

Curriculum Vitae

Houjun Mo

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Personal Data:

Name:	Houjun Mo
Date of birth:	May 3, 1963
Place of birth:	Anhui, China
Nationality:	USA
Sex:	Male
Address:	LGRT B619E, 710 North Pleasant St. Amherst, MA 01003, USA

Education:

9/1979-7/1983	BS (7/83; Phys.)	Anhui University
9/1983-4/1987	MS (1/86; Astrophys.)	Univ. of Sci. & Tech. of China
5/1987-6/1991	PhD (6/91; Astrophys.)	Munich University

Professional Employment:

1991 - 1994	Postdoctoral fellow	Institute of Astronomy, Cambridge
1994 - 1995	Postdoctoral member	Institute of Advanced Study, Princeton
1995 - 1998	Tenure-track position:	Max-Planck-Institut für Astrophysik
1999 - 2003	Tenured scientific staff	Max-Planck-Institut für Astrophysik
2003 - 2008	Tenured associate professor	Astronomy, UMass
2008 -	Tenured full professor	Astronomy, UMass

Honors and visiting positions

1. Distinguished visiting professor, Tsinghua University, 2016 - 2019
2. Distinguished visiting professor, University of Science and Technology of China, 2011 -2016
3. Book ‘Galaxy formation and evolution’ wins 2010 PROSE award
4. Visiting Professor, Univ. of Sci. & Tech of China, 2002
5. Honorary Professor, Shanghai Observatory, Chinese Academy of Sciences, 2000
6. Visiting Professor, Padova University, 2000
7. Key-Projects Reviewer, Chinese Academy of Sciences, 1999 - 2003
8. Outstanding Overseas Young Scientist, Chinese Academy of Sciences, 1999
9. PhD thesis with the highest honor (Summa Cum Laude)

Research collaborations

1. SUBARU/PFS collaboration: <https://pfs.ipmu.jp/>
2. SDSS/MaNGA: <https://www.sdss.org/surveys/manga/>
3. CHILES observation of HI galaxies: <http://chiles.astro.columbia.edu/science.html>
4. TolTEC Surveys: http://toltec.astro.umass.edu/science_legacy_surveys.php
5. Hydrodynamic simulations of the local universe: UMass; University of Science and Technology of China; University of Edinburgh

Mentoring and Advising

Postdoctoral fellows

1. Huiyuan Wang: former postdoctoral research associate at UMass.
2. Xiaohu Yang: former postdoctoral research associate at UMass.

3. At the Max-Planck-Institute for Astrophysics (MPA) where I held a faculty position from 1995 to 2003, postdoctoral fellows were all sponsored by the institute. Postdoctoral fellows whom I have worked with at MPA included Frank van den Bosch, Shude Mao, Yipeng Jing, Ravi Sheth, Tom Theuns, Tom Abel, David Syer, Beppi Tormen.

Graduate students

1. Darren Stroupe: UMass graduate student, first year research project.
2. Lisiyuan Yang: UMass graduate student, first year research project.
3. Yangyao Chen: visiting graduate student from Tsinghua University, PhD thesis.
4. Kai Wang: visiting graduate student from Tsinghua University, PhD thesis.
5. Jiacheng Meng, Tsinghua graduate student, projects through PFS collaboration
6. Xiao Li, Tsinghua graduate student, projects through PFS collaboration
7. Xuanyi Wu, Tsinghua graduate student, projects through PFS collaboration
8. Pengfei Li, undergraduate student from USTC, summer internship, 2019.
9. Seunghwan Lim: former UMass graduate student, PhD thesis.
10. Yue Liu, former UMass student, first year research project.
11. Shuang Zhou, former Tsinghua graduate student, projects through MaNGA collaboration
12. Sirinrat Sithajan: former UMass graduate student, second year project.
13. Zhankui Lu: former UMass graduate student, PhD thesis.
14. Bomee Lee: former UMass graduate student, second year project.
15. Ran Li: former graduate student from Peking University, worked with me for two years at UMass, PhD thesis.
16. Yu Lu: former UMass graduate student, PhD thesis.
17. Yun Li: former UMass graduate student, PhD thesis.
18. Yicheng Guo: UMass graduate student, second year project.

