

CURRICULUM VITAE: RAVI K. SHETH (April 2019)

Department of Physics and Astronomy Phone: 215.898.5942
University of Pennsylvania Fax: 215.898.2010
209 S. 33rd Street Email: shethrk@physics.upenn.edu
Philadelphia, PA 19104 www.physics.upenn.edu/~shethrk

Date of birth: 20 February 1968 Place of birth: Milwaukee, WI, USA
Nationality: USA/Italy

Faculty Appointments:

2016 – 2017	Associate Chair for Graduate Affairs	
2009 –	Professor	University of Pennsylvania
2007 – 2010	Associate Chair for Graduate Affairs	
2007 – 2009	Associate Professor	University of Pennsylvania
2005 – 2007	Assistant Professor	University of Pennsylvania
2002 – 2004	Assistant Professor	University of Pittsburgh

Research Experience:

1999 – 2001	Fermilab, Batavia, IL, U.S.A.
1996 – 1999	MPI für Astrophysik, Garching, Germany
1994 – 1996	Astronomy Department, U.C. Berkeley, U.S.A.

Higher Education:

1990 – 1994	Ph.D. in Astrophysics	Institute of Astronomy and Jesus College
	Marshall Scholar	University of Cambridge
1986 – 1990	BSc (High Honors) in Physics	Haverford College
	Dana S. McGill Scholar	
1983 – 1986	Four 'IB' HL certificates	Kodaikanal International School, India

Visiting Positions:

'111' Excellence Program	Shanghai Jiao Tong University	China (2020)
Vikram Sarabhai Chair	Indian Nat. Sci. Acad.	India (2017–2018)
Associate Member	Simons CCA	New York (2016–)
Visiting Professor	JMI, Delhi	India (2016–2018)
Staff Associate	ICTP, Trieste	Italy (2015–2023)
Senior Associate	ICTS, Bangalore	India (2014–2016)
Visiting Professor	Institut Henri Poincaré	France (November 2013)
Visiting Professor	LUTH - Meudon Observatory	France (June 2013)
Senior Visiting Scholar	AIMS, Cape Town	South Africa (2012–2015)
Visiting Professor	LUTH - Meudon Observatory	France (June 2012)
Visiting Professor	GEPI - Meudon Observatory	France (June 2011)
Senior Research Scientist	ICTP, Trieste	Italy (2011–2012)
Visiting Scholar	IPhT-CEA, Saclay	France (June 2010)
Visiting Professor	APC, Paris 7 Diderot	Paris, France (June 2009)

Research interests/highlights:

I develop physical models and statistical methods which allow the data from large scale galaxy and cluster surveys to constrain models of galaxy formation and cosmology.

My work on halo abundances and clustering forms the basis of methods which use clusters (e.g., X-ray luminosities, temperatures, the Sunyaev-Zeldovich effects, galaxy velocity dispersions) to study cosmology. I extended the approach to include the effects of tidal fields to predict how the morphology (sheets, filaments, voids) rather than simply the density, of large scale structure evolves, and how these predictions are modified if the initial conditions were non-Gaussian, or if the force of gravity does not decrease as the inverse-square of separation.

I have played a leading role in the development of what is now the standard model of nonlinear clustering and biasing: the Halo Model. It is the currently the best language for interpreting measurements of weak lensing, the thermal and kinematic Sunyaev-Zeldovich effects, and how galaxy clustering depends on galaxy type, both in real and in redshift space.

In 2004, I showed that dark matter halo formation is correlated with environment; I also discussed why, and pointed out that understanding this correlation is necessary if the Halo Model is to be used as a precision tool for cosmology. This correlation was sufficiently unexpected and the consequences sufficiently important that a number of groups have since confirmed that the effect does indeed exist: the effect is now called Assembly Bias, and it is expected to be the leading systematic in analysis of the next generation of all sky surveys.

In 2002, I developed a new method for estimating the evolution of the optical depth in the Lyman- α forest. In 2005, I showed how to use Mark Correlations to quantify environmental trends in the galaxy distribution. In 2009 I pioneered new methods for making unbiased estimates of the galaxy luminosity function and galaxy scaling relations from photometric redshift surveys; these allow one to turn cosmological surveys into exquisite probes of galaxy formation. The methods can have broader impact, since they can be applied to studies where peculiar velocities are an important component of the observed redshift: these include using star counts to model the structure of our galaxy, and estimating the luminosity function of dwarf galaxies in our local (≤ 50 Mpc) neighborhood. And in 2012, I provided a simple formula for the first crossing distribution by walks with correlated steps which is accurate for a wide range of barrier shapes. I then showed how to extend it to treat n -dimensional walks – thus providing the first realistic fully analytic model of nonlocal bias, in this case due to the tidal field. In the process, I showed how to unify the Excursion Set and Peaks Theory descriptions of the Cosmic Web. This has led to new insights into the origin and scale dependence of bias, insights which are essential for placing unbiased constraints on cosmological parameters from biased tracers of the cosmic web.

My work on how tidal fields help spin the Cosmic Web has led me back to my work on a particularly rich problem. In 1996 I showed how to map the problem of enumerating the forest of halo merger history trees into a combinatorics problem on the partitions of integers. My solution led to a flurry of activity in the probabilistic literature on the Additive Coalescent. I have recently returned to this problem in the context of Gaussian walks with correlated steps crossing a stochastic barrier whose statistics need not be Gaussian; like my work in 1996, this problem also pushes the boundaries of what is known in the literature on stochastic processes.

Graduate Students (* denotes faculty/research scientist):

*U. Abbas	Pitt→Marseille→Torino	Galaxy clustering and environment
R. Skibba	Pitt→...→UCSD	Mark correlation functions
*L. Rimoldini	Pitt→...→Geneva	Clustering of absorption line systems
*G. Rossi	Penn→...→Sejong U.	Distance errors in cosmology
T. Y. Lam	Penn→...→DBank	Non-gaussian statistics in cosmology
*M. Martino	Penn→...→St.Benedict	Environmental effects and non-standard models
*M. Caler	Penn→ West Chester U	Absorption line systems
*J. Moreno	Penn→...→Pomona	Merger trees and quasars
N. Frusciante	SISSA→IAP→Lisboa	Local and nonlocal bias
E. Castorina	SISSA→UCBerkeley→ CERN	Stochastic bias and neutrinos
E. Massara	SISSA→...→ Waterloo	Neutrinos and voids in modern cosmology
J. Shi	SISSA→KIAA, Beijing → IPMU	Correlations with environment

Post-graduate Scholar Sponsor (* denotes faculty):

