach to redshift space distortions. Part IV: perturbation theory applied to dark matter”
Journal of Cosmology and Astroparticle Physics, 11 (2012) 009 [arXiv:1207.0839] 41 citations (INSPIRES)
- [30] J. Kim & **T. Okumura**
“Heavy-Tail Distribution from Correlation of Discrete Stochastic Process”,
Unpublished [arXiv:1203.5581] 0 citation
- [31] **T. Okumura**, U. Seljak, P. McDonald & V. Desjacques
“Distribution function approach to redshift space distortions. Part II: N-body simulations”
Journal of Cosmology and Astroparticle Physics, 02 (2012) 010, [arXiv:1109.1609] 49 citations (NASA ADS)

- [32] W. Wang, Y. P. Jing, C. Li, **T. Okumura**, & J. Han
“Galaxy Clustering and Projected Density Profiles as Traced by Satellites in Photometric Surveys: Methodology and Luminosity Dependence”
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