19. Shiyin Shen: former MPA graduate student, PhD thesis
20. Xiaohu Yang: former USTC graduate student, worked with me for one year at MPA, PhD thesis.
21. Lidia Tasca: former MPA graduate student, PhD thesis.
22. Rigoberto Casas-Miranda: former MPA graduate student, PhD thesis.
23. Xi Kang: former SHAO graduate student, worked with me for two years at MPA, PhD thesis
24. Michael Platzöder: former MPA Diplom (master) student, Diplom thesis.
25. Weipeng Lin: former MPA graduate student, PhD thesis.
26. Wolfgang Salzmann, former PMA Diplom (master) student, Diplom thesis
27. Matteo Viel, former graduate student from Padova University, worked with me for two years at MPA, PhD thesis.
28. Donghai Zhao, former graduate student from Shanghai Observatory, worked with me for one year at MPA, PhD thesis.

Thesis committees served

1. Sara Feyzbakhsh, UMass physics
2. Tianyang Shen, UMass physics
3. Shuiyao Huang, UMass astronomy
4. Seunghwan Lim, UMass astronomy
5. Hansung Gim, UMass astronomy
6. Zhankui Lu, UMass astronomy
7. Christina Williams, UMass astronomy
8. John Cybulski, UMass astronomy
9. Basem Mahmoud Elmenoufi, UMass physics

10. Yu Lu, UMass astronomy;
11. Yun Li, UMass astronomy;
12. Yicheng Guo, UMass astronomy
13. Kushick Dutta, UMass physics;
14. Shikui Tang, UMass astronomy;
15. Yuxi Chen, UMass astronomy;
16. Dusan Keres, UMass astronomy;
17. Jun-hwan Choi, UMass astronomy;
18. Sanchayeeta Borthakur, UMass astronomy;
19. Jason Austerman, UMass astronomy;

Publications

Please use the following link to see my publications: [Publication list](#).

Talks and presentations

1. ELUCID: Reconstruct the Initial Density Field to Simulate the Cosmic Web, invited talk, in ‘The Cosmic Web in the Local Universe’, Leiden, 1/26 - 2/1/2020
2. Matter content of the cosmic web, colloquium, Department of Physics, UMass, 10/30/2019
3. The origin of assembly bias, invited talk, in ‘Workshop on assembly bias’, Shanghai, 6/10-6/14/2019
4. Cosmology: the origin, structure, and evolution of the Universe, Lectures given at UMass summer internship program, Amherst, 7/11/2019
5. Circum-galactic medium perspective of galaxy formation, invited talk, in ‘PAST, CURRENT AND FUTURE GALAXY SURVEYS’, CANDELS Meeting and ToI TEC Workshop, Amherst MA, 10/22-10/26/2018

6. Probing SZ effects with Toltec, in CANDELS Meeting and TolTEC Workshop, Amherst MA, 10/22-10/26/2018
7. Reconstructing and stacking: a systematic way to investigate the cosmic web, colloquium, Department of Astronomy, UMass, 10/18/2018
8. Gas around galaxies (CGM) and in the intergalactic medium (IGM). Invited talk, Workshop on galaxy formation and evolution, Guizhou, China. 8/6-8/10/2018
9. PFS-TOLTEC Synergy, in PFS collaboration meeting, Shanghai, 12/10-12/14/2018
10. Reconstruction and resimulation, department colloquium , Department of Astronomy, Beijing Normal University. 9/28/2017
11. Reconstructing the local universe, invited talk, Galaxy distribution and distance scales, Kavli Institute of Astronomy and Astrophysics, Peking University, Beijing. 9/11/2017
12. Galaxy groups and constrained simulations: from SDSS to PFS. Invited talk, PFS collaboration meeting, IPMU, Tokyo, Japan . 12/10/2017
13. Relationships Between Galaxies, Dark Halos And Large-Scale Structure, invited talk, Galaxy Evolution Across Time, Proceedings of a conference held 12-16 June, 2017 in Paris.
14. Lectures on ‘Galaxy formation and cosmology’, IPMU, Japan, 2017
15. Lectures on ‘Progress in galaxy formation’, Weihai, China, 2017
16. Re-simulating the actual history of the local Universe, Invited talk on International Conference on Galaxy Formation and Large-scale Structure, Hefei, China, 07/2017
17. Exploring the Local Universe with re- Constructed Initial Density fields, Colloquium at IPMU, Tokyo, 10/2016
18. Re-simulating the actual local Universe, Invited talk at Chinese-German workshop on Galaxies and Structure Formation, Guangzhou, China, 12/2016
19. Re-simulating the actual local Universe, Invited review, MaNGA collaboration meeting, Shanghai, 11/2016
20. Re-simulating the actual local Universe with constrained initial conditions, KIAA colloquium, Peking University, 12/2016