*J. Colberg	Pitt→...→ UHartford	VOIDS; Theorist's Virtual Observatory
*D. Vanden Berk	Pitt→...→ St. Vincent	Quasars and AGN
*R. Smith	Penn→...→ Sussex	Halos, perturbation theory and BAOs
*L. Ostorero	Penn→ Torino	
*P. Pápai	ICTP→ PSU, Thailand	Anisotropic clustering
*A. Paranjape	ICTP→ ETH→ IUCAA	Excursion set peaks
*E. Sefusatti	ICTP→...→ INAF Trieste	Fast mocks for cosmology
S. Anselmi	ICTP→ Case→ IAP → Technion	Baryon acoustic oscillations
*M. Musso	Penn→ MPA→ EAIFR, Rwanda	Random walks and halo formation

Grants and Awards:

Co-I: NASA-ATP (2011-2015):

Galaxies, halos and mass as cosmological tests (\$417k)

PI: NSF (2009-2013):

Stochastic bias and ellipsoidal collapse (\$407k)

Co-I: Westerbork Radio Telescope (2006-2007):

The gas content of void galaxies (195 hours)

PI: NSF (2005-2009):

Accounting for distance errors in cosmology (\$295k)

Joint PI: HST Cycle 14 Archival:

Mark correlations and galaxy evolution (\$20k of \$80k)

Co-I: HST Cycle 14 Archival (PI: D. Turnshek):

Are our ideas about quasar absorption lines consistent with galaxy images?

Co-I: HST Cycle 13 Snapshot (PI: M. Bernardi):

The most massive galaxies in the Universe (\$0k of \$113k)

PI: NASA-ADP (2004-2007):
Hot and cold spots in the WMAP sky (\$135k)

PI: NSF (2003-2007):
Substructure and the halo model of large scale structure (\$235k)

Joint-PI: US-Israel BSF (2003-2007):
Cosmology with the Lyman-alpha forest (\$37k)

PI: NASA-ATP (2003-2006):
Marked correlation functions and the evolution of galaxy biasing (\$290k)

PI: NCSA-PSC TCS1 (2003-2004):
Numerical simulations of self-similar gravitational clustering (35k units)

PI: UPitt FRG II (2002-2005):
Ellipsoidal collapse and the shapes of objects (\$3k)

Courses Developed and Taught at Penn:

Fall 2019	Introduction to Astrophysics I	20 science majors
Spring 2019	Cosmology	10 PhD students
Fall 2018	The Big Bang and Beyond	18 freshman
Spring 2018	Survey of the Universe	35 non-science majors
Fall 2017	The Big Bang and Beyond	35 freshman
Spring 2017	Cosmology	10 PhD students
Fall 2016	Survey of the Universe	70 non-science majors
Spring 2016	Physics Principles II	70 physics/engineering majors
Fall 2015	Survey of the Universe	70 non-science majors
Spring 2015	Physics Principles II	110 physics/engineering majors
Fall 2014	The Big Bang and Beyond	25 freshman
Fall 2013	Survey of the Universe	72 non-science majors
Spring 2013	Survey of the Universe	125 non-science majors
Spring 2010	The Big Bang and Beyond	60 non-science majors
Fall 2009	The Big Bang and Beyond	25 freshman
Fall 2008	Survey of the Universe	60 non-science majors
Spring 2008	The Big Bang and Beyond	15 non-science majors
Fall 2007	The Big Bang and Beyond	13 non-science majors
Spring 2007	Life in the Universe	19 non-science majors
Fall 2006	The Big Bang and Beyond	115 non-science majors
Spring 2006	Life in the Universe	26 non-science majors
Fall 2005	Physics I: Mechanics and Waves	83 physics/engineering majors
Spring 2005	Mechanics, Dynamics and Chaos	4 graduate students

Courses Developed and Taught at Pitt:

Spring 2004	Stonehenge to Hubble	100 non-science majors
Fall 2003	Introduction to Astronomy	100 physics majors
Spring 2003	Galactic and Extra-galactic Astronomy	7 graduate students
Fall 2002	Introduction to Astronomy	100 physics majors
Spring 2002	Radiative Processes in Astrophysics	7 graduate students

Courses Developed and Taught in Trieste:

Summer 2014	Cosmology	ICTP Diploma
Spring 2012	Cosmology	ICTP Diploma
Spring 2012	Large Scale Structure	SISSA PhD

Courses Developed and Taught Elsewhere:

Lecturer	Observational probes of cosmology	EAI FR, Kigali (August 2019)
Lecturer	Large scale structure	ICTP, Trieste (June 2018)
GIAN Lecturer	Nonlinear structure formation	JMI, Delhi (April 2018)
Lecturer	Structure formation in cosmology	IPM, Tehran (August 2017)
Lecturer	Nonlinear structure formation	ON, Rio de Janiero (August 2016)
Lecturer	Dark matter structures	IFT, Sao Paolo (July 2016)
Lecturer	Statistical methods in astronomy	University of Padova (May 2016)
Lecturer	Formation of cosmic structures	IUCAA, Pune (February 2016)
Lecturer	Structure formation	Bogota, Columbia (November 2015)
Lecturer	Large scale structure	SAIFR, Sao Paolo (December 2014)
Lecturer	Dark matter structures	ISAPP, Belgirate (July 2014)
Lecturer	Statistical methods in astronomy	University of Padova (May 2014)
Lecturer	Statistical approaches in cosmology	IHP, Paris (November 2013)
Lecturer	Galaxy surveys	TIFR, India (December 2012)
Lecturer	Structure formation	STIAS, South Africa (Jan 2012)
Visiting Lecturer	Nonlinear clustering	HRI, India (February 2009)
Lecturer	XIII BSCG	Rio de Janiero, Brazil (July 2008)
PIRE Lecturer	Hierarchical structure formation	Santiago, Chile (March 2007)
Lecturer	Galaxies and Cosmology	University of Padova (January 2007)
NOVA Lecturer	The halo model	The Netherlands (November 2006)

Department/University Service:

2019 Penn GRIP host to two Penn undergraduate students
2019 Department Ad Hoc Committee for Promotion of M. Sako
2018- Mentoring Committee for R. Sanderson
2016 – 2017 Graduate Chair
2017 Department Ad Hoc Committee for Promotion of A. Sweeney
2015 – 2016 Department Ad Hoc Committee for Promotion of J. Khoury
2015 – Graduate Committee
2014 – CURF Faculty Fellowship Review Committee
2014 – 2018 Department Grievance Committee
2013 – 2014 Department Ad Hoc Committee for Promotion of A. Lidz
2009 – 2011 Committee on Undergraduate Academic Standing
2007 – 2011 Graduate Chair
2007 – 2011 Department Planning Committee
2007 Particle-Cosmology Faculty Search Committee
2006 – 2011 Overseer Penn Dark Energy Survey Account
2006 Graduate Committee
2006 Colloquium Committee
2006 Astronomy Seminar Organizer
2005 – 2008 Astro Faculty Search Committee
2005 – 35 PhD Thesis Committees (other than for my own students)

