

## Ho Seong Hwang Curriculum Vitae

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### 1. Education

**Aug. 2007:** Ph.D. in Astronomy, Seoul National University, Korea (**Advisor** : Myung Gyoon Lee)  
**Thesis:** Dynamics of Galaxy Clusters in Wide-field Galaxy Surveys

**Feb. 2001:** B.S. in Physics, Korea Advanced Institute of Science and Technology (KAIST), Korea

### 2. Positions

**2014/09 – Present:** Research Professor, Korea Institute for Advanced Study (KIAS), Korea  
**2011/10 – 2014/08:** Research Fellow, Harvard-Smithsonian Center for Astrophysics, USA  
**2009/05 – 2011/09:** Research Fellow, CEA Saclay, France  
**2007/09 – 2009/04:** Research Fellow, KIAS, Korea  
**2004/12 – 2005/04:** Visiting Research Associate, School of Physical Sciences, University of Kent, UK  
**2001/03 – 2003/02:** Teaching Assistant, Seoul National University, Korea

### 3. Research Interests

- Large-scale Structure of the Universe
- Observational Cosmology
- Galaxy Formation and Evolution
- Formation of Galaxy Clusters/Groups
- Environmental Effects on Galaxy Properties
- Infrared Luminous Galaxies
- Galaxy Interactions and Mergers
- Globular Cluster Systems in Galaxies

### 4. References

<b>Dr. Margaret Geller</b>	Smithsonian Astrophysical Observatory, USA	mgeller@cfa.harvard.edu
<b>Dr. Daniel Fabricant</b>	Smithsonian Astrophysical Observatory, USA	dfabricant@cfa.harvard.edu
<b>Dr. David Elbaz</b>	CEA Saclay, France	delbaz@cea.fr
<b>Prof. Changbom Park</b>	Korea Institute for Advanced Study, Korea	cbp@kias.re.kr
<b>Prof. Myung Gyoon Lee</b>	Seoul National University, Korea	mglee@astro.snu.ac.kr

### 5. Observing Experience

- **Optical/Near-IR Imaging:** MMT/MMTcam, AKARI/IRC, BOAO, SOAO
- **Optical/Near-IR Spectroscopy:** Gemini-S/GMOS, MMT/Hectospec, FLWO/FAST, CTIO/R-C SPec., CFHT/MOS, AKARI/IRC
- **Mid/Far-IR, Submillimeter and Radio observations:** SMA, Herschel/PACS/SPIRE, AKARI/IRC

### 6. Talks in the last 2 years

#### 6.1. Conferences / Colloquia

**2017/10/12** “HectoMAP and Horizon Run 4: Over- and Under-dense Large-scale Structures in the Real and Simulated Universe”, Yeosu Convention Center, Korea (2017 Fall KAS meeting)

**2017/09/20** “Testing the Standard Model of Cosmology with Large-scale Structures in the Real and Simulated Universe”, Yukawa Institute for Theoretical Physics (YITP), Japan (KIAS-YITP joint workshop 2017)