21. ELUCID: Exploring the Local Universe with re-Constructed Initial Density fields, Colloquium, Xiamen University, 11/2016
22. Re-simulating the actual local Universe: Invited talk, Annual conference of Chinese AAS. 11/2016
23. Reconstructing the initial conditions to simulate the observed Universe, PFS workshop, Baltimore 12/2016
24. ELUCID: Exploring the local universe with reconstructed initial density field, invited talk, 19th Guoshoujing conference on Galaxies and cosmology, Beijing, July 4-July 7, 2016.
25. Warm and hot medium: a missing piece in an almost complete puzzle, invited talk, Workshop on missing baryons, Beijing, July 8, 2016.
26. Reconstructing the initial density field to re-simulate the local universe, Tsinghua Center of Astrophysics Colloquium, 2016.
27. The star formation history and stellar mass assembly in dark matter halos, invited talk, Workshop on galaxies and active galactic nuclei, Hefei, 2015
28. The connection between halos and galaxies, colloquium, Shanghai Observatory, 2015
29. The link between galaxies and dark matter halos. Workshop on galaxy-halo connection, Aspen, Colorado. 8/24/2014
30. The star formation history and stellar mass assembly in dark matter halos, colloquium, Johns Hopkins University, March 2014
31. Reconstruct the initial density field of the local universe, invited highlight talk, in Galaxy formation and cosmology, May 18- May 23, 2014, Xi'an, China.
32. Halo structure, galaxy-halo connection and large-scale structure, colloquium, Shanghai Observatory
33. A Bayesian approach to the semi-analytic model of galaxy formation Invited talk at 'The ecosystem of galaxies' , Hefei, 2012
34. Challenges in galaxy formation. invited talk at 'Astrophysics Symposium', Shanghai, 2012
35. Bayesian galaxy formation, Colloquium, Purple Mountain Observatory, 2012

36. The formation and structure of dark matter halos, Santa Cruz Workshop on Galaxies, 2009
37. Cold dark matter halos, Lectures at Santa Fe Summer Workshop on Cosmology, 2009.
38. The formation and structure of dark matter halos, Frontier of astronomy and astrophysics, Kavli Institute of Astronomy and Astrophysics, an Kavli Institute Opening Symposium, 2008
39. The origin of cold dark matter halo density profiles, Frontier of astronomy and astrophysics, workshop to celebrate 50th anniversary of USTC, 2008.
40. Dark matter, dark energy and the structure of the universe. Public talk, Frontier of astronomy and astrophysics, celebrating the 50th anniversary of USTC, 2008.
41. The formation and structure of dark matter halos, keynote talk, Galaxy Growth in a Dark Universe, Heidelberg 2007
42. The galaxy-dark matter connection, keynote talk, Galaxy formation in the local and high-redshift universe, Lijiang, 2007
43. The relationship between galaxies and dark matter, Institute of Astronomy, Academia Sinica, Taipei, 2007
44. Cosmology and galaxy formation, Yunan University, Kunmin 2007
45. Establishing the relationship between galaxies and dark matter: invited talk, IAU Symposium No 235, Galaxy evolution across the Hubble time, Prague, 2006
46. Killing dwarf galaxies with hot pancakes, invited talk, Galaxies in the Cosmic Web, Las Cruces, 2006
47. The origin of cold dark matter halo density profiles
Mo, H. J., 2006, in EAS Publications Series, Volume 20, 2006, pp.51-54
48. The relationship between galaxies and dark mater halos, Astronomy Department, Columbia University, 2006
49. The galaxy-dark matter connection, KITP, Santa Barbara, 2006
50. The galaxy-dark matter connection, Astronomy Department, Univ. of California at Berkeley, 2006

51. The galaxy-dark matter connection, Astronomy Department, Queen's Univ., Kingston, 2006
52. Cold gas in dark halos and the formation of late-type galaxies, invited talk, IAU colloquium 199, Shanghai, 2005
53. The origin of cold dark matter halo profiles, invited talk, 21st IAP Colloquium, Paris, 2005
54. Cold gas in dark matter halos and the formation of late-type galaxies
Mo H.J., Yang X., van den Bosch F.C., Katz N.S., 2005, invited talk, Probing Galaxies through Quasar Absorption Lines, IAU Colloquium 199, Shanghai 2005. Eds.: P.R. Williams, C. Shu and B. Menard, Cambridge Univ. Press, Cambridge 2005, p205
55. The origin of CDM halo density profiles
Mo H.J., 2005, in Mass Profiles and Shapes of Cosmological Structures, 21st IAP Colloquium, Paris 2005. Eds.: G.A. Mamon, F. Combes, C. Deffayet, B. Fort, EDP Sciences Publisher, 2005
56. The connection between dark halos and galaxies, Max-Planck-Institut für Astronomie, 2005
57. Linking galaxies with dark matter halos, University of Pennsylvania, 2005
58. The connection between galaxies and dark halos, Harvard, 2004
59. Linking galaxies with dark matter halos, MIT, 2004
60. The clustering of dark matter halos, Aspen, 2002
61. Modeling galaxy clustering in the universe, Univ. of Massachusetts, 2002
62. Galaxy formation and evolution, Beijing Obs., 2002
63. The formation of galaxies in CDM cosmogony Shanghai Obs., 2001
64. The origin of the Tully-Fisher relation
Mo, H. J., Mao, S., 2001, in Progress in Astronomy, Vol. 19, Supp., p. 84
65. Formation and evolution of galaxies
Mo, H., 2001, in Progress in Astronomy, Vol. 19, Supp., p. 112