External Service:

- 2019 NASA ATP Grant Review Panel
- 2019 NSF AAPF Grant Review Panel
- 2018 – Scientific Council, East Africa Institute for Fundamental Physics, Rwanda
- 2018 NASA HST Grant Review Panel
- 2017 NASA ATP Grant Review Panel
- 2017 – ASI, INFN, INAF (Italian Space, High Energy, Nuclear, Astro) Reviewer
- 2017 DFG (German Research Foundation) Reviewer
- 2017 NSF Physics Frontiers Centers Reviewer
- 2015 NASA ADAP Grant Review Panel
- 2014 – 2017 NOAO Time Allocation Committee: Extra-Galactic Chair
- 2014 NSF COS2 Grant Review Panel
- 2013 NASA ATP Grant Review Panel
- 2012 – Kaufman Science Advisory Board
- 2012 – IAU-OAD Task Force 1 (Research and Universities)
- 2009 NASA ATP Grant Review Panel
- 2008 NOAO Extragalactic Time Allocation Committee
- 2008 – 2017 Editorial Board: Advances in Astronomy
- 2007 – 2008 Dark Energy Survey Publications Committee
- 2007 – PhD reviewer for students in France, India, Israel, Italy, Spain, The Netherlands
- 2007 NASA Spitzer Proposal Review Panel
- 2006 – 2007 NSF Grant Review Panel
- 2004 NASA Grant Review Panel
- 2004 – Public lectures: Philadelphia, Pittsburgh, Rio de Janeiro
- 1995 – Referee for AA, ApJ, JCAP, MNRAS, New. Ast., J Phys A, PRD

Organization of International Conferences:

Co-Director: ICTP Cosmology Summer School
ICTP, Trieste, Italy (August 2020)

Co-Organizer: Dynamics of Large Scale Structure Formation
Munich Institute for Astro- and Particle Physics, Germany (1-26 July 2019)

Scientific Organizing Committee: Assembly Bias
Shanghai Astrophysical Observatory, China (10-14 June 2019)

Organizing Committee: Shedding Light on the Dark Universe with ELTs
ICTP, Trieste, Italy (2-6 July 2018)

Co-Director: ICTP Cosmology Summer School
ICTP, Trieste, Italy (18-29 June 2018)

Scientific Organizing Committee: Galaxy evolution across time
Paris, France (12-16 June 2017)

Organizing Committee: ICTP Workshop on Cosmology with Radio Surveys
ICTP, Trieste, Italy (18-21 June 2016)

Co-Director: ICTP Cosmology Summer School
ICTP, Trieste, Italy (4-15 June 2016)

Organizing Committee: Workshop on Galaxies in the cosmic web
Lorentz Center, The Netherlands (7-11 March 2016)

Co-Director: School and Workshop on Cosmology and galaxy formation
IUCAA, Pune, India (1-12 February 2016)

Organizing Committee: Workshop on Unbiased constraints from biased tracers
Institute for Advanced Studies, Princeton (24-26 September 2015)

Convener: Cosmology Sessions at TAUP 2015
Torino, Italy (7-11 September 2015)

Co-Director: ICTP Advanced School on Cosmology
ICTP, Trieste, Italy (18-29 May 2015)

Organizing Committee: Joint SAIFR/ICTP Cosmology School
SAIFR, Sao Paulo, Brazil (1-13 December 2014)

Organizing Committee: ICTP Cosmology Summer School/Large Scale Structure Workshop
ICTP, Trieste, Italy (4-21 August 2014)

Organizing Committee: Mini-symposium on High Energy Physics and Phenomenology
ICTP, Trieste, Italy (14 April 2014)

Organizing Committee: Halo bias: Nonlinear, nonlocal and non-Gaussian
ICTP, Trieste, Italy (8-11 October 2013)

Organizing Committee: New light in cosmology from the CMB
ICTP, Trieste, Italy (22 July - 2 August 2013)

Organizing Committee: Recent developments in nuclear and astroparticle physics
ICTP, Trieste, Italy (19-23 November 2012)

Organizing Committee: The physics of star formation and its role in galaxy evolution
ICTP, Trieste, Italy (16-18 October 2012)

Organizing Committee: ICTP Cosmology Summer School/Large Scale Structure Workshop
ICTP, Trieste, Italy (16 July - 3 August 2012)

Organizing Committee: Perturbative approaches to redshift space distortions
Pauli Institute, ITP, Zurich, Switzerland (11-13 July 2012)

Organizing Committee: Joint ICTP-SISSA Workshop on Interacting Galaxies and Binary Quasars
ICTP, Trieste, Italy (2-5 April 2012)

Co-Director, Lecturer: Cape Town International Cosmology School
STIAS, Stellenbosch, South Africa (15-28 January 2012)

Organizer, Lecturer: School and Conference on Analytical and Computational Astrophysics
ICTP, Trieste, Italy (14-25 November 2011)

International Organizing Committee: 3rd Galileo–Xu Guangqi Meeting
Beijing, China (11-15 October 2011)

Organizing Committee: Workshop on Infrared Modifications of Gravity
ICTP, Trieste, Italy (26-30 September 2011)

Scientific Organizing Committee: Galaxy Evolution and Environment
Kuala Lumpur, Malaysia (30 March-3 April 2009)

Organizing Committee: Cosmological Voids
Dutch Royal Academy of Sciences, Amsterdam (11-15 December 2006)

Invited Chair: Galaxies and Large Scale Structure
XI Marcel Grossmann Meeting on General Relativity, Berlin, (23-29 July 2006)

Organizing Committee: Workshop on Voids
Aspen Center for Physics (28 May-18 June 2006)

Invited Chair: Galaxies and Large Scale Structure
X Marcel Grossmann Meeting on General Relativity, Rio di Janiero (20-26 July 2003)

Organizing Committee: Structure formation and dark matter halos
Fermilab, Batavia, IL (10-12 May 2001)

Organizing Committee: Evolution of large scale structure
The first MPA-ESO conference in Garching, Germany (2-7 August 1998)

Books and Invited Reviews:

1. Galaxies and large scale structure: Lecture notes from the XIIIth Brazilian School on Cosmology and Gravitation.
Ravi K. Sheth. 2009.
AIP Conference Proceedings, Volume 1132, pp. 158–198. Eds. M. Novello & S. Perez.
2. The Halo Model of Large Scale Structure
Asantha Cooray & **Ravi K. Sheth.** 2002
Physics Reports, 372, 1–129.
3. Evolution of large scale structure: From recombination to Garching
Eds. A. J. Banday, **Ravi K. Sheth** and L. da Costa. 1999
Proceedings of the MPA-ESO conference in Garching, Germany (2-7 Aug. 1998)