- 2017/09/12 “*HectoMAP and Horizon Run 4: Dense Structures and Voids in the Real and Simulated Universe*”, Institut d’Astrophysique de Paris (IAP), France (Journal-club Universe)
- 2017/07/10 “*The KIAS redshift survey of nearby galaxy clusters: COMA and more*”, Resom Forest Resort, Korea (2017 CLEVOR-GEM Joint Workshop)
- 2017/07/06 “*HectoMAP and Horizon Run 4: Over- and Under-dense Large-scale Structures in the Real and Simulated Universe*”, Taipei International Convention Center, Taiwan (2017 Asia-Pacific Regional IAU Meeting)
- 2017/06/28 “*Summary of Subaru International Partnership Science and Instrumentation Workshop*”, Daea-Ulleung Resort, Korea (The 6th Survey Science Group Workshop)
- 2017/06/02 “*HectoMAP and Horizon Run 4: A Cosmological Test with Large-scale Structures at Intermediate Redshifts*”, Yonsei University, Korea (Astronomy Colloquium Talk)
- 2017/03/23 “*Mapping the Galaxy Distribution in and around Galaxy Clusters*”, NAOJ, Japan (Subaru International Partnership Science and Instrumentation Workshop)
- 2017/03/03 “*Galaxy Redshift Surveys with MMT/Hectospec: Galaxy Groups/Clusters and Large-scale Structure of the Universe*”, KASI, Korea (2017 Medium/Large Telescope Users Meeting)
- 2016/12/16 “*Multiwavelength Galaxy Surveys: New Opportunities*”, Konjiam Resort, Korea (Survey Science Group Meeting on Multiwavelength Studies of External Galaxies)
- 2016/11/09 “*Cosmic Address and Large-scale structure of the Universe*”, KIAS, Korea (QUC Workshop 2016)
- 2016/11/01 “*HectoMAP and Horizon Run 4: A cosmological test with large-scale structures at intermediate redshifts*”, KIAS, Korea (The 7th KIAS Workshop on Cosmology and Structure Formation)
- 2016/10/18 “*Science with Local Infrared Galaxies: DOGs in our backyard*”, Shanghai, China (JINGLE team meeting)
- 2016/09/29 “*HectoMAP and Horizon Run 4: A Cosmological Test with Large-scale Structures at Intermediate Redshifts*”, Seoul National University, Korea (The 10th East Asian Meeting on Astronomy)
- 2016/08/02 “*Mapping the Distribution of Galaxies at Intermediate Redshifts: Galaxy Clusters and Large-scale Structure of the Universe*”, Australian National University, Australia (RSAA Colloquium Talk)
- 2016/07/28 “*Mapping the Distribution of Galaxies at Intermediate Redshifts: Galaxy Clusters and Large-scale Structure of the Universe*”, Australian Astronomical Observatory, Australia (Colloquium Talk)
- 2016/04/08 “*A Cosmological Test with Large-scale Structures at Intermediate Redshifts*”, KASI, Korea (3rd Korea-Japan Workshop on Dark Energy)
- 2016/02/01 “*Current Status of SDSS IV and DESI*”, High 1 Resort, Korea (The 5th Survey Science Group Workshop)

## 6.2. Public Talks

- 2017/06/28 “*Structure of the Universe: Where am I in the vast Universe?*”, Ulleung High School in Ulleung-do, Korea
- 2016/11/25 “*Where am I in the vast Universe?*”, Okgu Middle School in Kunsan, Korea
- 2016/08/11 “*Structure of the Universe: Where am I in the vast Universe?*”, Sobaeksan Optical Astronomy Observatory, Korea (Seodaemun Museum of Natural History Summer Camp)
- 2016/02/16 “*Modern Astronomy: The Past, Present, and Future of the Universe*”, Korea Air Force Academy, Korea (Intensive Astronomy/Universe Program)
- 2016/01/30 “*Sky on a Chip*”, Gwacheon National Science Museum, Korea (Astronomy and Space Camp)

## 7. List of Publication

- 120 refereed papers in total: 7 submitted, 17 as first author, 24 as second author, and 72 as co-author

### 7.1. Refereed Publications, Submitted

7. **hCOSMOS: a dense spectroscopic survey of  $r \leq 21.3$  galaxies in the COSMOS field**, Damjanov, I., Zahid, H. J., Geller, M. J., Fabricant, D. G., **Hwang, H. S.**, 2017, ApJS, submitted (arXiv:1710.01733)

6. **A Study of Environmental Effects on Galaxy Spin using MaNGA data**,  
Lee, J. C., **Hwang, H. S.**, Chung, H.,  
2017, MNRAS, submitted
5. **JINGLE, a JCMT legacy survey of dust and gas for galaxy evolution studies: I. Survey overview and first results**,  
Saintonge, A. et al. (**Hwang, H. S.**),  
2017, MNRAS, submitted
4. **Evolution of Late-type Galaxies in Cluster Environment: Effects of High-speed Multiple Encounters with Early-type Galaxies**,  
Hwang, J.-S., Park, C., Banerjee, A., **Hwang, H. S.**,  
2017, ApJ, submitted
3. **The Fourteenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the extended Baryon Oscillation Sky Survey and from the second phase of the Apache Point Observatory Galactic Evolution Experiment**,  
SDSS Collaboration (**Hwang, H. S.**),  
2017, ApJS, submitted (arXiv:1707.09322)
2. **The surprisingly large dust and gas content of quiescent galaxies at  $z > 1.4$** ,  
Gobat, R., et al. (**Hwang, H. S.**),  
2017, NatAs<sup>1</sup>, submitted (arXiv:1703.02207)
1. **COSMOS2015 photometric redshifts probe the impact of filaments on galaxy properties**,  
Laigle, C., Pichon, C., et al. (**Hwang, H. S.**),  
2017, MNRAS, submitted (arXiv:1702.08810)