66. Cosmological Formation of Disk Galaxies
Mo, H. J., Mao, S., 2000, in Dynamics of Galaxies: from the Early Universe to the Present, Paris, Eds.: F. Combes, G.A. Mamon, and V. Charmandaris, ASP 197, p.145.
67. The formation of galaxy disks, UC Santa Barbara, 2000
68. The formation of disk galaxies, Padova Univ., 2000
69. The formation and evolution of disk galaxies
Mo H.J., in: IAP conference on Galactic Dynamics, Paris, 1999 eds. F. Combes et al., ASP Series, Vol. 197, p145
item The Formation and Evolution of Disk Galaxies
Mo H.J., 1999, in From Stars to Galaxies to the Universe, Tegernsee 1998. Eds: G. Boerner, H. Mo., p.116
70. The origin of the scaling relations of disk galaxies, Padova Univ., 1999
71. The formation and evolution of disk galaxies, Heidelberg, 1999
72. The properties of damped Lyman alpha systems, UC San Diego, 1999
73. The properties of Lyman break galaxies, CalTech, 1999
74. Gaseous galactic halos and QSO absorption line systems
Mo H.J., in: UC Santa Cruz Workshop on Galactic Halos, 1998, eds. D. Zarisky, ASP Series, Vol. 136, p178
75. The formation of disk galaxies, Roma Univ., 1998
76. The formation of disk galaxies, Munich Univ., 1998
77. The formation and evolution of disk galaxies, Ringberg, 1998
78. An analytical model of dark matter clustering, Edinburgh Univ., 1997
79. Analytical approximations to galaxy clustering
Mo H.J., in: Ringberg Workshop on The Evolving Universe, 1997 ed. D. Hamilton, Kluwer, p343
80. Analytical approximations to the large-scale gravitational clustering
Mo, H.J., Jing Y.P., Börner G., In: Astrophysics Reports., Proc. of the Hangzhou Workshop on Cosmology at High and Low Redshift., Ed. Z.G. Deng and Z.L. Zou. Publications of the Beijing Astron. Obs. Special Issue, No. 2, 1997, 15–42.

81. Constraints on the cosmic structure formation models from early formation of galaxies
Mo H.J., In: The 21st Century Chinese Astronomy, Hong Kong 1996, eds. K.S. Cheng,
K.L. Chan. World Scientific, Singapore 1997, 453–456.
82. The clustering of dark matter and dark matter halos, Univ. of Arizona, 1996
83. Gaseous galaxy halos and QSO absorption line systems, Stony Brook, 1995
84. The clustering of dark halos and bias, Space Telescope Science Institute, 1995
85. Galaxy clustering and bias, Univ. of Illinois, 1995
86. Damped Lyman alpha systems and galaxy formation, Potsdam, 1995
87. Constraining galaxy formation models by damped Lyman alpha systems
Mo, H.J., Miralda-Escude J., In: Astrophysics Reports., Proc. of the Nandaihe Work-
shop on The Formation and Evolution of Galaxies., Ed. Z.L. Zou et al. Publications
of the Beijing Astron. Obs. Special Issue, No. 1, 1995, 22–26.
88. Constraining galaxy formation models by observations of damped Lyman alpha systems
Mo, H.J. and J. Miralda-Escude: In: Large Scale Structure in the Universe, Potsdam
1994, Eds. J.P. Mücke et al. World Scientific, Singapore 1995, 268–272.
89. QSO Absorption line systems as pressure-confined clouds in galactic haloes
Mo, H.J.: In: ASO Absorption Lines. Proc. of the ESO Workshop Garching 1994, Ed.
G. Meylan. Springer, Berlin 1995, 445–446.