Primary Refereed Publications:

181. Halo bias for excursion set peaks in energy
M. Musso & **Ravi K. Sheth.** 2019
Monthly Notices of the Royal Astronomical Society, in prep
180. On the nonlinear statistics of primordial black holes
C. Germani & **Ravi K. Sheth.** 2019
Physical Review D, submitted
179. Linear Point and Sound Horizon standard rulers: Parameter dependences and constraints from Cosmic Microwave Background measurements
M. O’Dwyer, S. Anselmi, G. D. Starkman, P.-S. Corasaniti, **Ravi K. Sheth**, A. G. Sanchez & I. Zehavi. 2019
Physical Review D, submitted

178. A universal threshold for primordial black hole formation
A. Escrivà, C. Germani & **Ravi K. Sheth**. 2019
Physical Review Letters, submitted (arXiv:1907.13311)
177. Excursion set peaks in energy as a model for halos
M. Musso & **Ravi K. Sheth**. 2019
Monthly Notices of the Royal Astronomical Society, submitted (arXiv:1907.09147)
176. Galaxy properties as revealed by MaNGA. II. Formation and assembly of slow and fast rotator ellipticals and dependence on environment
M. Bernardi, H. Domínguez Sánchez, J. R. Brownstein, N. Drory & **Ravi K. Sheth**. 2019
Monthly Notices of the Royal Astronomical Society, in press (arXiv:1904.11996)
175. Galaxy properties as revealed by MaNGA. I. Constraints on IMF and M_*/L gradients in ellipticals
H. Domínguez Sánchez, M. Bernardi, J. R. Brownstein, N. Drory & **Ravi K. Sheth**. 2019
Monthly Notices of the Royal Astronomical Society, in press (arXiv:1904.11992)
174. Density and velocity profiles of cosmic voids
E. Massara & **Ravi K. Sheth**. 2019
Monthly Notices of the Royal Astronomical Society, submitted (arXiv:1811.03132)
173. Constraining black hole-host galaxy scaling relations from the large-scale clustering of Active Galactic Nuclei: Implications for the mean radiative efficiency of super-massive black holes
F. Shankar, V. Allevato, M. Bernardi, et al. 2019
Nature Astronomy, revised
172. Excursion set peaks: the role of shear
E. Castorina, A. Paranjape, O. Hahn & **Ravi K. Sheth**. 2019
Journal of Cosmology and Astroparticle Physics, revised (arXiv:1611.03619)
171. Constraints on the redshift evolution of astrophysical feedback with Sunyaev-Zel'dovich effect cross-correlations
S. Pandey, E. J. Baxter, Z. Xu, et al. 2019
Physical Review D, in press (21 pages)
170. Cosmic web anisotropy is the primary indicator of halo assembly bias
S. Ramakrishnan, A. Paranjape, O. Hahn & **Ravi K. Sheth**. 2019
Monthly Notices of the Royal Astronomical Society, in press (arXiv:1903.02007)
169. Cosmic distance inference from purely geometric BAO methods: Linear Point standard ruler and correlation function model-fitting
S. Anselmi, P.-S. Corasaniti, A. Sanchez, G. Starkman, **Ravi K. Sheth** & I. Zehavi. 2018
Physical Review D, 99, 123515 (12 pages)
168. Exact enumeration approach to first-passage time distribution of non-Markovian random walks
S. Baghran, F. Nikakhtar, M. R. R. Tabar, S. Rahvar, **Ravi K. Sheth**, K. Lehnertz & M.

- Sahimi. 2019
Physical Review E, 99, 062101 (10 pages)
167. Radial acceleration relation between baryons and dark or phantom matter in the super-critical acceleration regime of nearly spherical galaxies
K.-H. Chae, M. Bernardi, **Ravi K. Sheth** & I.-T. Gong. 2019
The Astrophysical Journal, 877, 18 (22 pages)
166. Modeling nearly spherical pure-bulge galaxies with a stellar mass-to-light ratio gradient under the Λ CDM and MOND Paradigms: II. The orbital anisotropy of slow rotators within the effective radius
K.-H. Chae, M. Bernardi & **Ravi K. Sheth**. 2019
The Astrophysical Journal, 874, 41 (19 pages)
165. Black hole scaling relations of active and quiescent galaxies: Addressing selection effects and constraining virial factors
F. Shankar, M. Bernardi, K. Richardson, C. Marsden, **Ravi K. Sheth**, et al. 2019
Monthly Notices of the Royal Astronomical Society, 485, 1278–1292
164. The Linear Point standard ruler for galaxy survey data: validation with mock catalogues
S. Anselmi, G. Starkman, P.-S. Corasaniti, **Ravi K. Sheth** & I. Zehavi. 2018
Physical Review D, 98, 023527 (9 pages)
163. Galaxy correlation functions provide a more robust cosmological standard ruler
S. Anselmi, G. Starkman, P.-S. Corasaniti, **Ravi K. Sheth** & I. Zehavi. 2018
Physical Review Letters, 121, 021301 (5 pages)
162. The excursion set approach: Stratonovich approximation and Cholesky decomposition
F. Nikakhtar, M. Ayromlou, S. Baghran, S. Rahvar, M. R. Rahimi-Tabar & **Ravi K. Sheth**. 2018
Monthly Notices of the Royal Astronomical Society, 478, 5296–5300
161. Modeling nearly spherical pure-bulge galaxies with stellar M/L ratio gradients under the Λ CDM and MOND Paradigms: I. Methodology, dynamical stellar masses and the Fundamental Mass Plane
K.-H. Chae, M. Bernardi & **Ravi K. Sheth**. 2018
The Astrophysical Journal, 860, 81 (17 pages)
160. M_*/L gradients driven by IMF variation: Large impact on dynamical stellar mass estimates
M. Bernardi, **Ravi K. Sheth**, et al. 2018
Monthly Notices of the Royal Astronomical Society, 477, 2560–2571
159. The dependence of galaxy clustering on tidal environment in the Sloan Digital Sky Survey
A. Paranjape, O. Hahn & **Ravi K. Sheth**. 2018
Monthly Notices of the Royal Astronomical Society, 476, 5442–5452
158. Halo assembly bias and the tidal anisotropy of the local halo environment
A. Paranjape, O. Hahn & **Ravi K. Sheth**. 2018
Monthly Notices of the Royal Astronomical Society, 476, 3631–3647