## 7.2. *Refereed Publications, First Author*

17. **HectoMAP and Horizon Run 4: Dense Structures and Voids in the Real and Simulated Universe**,  
**Hwang, H. S.**, Geller, M. J., Park, C., Fabricant, D. G., Kurtz, M. J., Rines, K. J., Kim, J., Diaferio, A., et al.,  
2016, ApJ, 818, 106
16. **Comparing Dense Galaxy Cluster Redshift Surveys with Weak Lensing Maps**,  
**Hwang, H. S.**, Geller, M. J., Diaferio, A., Rines, J. K., Zahid, J.,  
2014, ApJ, 797, 106
15. **Dust Properties of Local Dust-Obscured Galaxies with the Submillimeter Array**,  
**Hwang, H. S.**, Andrews, S. M., Geller, M. J.,  
2013, ApJ, 777, 38
14. **Dust-Obscured Galaxies in the Local Universe**,  
**Hwang, H. S.**, Geller, M. J.,  
2013, ApJ, 769, 116
13. **SHELS: Optical Spectral Properties of WISE 22  $\mu\text{m}$ -selected Galaxies**,  
**Hwang, H. S.**, Geller, M. J., Kurtz, M., Dell'Antonio, I., Fabricant, D.,  
2012, ApJ, 758, 25
12. **A WISE View of a Nearby Supercluster A2199**,  
**Hwang, H. S.**, Geller, M. J., Diaferio, A., Rines, K.,  
2012, ApJ, 752, 64
11. **Activity in galactic nuclei of cluster and field galaxies in the local universe**,  
**Hwang, H. S.**, Park, C., Elbaz, D., Choi, Y.-Y.,  
2012, A&A, 538, 15
10. **GOODS-Herschel: the impact of galaxy-galaxy interactions on the far-infrared properties of galaxies**,  
**Hwang, H. S.**, Elbaz, D., Dickinson, M., Charmandaris, V., Daddi, E., GOODS-Herschel team,  
2011, A&A, 535, 60
9. **Evolution of Dust Temperature of Galaxies through Cosmic Time as seen by Herschel**,  
**Hwang, H. S.**, Elbaz, D., Magdis, G. E., Daddi, E., Symeonidis, M., PEP team, HerMES team, AKARI team  
2010, MNRAS, 409, 75

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<sup>1</sup>NatAs: Nature Astronomy

8. **Environmental Dependence of Local Luminous Infrared Galaxies**,  
Hwang, H. S., Elbaz, D., Lee, J. C., Jeong, W.-S., Park, C., Lee, M. G., Lee, H. M.,  
2010, *A&A*, 522, 33
7. **Orbital Dependence of Galaxy Properties in Satellite Systems of Galaxies**,  
Hwang, H. S., Park, C.,  
2010, *ApJ*, 720, 522
6. **Galaxy Activity in Merging Binary Galaxy Clusters**,  
Hwang, H. S., Lee, M. G.,  
2009, *MNRAS*, 397, 2111
5. **Evidence for Morphology and Luminosity Transformation of Galaxies at High Redshifts**,  
Hwang, H. S., Park, C.,  
2009, *ApJ*, 700, 791
4. **Galaxy Orbits for Galaxy Clusters in Sloan Digital Sky Survey and 2dF Galaxy Redshift Survey**,  
Hwang, H. S., Lee, M. G.,  
2008, *ApJ*, 676, 218
3. **The Globular Cluster System of M60 (NGC 4649). II. Kinematics of the Globular Cluster System**,  
Hwang, H. S., Lee, M. G., Park, H. S., Kim, S. C., Park, J.-H., Sohn, Y.-J., Lee, S.-G., Rey, S.-C., et al.  
2008, *ApJ*, 674, 869
2. **Searching for Rotating Galaxy Clusters in SDSS and 2dFGRS**,  
Hwang, H. S., Lee, M. G.,  
2007, *ApJ*, 662, 236
1. **The ultraluminous and hyperluminous infrared galaxies in the SDSS, 2dFGRS and 6dFGS**,  
Hwang, H. S., Serjeant, S., Lee, M. G., Lee, K. H., White, G. J.,  
2007, *MNRAS*<sup>2</sup>, 375, 115