157. Bimodal formation time distribution for infall dark matter halos
J. Shi, H. Wang, H. J. Mo., L. Xie, X. Wang, A. Lapi & **Ravi K. Sheth**. 2018
The Astrophysical Journal, 857, 127 (11 pages)
156. Stellar mass functions and implications for a variable IMF
M. Bernardi, **Ravi K. Sheth**, et al. 2018
Monthly Notices of the Royal Astronomical Society, 475, 757–771
155. Dependence of halo bias on mass and environment
J. Shi & **Ravi K. Sheth**. 2018
Monthly Notices of the Royal Astronomical Society, 473, 2486–2492
154. Effective window function for Lagrangian halos
K. Chuen-Chan, **Ravi K. Sheth** & R. Scoccimarro. 2017
Physical Review D, 96, 103543 (15 pages)
153. Selection bias in dynamically-measured super-massive black hole samples: Scaling relations and correlations between residuals in semi-analytic galaxy formation models
E. Barausse, F. Shankar, M. Bernardi, Y. Dubois & **Ravi K. Sheth**. 2017
Monthly Notices of the Royal Astronomical Society, 468, 4782–4791
152. Constraints on halo formation from cross-correlations with correlated variables
E. Castorina, A. Paranjape & **Ravi K. Sheth**. 2017
Monthly Notices of the Royal Astronomical Society, 468, 3813–3827
151. Comparing PyMorph and SDSS photometry. II. The differences are more than semantics and are not dominated by intracluster light
M. Bernardi, J.-L. Fischer, **Ravi K. Sheth**, A. Meert, M. Huertas-Company, F. Shankar, & V. Vikram. 2017
Monthly Notices of the Royal Astronomical Society, 468, 2569–2581
150. Consistency relations for Lagrangian halo bias and their implications
K. Chuen-Chan, **Ravi K. Sheth** & R. Scoccimarro. 2017
Monthly Notices of the Royal Astronomical Society, 468, 2232–2248
149. The high mass end of the stellar mass function: Dependence on stellar population models and agreement between fits to the light profile
M. Bernardi, A. Meert, **Ravi K. Sheth** et al. 2017
Monthly Notices of the Royal Astronomical Society, 467, 2217–2233
148. The halo boundary of galaxy clusters in the SDSS
E. Baxter, C. Chang, B. Jain, S. Adhikari, N. Dalal, A. Kravtsov, S. More, E. Rozo, E. Rykoff & **Ravi K. Sheth**. 2017
The Astrophysical Journal, 841, 18 (17 pages)
147. An order statistics approach to the Halo Model for galaxies
N. Paul, A. Paranjape & **Ravi K. Sheth**. 2017
Monthly Notices of the Royal Astronomical Society, 466, 4515–4529

146. Selection bias in dynamically-measured super-massive black hole samples: Dynamical masses and dependence on Sérsic index
F. Shankar, M. Bernardi & **Ravi K. Sheth**. 2017
Monthly Notices of the Royal Astronomical Society, 466, 4029–4039
145. Selection bias in dynamically-measured super-massive black hole samples: Consequences for pulsar timing arrays
A. Sesana, F. Shankar, M. Bernardi & **Ravi K. Sheth**. 2016
Monthly Notices of the Royal Astronomical Society, 463, L6–L11
144. Selection bias in dynamically-measured super-massive black hole samples: Its consequences and the quest for the most fundamental relation
F. Shankar, M. Bernardi, **Ravi K. Sheth**, L. Ferrarese, A. W. Graham, G. Savorgnan, V. Alleinato, A. Marconi, R. Läsker, & A. Lapi. 2016
Monthly Notices of the Royal Astronomical Society, 460, 3119–3142
143. The universality of the virial halo mass function and models for non-universality of other halo definitions
G. Despali, C. Giocoli, R. E. Angulo, G. Tormen, **Ravi K. Sheth**, G. Baso & L. Moscardini. 2016
Monthly Notices of the Royal Astronomical Society, 456, 2486–2504
142. The massive end of the luminosity and stellar mass functions and clustering from CMASS to SDSS: Evidence for and against passive evolution
M. Bernardi, A. Meert, **Ravi K. Sheth**, M. Huertas-Company, C. Maraston, F. Shankar & V. Vikram. 2016
Monthly Notices of the Royal Astronomical Society, 455, 4122–4135
141. Beating non-linearities: Improving the Baryon Acoustic Oscillations with the linear point
S. Anselmi, G. D. Starkman & **Ravi K. Sheth**. 2016
Monthly Notices of the Royal Astronomical Society, 455, 2474–2483
140. On the intermediate-redshift central stellar mass-halo mass relation, and implications for the evolution of the most massive galaxies since $z \sim 1$
F. Shankar, H. Guo, V. Bouillot, et al. 2014
The Astrophysical Journal Letters, 797, 27–33
139. On the Markovian assumption in the excursion set approach: The approximation of Markovian Velocities
M. Musso & **Ravi K. Sheth**. 2014
Monthly Notices of the Royal Astronomical Society, 443, 1601–1613
138. Systematic effects on the luminosity size relation: Dependence on model fitting and morphology
M. Bernardi, A. Meert, V. Vikram, M. Huertas-Company, S. Mei, F. Shankar & **Ravi K. Sheth**. 2014
Monthly Notices of the Royal Astronomical Society, 443, 874–897

137. Stochasticity in halo formation and the excursion set approach
M. Musso & **Ravi K. Sheth**. 2014
Monthly Notices of the Royal Astronomical Society, 442, 401–405
136. The excursion set approach in non-Gaussian fields
M. Musso & **Ravi K. Sheth**. 2014
Monthly Notices of the Royal Astronomical Society, 439, 3051–3063
135. Cosmology with massive neutrinos II: on the universality of the halo mass function and bias
E. Castorina, E. Sefusatti, **Ravi K. Sheth**, F. Villaescusa-Navarro, M. Viel. 2014
Journal of Cosmological Physics, 02, 049 (22 pages)
134. The importance of stepping up in the excursion set approach
M. Musso & **Ravi K. Sheth**. 2014
Monthly Notices of the Royal Astronomical Society, 438, 2683–2693
133. On the self-consistency of the excursion set approach
I. Achitouv, Y. Rasera, **Ravi K. Sheth** & P.-S. Corasaniti. 2013
Physical Review Letters, 111, 231303 (5 pages)
132. The massive end of the luminosity and stellar mass functions: Dependence on the fit to the light profile
M. Bernardi, A. Meert, **Ravi K. Sheth**, V. Vikram, M. Huertas-Company, S. Mei & F. Shankar. 2013
Monthly Notices of the Royal Astronomical Society, 436, 697–704
131. Bias deconstructed: Unravelling the scale dependence of halo bias using real space measurements
A. Paranjape, E. Sefusatti, K.-C. Chan, V. Desjacques, P. Monaco & **Ravi K. Sheth**. 2013
Monthly Notices of the Royal Astronomical Society, 436, 449–459
130. Peak-peak correlations in the cosmic background radiation from cosmic strings
M. S. Movahed, B. Javanmardi & **Ravi K. Sheth**. 2013
Monthly Notices of the Royal Astronomical Society, 434, 3597–3605
129. An accurate tool for the fast generation of dark matter halo catalogs
P. Monaco, E. Sefusatti, S. Borgani, M. Crocce, P. Fosalba, **Ravi K. Sheth** & T. Theuns. 2013
Monthly Notices of the Royal Astronomical Society, 433, 2389–2402
128. Stochastic bias in multi-dimensional excursion set approaches
E. Castorina & **Ravi K. Sheth**. 2013
Monthly Notices of the Royal Astronomical Society, 433, 1529–1536
127. Excursion set peaks: A self-consistent model of dark halo abundances and clustering
A. Paranjape, **Ravi K. Sheth** & V. Desjacques. 2013
Monthly Notices of the Royal Astronomical Society, 431, 1503–1512

126. Ellipsoidal halo finders and implications for models of triaxial halo formation
G. Despali, G. Tormen & **Ravi K. Sheth**. 2013
Monthly Notices of the Royal Astronomical Society, 431, 1143–1159
125. Nonlocal Lagrangian bias
Ravi K. Sheth, K. C. Chan & R. Scoccimarro. 2013
Physical Review D, 87, 083002 (13 pages)
124. On the anisotropic density distribution on large scales
P. Papai & **Ravi K. Sheth**. 2013
Monthly Notices of the Royal Astronomical Society, 429, 1133–1138
123. Measures of galaxy environment II - Rank ordered mark correlations
R. Skibba, **Ravi K. Sheth**, et al. 2013
Monthly Notices of the Royal Astronomical Society, 429, 458–468
122. Scale dependent halo bias in the excursion set approach
M. Musso, A. Paranjape, **Ravi K. Sheth**. 2012
Monthly Notices of the Royal Astronomical Society, 427, 3145–3158
121. Peaks theory and the excursion set approach
A. Paranjape & **Ravi K. Sheth**. 2012
Monthly Notices of the Royal Astronomical Society, 426, 2789–2796
120. Lagrangian bias in the local bias model
N. Frusciante & **Ravi K. Sheth**. 2012
Journal of Cosmology and Astroparticle Physics, 11, 016 (13 pages)
119. The luminosities of the brightest cluster galaxies and brightest satellites in SDSS groups
A. Paranjape & **Ravi K. Sheth**. 2012
Monthly Notices of the Royal Astronomical Society, 423, 1845–1855
118. One step beyond: The excursion set approach with correlated steps
M. Musso & **Ravi K. Sheth**. 2012
Monthly Notices of the Royal Astronomical Society, 423, L102–L106
117. Plain fundamentals of fundamental planes: Analytics and algorithms
Ravi K. Sheth & M. Bernardi. 2012
Monthly Notices of the Royal Astronomical Society, 422, 1825–1834
116. Formation times, mass growth histories and concentrations of dark matter haloes
C. Giocoli, G. Tormen & **Ravi K. Sheth**. 2012
Monthly Notices of the Royal Astronomical Society, 422, 185–198
115. Gravity and large-scale non-local bias
K. C. Chan, R. Scoccimarro & **Ravi K. Sheth**. 2012
Physical Review D., 85, 083509 (24 pages)

114. A hierarchy of voids: More ado about nothing
A. Paranjape, T. Y. Lam & **Ravi K. Sheth**. 2012
Monthly Notices of the Royal Astronomical Society, 420, 1648–1655
113. Halo abundances and counts in cells: The excursion set approach with correlated steps
A. Paranjape, T. Y. Lam & **Ravi K. Sheth**. 2012
Monthly Notices of the Royal Astronomical Society, 420, 1429–1441
112. Halo bias in the excursion set approach with correlated steps
A. Paranjape & **Ravi K. Sheth**. 2012
Monthly Notices of the Royal Astronomical Society, 419, 132–137
111. How unusual are the Shapley supercluster and the Sloan Great Wall?
Ravi K. Sheth & A. Diaferio. 2011
Monthly Notices of the Royal Astronomical Society, 417, 2938–2949
110. Modelling the shapes of the largest gravitationally bound objects
G. Rossi, **Ravi K. Sheth** & G. Tormen. 2011
Monthly Notices of the Royal Astronomical Society, 416, 248–261
109. Symmetry in stochasticity: Random walk models of large scale structure
Ravi K. Sheth. 2011
Pramana – Journal of Physics, 77, 169–184
108. Optimal linear reconstruction of dark matter from halo catalogs
C. Yanchuan, G. Bernstein & **Ravi K. Sheth**. 2011
Monthly Notices of the Royal Astronomical Society, 412, 995–1010
107. Scale-dependent bias from scale-dependent growth
K. Parfrey, L. Hui & **Ravi K. Sheth**. 2011
Physical Review D, 83, 063511
106. Evidence of major dry mergers at $M_* > 2 \times 10^{11} M_\odot$ from curvature in early-type galaxy scaling relations?
M. Bernardi, N. Roche, F. Shankar & **Ravi K. Sheth**. 2011
Monthly Notices of the Royal Astronomical Society, 412, L6–L10
105. Curvature in the color-magnitude relation but not in color- σ : Major dry mergers at $M_* > 2 \times 10^{11} M_\odot$?
M. Bernardi, N. Roche, F. Shankar & **Ravi K. Sheth**. 2011
Monthly Notices of the Royal Astronomical Society, 412, 684–704
104. The cosmological free-free signal from galaxy groups and clusters
P.-P. Ponente, J.-M. Diego, **Ravi K. Sheth**, C. Burigana, S. Knollmann & Y. Ascasibar. 2011
Monthly Notices of the Royal Astronomical Society, 410, 2353–2362
103. Modeling scale-dependent bias on the baryonic acoustic scale with the statistics of peaks of Gaussian random fields
V. Desjacques, M. Crocce, R. Scoccimarro & **Ravi K. Sheth**. 2010
Physical Review D, 82, 103529