### 7.3. *Refereed Publications, Second Author*

24. **Demise of Faint Satellites around Isolated Early-type Galaxies**,  
Park, C., Hwang, H. S., Park, H., Lee, J. C.,  
2017, *NatAs*, in press (arXiv:1703.02207)
23. **Star Formation Activity of Barred Spiral Galaxies**,  
Kim, E., Hwang, H. S., Chung, H., Lee, G.-H., Park, C., Cervantes Sodi, B., Kim, S. S.,  
2017, *ApJ*, 845, 83
22. **A Redshift Survey of the Nearby Galaxy Cluster Abell 2199: Comparison of the Spatial and Kinematic Distributions of Galaxies with the Intracluster Medium**,  
Song, H., Hwang, H. S., Park, C., Tamura, T.,  
2017, *ApJ*, 842, 88
21. **The Fastest Galaxy Evolution in an Unbiased Compact Group Sample with WISE**,  
Lee, G.-H., Hwang, H. S., Sohn, J., Lee, M. G.,  
2017, *ApJ*, 835, 280
20. **To the Edge of M87 and Beyond: Spectroscopy of Intracluster Globular Clusters and Ultra Compact Dwarfs in the Virgo Cluster**,  
Ko, Y., Hwang, H. S., et al.,  
2017, *ApJ*, 835, 212
19. **A Submillimeter Continuum Survey of Local Dust-Obscured Galaxies**,  
Lee, J. C., Hwang, H. S., Lee, G.-H.,  
2016, *ApJ*, 833, 188
18. **SHELS: Complete Redshift Surveys of Two Widely Separated Fields**,  
Geller, M. J., Hwang, H. S., DellAntonio, I., Zahid, H. J., Kurtz, M. J., Fabricant, D. G.,  
2016, *ApJS*, 224, 11

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<sup>2</sup>MNRAS: Monthly Notices of the Royal Astronomical Society