102. Halo model description of the nonlinear dark matter power spectrum at $k \gg 1h\text{Mpc}^{-1}$
C. Giocoli, M. Bartelmann, **Ravi K. Sheth** & M. Cacciato. 2010
Monthly Notices of the Royal Astronomical Society, 408, 300–313
101. MgII absorption systems and their neighbouring galaxies from a background subtraction technique
M. Caler, **Ravi K. Sheth** & B. Jain. 2010
Monthly Notices of the Royal Astronomical Society, 406, 1269–1289
100. Galaxy luminosities, stellar masses, sizes, velocity dispersions as a function of morphological type
M. Bernardi, F. Shankar, J. B. Hyde, S. Mei, F. Marulli & **Ravi K. Sheth**. 2010
Monthly Notices of the Royal Astronomical Society, 404, 2087–2122
99. The substructure hierarchy in dark matter haloes
C. Giocoli, G. Tormen, **Ravi K. Sheth** & F. C. van den Bosch. 2010
Monthly Notices of the Royal Astronomical Society, 404, 502–517
98. Convolution and deconvolution based estimates of galaxy scaling relations from photometric redshift surveys
Ravi K. Sheth & G. Rossi. 2010
Monthly Notices of the Royal Astronomical Society, 403, 2137–2142
97. Sizes and ages of SDSS ellipticals: Comparison with hierarchical galaxy formation models
F. Shankar, F. Marulli, M. Bernardi, X. Dai, J. B. Hyde & **Ravi K. Sheth**. 2010
Monthly Notices of the Royal Astronomical Society, 403, 117–128
96. The nonlinear redshift space probability distribution function in models with local primordial non-Gaussianity
T. Y. Lam, V. Desjacques & **Ravi K. Sheth**. 2010
Monthly Notices of the Royal Astronomical Society, 402, 2397–2402
95. Large scale bias and the inaccuracy of the peak background split
M. Manera, **Ravi K. Sheth** & R. Scoccimarro. 2010
Monthly Notices of the Royal Astronomical Society, 402, 589–602
94. Redshift space correlations and scale-dependent stochastic biasing of density peaks
V. Desjacques & **Ravi K. Sheth**. 2010
Physical Review D, 81, 023526 (24 pages)
93. Reconstructing galaxy fundamental distributions and scaling relations from photometric redshift surveys. Applications to the SDSS early-type sample
G. Rossi, **Ravi K. Sheth** & C. Park. 2010
Monthly Notices of the Royal Astronomical Society, 401, 666–676
92. The initial shear field in models with primordial local non-Gaussianity and implications for halo and void abundances
T. Y. Lam, **Ravi K. Sheth** & V. Desjacques. 2009
Monthly Notices of the Royal Astronomical Society, 399, 1482–1494

91. Non-gaussian distribution and clustering of hot and cold pixels in the WMAP5 sky
G. Rossi, **Ravi K. Sheth**, C. Park & C. Hernandez-Monteagudo. 2009
Monthly Notices of the Royal Astronomical Society, 399, 304–316
90. Halo abundances in the f_{nl} model
T. Y. Lam & **Ravi K. Sheth**. 2009
Monthly Notices of the Royal Astronomical Society, 398, 2143–2151
89. Dark matter halo creation in moving barrier models
J. Moreno, C. Giocoli & **Ravi K. Sheth**. 2009
Monthly Notices of the Royal Astronomical Society, 397, 299–310
88. The nonlinear probability distribution function in models with local primordial non-Gaussianity
T. Y. Lam & **Ravi K. Sheth**. 2009
Monthly Notices of the Royal Astronomical Society, 395, 1743–1748
87. Spherical collapse and cluster counts in modified gravity models
M. Martino, H. F. Stabenau & **Ravi K. Sheth**. 2009
Physical Review D, 79, 084013 (10 pages)
86. On the equivalence between the effective cosmology and excursion set treatments of environment
M. C. Martino & **Ravi K. Sheth**. 2009
Monthly Notices of the Royal Astronomical Society, 394, 2109–2112
85. Linear theory and velocity correlations of clusters
I. Zehavi & **Ravi K. Sheth**. 2009
Monthly Notices of the Royal Astronomical Society, 394, 1459–1462
84. A halo model of galaxy colors and clustering in the SDSS
R. A. Skibba & **Ravi K. Sheth**. 2009
Monthly Notices of the Royal Astronomical Society, 392, 1080–1091
83. Merger histories of dark matter haloes in moving barrier models
J. Moreno, C. Giocoli & **Ravi K. Sheth**. 2008
Monthly Notices of the Royal Astronomical Society, 391, 1729–1740
82. A search for the most massive galaxies III: Global and central structure
J. B. Hyde, M. Bernardi, **Ravi K. Sheth**, K. Gebhardt & R. C. Nichol. 2008
Monthly Notices of the Royal Astronomical Society, 391, 1559–1576
81. A search for the most massive galaxies II: Structure, environment and formation
M. Bernardi, J. B. Hyde, A. Fritz, **Ravi K. Sheth**, K. Gebhardt & R. C. Nichol. 2008
Monthly Notices of the Royal Astronomical Society, 391, 1191–1209
80. Ellipsoidal collapse and the redshift space probability distribution function of dark matter
T. Y. Lam & **Ravi K. Sheth**. 2008
Monthly Notices of the Royal Astronomical Society, 389, 1249–1258

79. An analytic model for the bispectrum of galaxies in redshift space
R. E. Smith, **Ravi K. Sheth** & R. Scoccimarro. 2008
Phys. Rev. D, 78, 023523 (26 pages)
78. The 2df-SDSS LRG and QSO survey: Evolution of the clustering of LRGs since $z=0.6$
D. Wake, **Ravi K. Sheth** et al. 2008
Monthly Notices of the Royal Astronomical Society, 387, 1045–1062
77. Unbiased estimates of galaxy scaling relations from photometric redshift surveys
G. Rossi & **Ravi K. Sheth**. 2008
Monthly Notices of the Royal Astronomical Society, 387, 735–740
76. Experimental design and model selection: The example of exoplanet detection
V. Balasubramanian, K. Larjo & **Ravi K. Sheth**. 2008
Festschrift for Jorma Rissanen, TICSP series 38, p.81–92 (arXiv:0802.0498)
75. Perturbation theory and excursion set estimates of the probability distribution function of dark matter, and a method for reconstructing the initial distribution
T. Y. Lam & **Ravi K. Sheth**. 2008
Monthly Notices of the Royal Astronomical Society, 386, 407–415
74. Motion of the acoustic peak in the correlation function
R. E. Smith, R. Scoccimarro & **Ravi K. Sheth**. 2008
Physical Review D, 77, 043525 (20 pages)
73. Satellite luminosities in galaxy groups
R. Skibba, **Ravi K. Sheth** & M. Martino. 2007
Monthly Notices of the Royal Astronomical Society, 382, 1940–1946
72. The probability distribution of the SZ power spectrum: An analytic approach
P. Zhang & **Ravi K. Sheth**. 2007
The Astrophysical Journal, 671, 14–26
71. The three-point correlation function of luminous red galaxies in the SDSS
G. Kulkarni, R. Nichol, **Ravi K. Sheth**, H. Seo, D. Eisenstein, & A. Gray. 2007
Monthly Notices of the Royal Astronomical Society, 378, 1196–1206
70. On estimating luminosity and redshift distributions in photometric redshift surveys
Ravi K. Sheth. 2007
Monthly Notices of the Royal Astronomical Society, 378, 709–715
69. Strong clustering of underdense regions and the environmental dependence of clustering from Gaussian initial conditions
U. Abbas & **Ravi K. Sheth**. 2007
Monthly Notices of the Royal Astronomical Society, 378, 641–648
68. Mark correlations in galaxy formation models
Ravi K. Sheth, A. J. Connolly & R. Skibba. 2007
Monthly Notices of the Royal Astronomical Society, submitted (astro-ph/0511773)