17. **Compact Groups of Galaxies with Complete Spectroscopic Redshifts in the Local Universe**,  
Sohn, J., **Hwang, H. S.**, Geller, M. J., Diaferio, A., Rines, K. J., Lee, M. G., Lee, G.-H.,  
2015, JKAS<sup>3</sup>, 48, 381
16. **Schwarzschild Lecture 2014: HectoMAPping the Universe**,  
Geller, M. J., **Hwang, H. S.**,  
2015, AN<sup>4</sup>, 336, 428
15. **Galaxy Evolution in the Mid-infrared Green Valley: a Case of the A2199 Supercluster**,  
Lee, G.-H., **Hwang, H. S.**, Lee, M. G., Sohn, J., Shim, H., Diaferio, A.,  
2015, ApJ, 800, 80
14. **The Number Density of Quiescent Compact Galaxies at Intermediate Redshift**,  
Damjanov, I., **Hwang, H. S.**, Chilingarian, I., Geller, M. J.,  
2014, ApJ, 793, 39
13. **Tracing Recent Star Formation of Red Early-type Galaxies out to  $z \sim 1$** ,  
Ko, J., **Hwang, H. S.**, Im, M., Le Borgne, D., Lee, J. C., Elbaz, D.,  
2014, ApJ, 791, 134
12. **SHELS: A Complete Galaxy Redshift Survey with  $R \leq 20.6$** ,  
Geller, M. J., **Hwang, H. S.**, Fabricant, D. G., Kurtz, M. J., Dell'Antonio, I. P., Zahid, J.,  
2014, ApJS<sup>5</sup>, 213, 35
11. **A Redshift Survey of the Strong Lensing Cluster Abell 383**,  
Geller, M. J., **Hwang, H. S.**, Diaferio, A., Kurtz, M., Coe, D., Rines, J. K.,  
2014, ApJ, 783, 52
10. **The Calibration of Star Formation Rate Indicators for WISE Selected Galaxies**,  
Lee, J. C., **Hwang, H. S.**, Ko, J.,  
2013, ApJ, 774, 62
9. **Activity in Galactic Nuclei of Compact Group Galaxies in the Local Universe**,  
Sohn, J., **Hwang, H. S.**, Lee, M. G., Lee, G.-H., Lee, J. C.,  
2013, ApJ, 771, 106
8. **The Mid-infrared and Near-Ultraviolet Excess Emissions of Quiescent Galaxies on the Red Sequence**,  
Ko, J., **Hwang, H. S.**, Lee, J. C., Sohn, Y.-J.,  
2013, ApJ, 767, 90
7. **AKARI Near-Infrared Spectroscopy of Luminous Infrared Galaxies**,  
Lee, J. C., **Hwang, H. S.**, Lee, M. G., Kim, M., Lee, J. H.,  
2012, ApJ, 756, 95
6. **Optical spectral classification of southern ultraluminous infrared galaxies**,  
Lee, J. C., **Hwang, H. S.**, Lee, M. G., Kim, M., Kim, S. C.,  
2011, MNRAS, 414, 720
5. **AKARI Near-Infrared Spectroscopy of SDSS-selected Blue Early-type Galaxies**,  
Lee, J. H., **Hwang, H. S.**, Lee, M. G., Lee, J. C., Matsuhara, H.,  
2010, ApJ, 719, 1946
4. **Herschel Unveils a Puzzling Uniformity of Distant Dusty Galaxies**,  
Elbaz, D., **Hwang, H. S.**, Magnelli, B., Daddi, E., Aussel, H., PEP team, HerMES team,  
2010, A&A<sup>6</sup>, 518, L29
3. **Interactions of Galaxies in the Galaxy Cluster Environment**,  
Park, C., **Hwang, H. S.**,  
2009, ApJ, 699, 1595
2. **Wide-Field Survey of Globular Clusters in M31. II. Kinematics of the Globular Cluster System**,  
Lee, M. G., **Hwang, H. S.**, Kim, S. C., Park, H. S., Geisler, D., Sarajedini, A., & Harris, W.E.,  
2008, ApJ, 674, 886

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<sup>3</sup>JKAS: Journal of Korean Astronomical Society

<sup>4</sup>AN: Astronomische Nachrichten

<sup>5</sup>ApJS: The Astrophysical Journal Supplement Series

<sup>6</sup>A&A: Astronomy & Astrophysics

1. **The Globular Cluster System of M60 (NGC 4649). I. CFHT MOS Spectroscopy and Database**, Lee, M. G., **Hwang, H. S.**, Park, H. S., Park, J.-H., Kim, S. C., Sohn, Y.-J., Lee, S.-G., Rey, S.-C., et al. 2008, ApJ, 674, 857

#### 7.4. *Refereed Publications, Co-Author*

72. **Galaxy evolution in the metric of the Cosmic Web**, Kraljic, K., et al. (**Hwang, H. S.**), 2017, MNRAS, in press (arXiv:1710.02676)
71. **The Thirteenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-IV Survey MAPPING Nearby Galaxies at Apache Point Observatory**, SDSS Collaboration (**Hwang, H. S.**), 2017, ApJS, in press (arXiv:1608.02103)
70. **An imperfectly passive nature: Bright sub-millimeter emission from dust-obscured star formation in the  $z=3.717$  "passive" system ZF20115**, Simpson, J. M., et al. (**Hwang, H. S.**), 2017, ApJL, 844, 10
69. **Galaxy evolution in merging clusters. The passive core of the "Train Wreck" cluster of galaxies, A520**, Deshev, B., et al. (**Hwang, H. S.**), 2017, A&A, in press (arXiv:1707.03208)
68. **Clustering of Extremely Red Objects in the Subaru GTO 2deg<sup>2</sup> Field**, Shin, J., Shim, H., **Hwang, H. S.**, Ko, J., et al., 2017, JKAS, 50, 60
67. **Sloan Digital Sky Survey IV: Mapping the Milky Way, Nearby Galaxies and the Distant Universe**, SDSS Collaboration (**Hwang, H. S.**), 2017, AJ, 154, 28
66. **The Dependence of the Mass-Metallicity Relation on Large Scale Environment**, Wu, P.-F., Zahid, H. J., **Hwang, H. S.**, Geller, M., 2017, MNRAS, 468, 1881
65. **Dependence of Cluster Galaxy Properties on Dynamical State of Host Clusters**, Kim, J.-W., Ko, J., **Hwang, H. S.**, et al., 2017, ApJ, 836, 105
64. **Separating Galaxies from the Cluster Dark Matter Halo in Abell 611**, Monna, A., Seitz, S. et al. (**Hwang, H. S.**), 2017, MNRAS, 465, 4589
63. **The Scaling of Stellar Mass and Central Stellar Velocity Dispersion for Quiescent galaxies at  $z < 0.7$** , Zahid, H. J., Geller, M., Fabricant, D., **Hwang, H. S.**, 2016, ApJ, 832, 203
62. **Compact E+A Galaxies as a Progenitor of Massive Compact Quiescent Galaxies at  $0.2 < z < 0.8$** , Zahid, H. J., et al. (**Hwang, H. S.**), 2016, ApJ, 831, 146
61. **Catalogs of Compact Groups of Galaxies from the Enhanced SDSS DR12**, Sohn, J., Geller, M. J., **Hwang, H. S.**, Zahid, H. J., Lee, M. G., 2016, ApJS, 225, 23
60. **The Stellar Mass Fundamental Plane and Compact Quiescent Galaxies at  $z < 0.6$** , Zahid, H. J., Damjanov, I., Geller, M. J., **Hwang, H. S.**, Fabricant, D. G. 2016, ApJ, 821, 101
59. **Stellar Populations of Early-type Galaxies with Mid-infrared Excess Emission**, Ko, J., Chung, H., **Hwang, H. S.**, Lee, J. C. 2016, ApJ, 820, 132
58. **HeCS-SZ: The Hectospec Survey of Sunyaev-Zeldovich Selected Clusters**, Rines, K. J., Geller, M. J., Diaferio, A., **Hwang, H. S.**, 2016, ApJ, 819, 63

57. **The Environment of Massive Quiescent Compact Galaxies at  $0.1 < z < 0.4$  in the COSMOS Field**,  
Damjanov, I., Geller, M. J., Zahid, H. J., **Hwang, H. S.**,  
2015, ApJ, 815, 104
56. **SHELS: A Rise in the Ionizing Photons in Star-forming Galaxies between  $0.2 < z < 0.6$** ,  
Kewley, L., Zahid, H. J., Geller, M. J., Dopita, M., **Hwang, H. S.**, Fabricant, D.,  
2015, ApJL, 812, 20
55. **The satellite content and quenching of star formation in galaxy groups at  $z \sim 1.8$** ,  
Gobat, R., Daddi, E. et al. (**Hwang, H. S.**),  
2015, A&A, 581, 56
54. **Quiescent Compact Galaxies at Intermediate Redshift in the COSMOS field. I. Number Density**,  
Damjanov, I., Geller, M. J., Zahid, H. J., **Hwang, H. S.**,  
2015, ApJ, 806, 158
53. **GOODS-Herschel : Star Formation, Dust Attenuation and the FIR-Radio Correlation on the Main Sequence of Star-Forming Galaxies up to  $z \sim 4$** ,  
Pannella, M., Elbaz, D., Daddi, E., Dickinson, M., **Hwang, H. S.**, et al.,  
2015, ApJ, 807, 141
52. **GOODS-Herschel: resolving the Cosmic Infrared Background by pushing Herschel to its faintest limit up to  $500 \mu\text{m}$** ,  
Leiton, R., Elbaz, D., Okumura, K., **Hwang, H. S.**, et al.,  
2015, A&A, 579, 93
51. **Constraining the galaxy mass content in the core of A383: first case study using velocity dispersion measurements for individual cluster members**,  
Monna, A., Seitz, S. et al. (**Hwang, H. S.**),  
2015, MNRAS, 447, 1224
50. **The Double Galaxy Cluster Abell 2465 II. Star Formation in the Cluster**,  
Wegner, G. A., Chu, D. S., **Hwang, H. S.**,  
2015, MNRAS, 447, 1126
49. **Regularity underlying complexity: a redshift-independent description of the continuous variation of galaxy-scale molecular gas properties in the mass-star formation rate plane**,  
Sargent, M., Daddi, E., Bethermin, M., Aussel, H., Magdis, G., **Hwang, H. S.**, et al.,  
2014, ApJ, 793, 19
48. **The Universal Relation of Galactic Chemical Evolution: The Origin of the Mass-Metallicity Relation**,  
Zahid, J., Dima, G., Kudritzki, R., Kewley, L., Geller, M. J., **Hwang, H. S.**,  
2014, ApJ, 791, 130
47. **Measuring Galaxy Velocity Dispersions with Hectospec**,  
Fabricant, D., Chilingarian, I., **Hwang, H. S.**, Kurtz, M., Geller, M. J., Dell'Antonio, I., Rines, K.,  
2013, PASP, 125, 1362
46. **Intermediate Redshift Massive Compact Galaxies**,  
Damjanov, I., Chilingarian, I., **Hwang, H. S.**, Geller, M. J.,  
2013, ApJL, 775, 48
45. **The Chemical Evolution of Star-Forming Galaxies Over the Last 11 Billion Years**,  
Zahid, J., Geller, M. J., Kewley, L., **Hwang, H. S.**, Fabricant, D., Kurtz, M.,  
2013, ApJL<sup>7</sup>, 771, 19
44. **Release of the deepest Herschel-PACS far-infrared survey: number counts and infrared luminosity functions from combined PEP/GOODS-H observations**,  
Magnelli, B., Popesso, P., Berta, S., Pozzi, F., PEP/GOODS-H team (**Hwang, H. S.**),  
2013, A&A, 553, 132
43. **A Survey for Planetary Nebulae in M31 Globular Clusters**,  
Jacoby, G. H., Ciardullo, R., De Marco, O., Lee, M. G., Herrmann, K. A., **Hwang, H. S.**, et al.,  
2013, ApJ, 769, 10
42. **The Herschel census of infrared SEDs through cosmic time**,  
Symeonidis, M., Vaccari, M., Berta, S., et al. (**Hwang, H. S.**),  
2012, MNRAS, 431, 2317

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<sup>7</sup>ApJL: The Astrophysical Journal Letters

41. **Panchromatic Spectral Energy Distributions of Herschel Sources**,  
Berta, S., Lutz, D., Santini, P., Wuyts, S., Rosario, D., et al. (**Hwang, H. S.**),  
2013, A&A, 551, 100
40. **Widespread and Hidden Active Galactic Nuclei in Star-forming Galaxies at redshift >0.3**,  
Juneau, S., Dickinson, M., Bournaud, F., et al. (**Hwang, H. S.**),  
2013, ApJ, 764, 176
39. **GOODS-Herschel: Separating High redshift Active Galactic Nuclei and Star Forming Galaxies using Infrared Color Diagnostics**,  
Kirkpatrick, A., Pope, A., GOODS-Herschel team (**Hwang, H. S.**),  
2013, ApJ, 763, 123
38. **GOODS-Herschel: radio-excess signature of hidden AGN activity in distant star-forming galaxies**,  
Del Moro, A., Alexander, D. M., Mullaney, J. R., GOODS-Herschel team (**Hwang, H. S.**),  
2012, A&A, 549, 59
37. **The Evolving Interstellar Medium of Star Forming Galaxies since  $z=2$  as Probed by Their Infrared Spectral Energy Distributions**,  
Magdis, G. E., Daddi, E., Bethermin, M., GOODS-Herschel team (**Hwang, H. S.**),  
2012, ApJ, 760, 6
36. **GOODS-Herschel: Impact of Active Galactic Nuclei and Star Formation Activity on Infrared Spectral Energy Distributions at High Redshift**,  
Kirkpatrick, A., Pope, A., GOODS-Herschel team (**Hwang, H. S.**),  
2012, ApJ, 759, 139
35. **The Globular Cluster System of NGC 4636 and Formation of Globular Clusters in gE Galaxies**,  
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