67. On the inconsistency between the black hole mass function inferred from $M_{\bullet} - \sigma$ and $M_{\bullet} - L$ correlations
E. Tundo, M. Bernardi, J. B. Hyde, **Ravi K. Sheth** & A. Pizzella. 2007
The Astrophysical Journal, 663, 53–60
66. Selection bias in the $M_{\bullet} - \sigma$ and $M_{\bullet} - L$ correlations and its consequences
M. Bernardi, **Ravi K. Sheth**, E. Tundo & J. B. Hyde. 2007
The Astrophysical Journal, 660, 267–275
65. The luminosities, sizes and velocity dispersions of Brightest Cluster Galaxies: Implications for formation history
M. Bernardi, J. B. Hyde, **Ravi K. Sheth**, C. J. Miller & R. C. Nichol. 2007
The Astronomical Journal, 133, 1741–1755
64. An improved model for the formation times of dark matter haloes
C. Giocoli, J. Moreno, **Ravi K. Sheth** & G. Tormen. 2007
Monthly Notices of the Royal Astronomical Society, 376, 977–983
63. The scale dependence of halo and galaxy bias I: Effects in real space
R. E. Smith, R. Scoccimarro & **Ravi K. Sheth**. 2007
Physical Review D, 75, 063512 (30 pages)
62. The probability distribution of the Ly- α transmitted flux from a sample of SDSS quasars
V. Desjacques, A. Nusser & **Ravi K. Sheth**. 2007
Monthly Notices of the Royal Astronomical Society, 374, 206–219
61. The environmental dependence of galaxy clustering in the SDSS
U. Abbas & **Ravi K. Sheth**. 2006
Monthly Notices of the Royal Astronomical Society, 372, 1749–1754
60. Environment and the cosmic evolution of star formation
Ravi K. Sheth, R. Jimenez, B. Panter & A. F. Heavens. 2006
The Astrophysical Journal Letters, 650, L25–L28
59. The luminosity-weighted or ‘marked’ correlation function
R. Skibba, **Ravi K. Sheth**, A. J. Connolly & R. Scranton. 2006
Monthly Notices of the Royal Astronomical Society, 369, 68–76
58. An excursion set model of the cosmic web: The abundance of sheets, filaments and halos
J. Shen, T. Abel, H. J. Mo, & **Ravi K. Sheth**. 2006
The Astrophysical Journal, 645, 783–791
57. The effect of large-scale structure on the SDSS galaxy three-point correlation function
R. C. Nichol, **Ravi K. Sheth**, Y. Suto, et al. 2006
Monthly Notices of the Royal Astronomical Society, 368, 1507–1514
56. A search for the most massive galaxies in the Universe: Double trouble?
M. Bernardi, **Ravi K. Sheth**, R. C. Nichol, et al. 2006
The Astronomical Journal, 131, 2018–2034

55. Evolution and environment of early-type galaxies
M. Bernardi, R. C. Nichol, **Ravi K. Sheth**, C. J. Miller & J. Brinkmann. 2006
The Astronomical Journal, 131, 1288–1317
54. The impact of halo shapes on the bispectrum in cosmology
R. E. Smith, P. I. R. Watts & **Ravi K. Sheth**. 2006
Monthly Notices of the Royal Astronomical Society, 365, 214–230
53. The environmental dependence of clustering in hierarchical models
U. Abbas & **Ravi K. Sheth**. 2005
Monthly Notices of the Royal Astronomical Society, 364, 1327–1336
52. The halo model description of mark correlations
Ravi K. Sheth. 2005
Monthly Notices of the Royal Astronomical Society, 364, 796–806
51. Voids in a Λ CDM universe
J. M. Colberg, **Ravi K. Sheth**, A. Diaferio, L. Gao & N. Yoshida. 2005
Monthly Notices of the Royal Astronomical Society, 360, 216–226
50. Improved cosmological constraints from gravitational lens statistics
J. Mitchell, C. Keeton, J. Frieman & **Ravi K. Sheth**. 2005
The Astrophysical Journal, 622, 81–98
49. Colors, magnitudes, and velocity dispersions in early-type galaxies: Implications for galaxy ages and metallicities
M. Bernardi, **Ravi K. Sheth**, R. C. Nichol, D. P. Schneider & J. Brinkmann. 2005
The Astronomical Journal, 129, 61–72
48. On the inclusion of environmental effects in the halo model of large scale structure
Ravi K. Sheth, U. Abbas & R. Skibba. 2004
Proceedings of IAU Colloquium 195, ed. A. Diaferio, p.539–545
47. On the environmental dependence of halo formation
Ravi K. Sheth & G. Tormen. 2004
Monthly Notices of the Royal Astronomical Society, 350, 1385–1390
46. On departures from a power law in the galaxy correlation function
I. Zehavi, D. H. Weinberg, Z. Zheng, A. A. Berlind, J. A. Frieman, R. Scoccimarro, **Ravi K. Sheth**, M. R. Blanton, M. Tegmark, H. J. Mo, et al. 2004
The Astrophysical Journal, 608, 16–24
45. A hierarchy of voids: Much ado about nothing
Ravi K. Sheth & R. van de Weygaert. 2004
Monthly Notices of the Royal Astronomical Society, 350, 517–538
44. Formation times and masses of dark matter haloes
Ravi K. Sheth & G. Tormen. 2004
Monthly Notices of the Royal Astronomical Society, 349, 1464–1468

43. Substructure in dark matter halos: Towards a model of the abundance and spatial distribution of subclumps
Ravi K. Sheth. 2003
Monthly Notices of the Royal Astronomical Society, 345, 1200–1204
42. Substructure and the halo model of large scale structure
Ravi K. Sheth & B. Jain. 2003
Monthly Notices of the Royal Astronomical Society, 345, 529–538
41. Quasar-galaxy and galaxy-galaxy cross-correlations: Model predictions with realistic galaxies
B. Jain, R. Scranton & **Ravi K. Sheth**. 2003
Monthly Notices of the Royal Astronomical Society, 345, 62–70
40. The velocity dispersion function of early-type galaxies
Ravi K. Sheth, M. Bernardi, P. L. Schechter, et al. 2003
The Astrophysical Journal, 594, 225–231
39. The morphological Butcher-Oemler effect in the SDSS Cut and Enhance galaxy cluster catalog
T. Goto, S. Okamura, M. Yagi, **Ravi K. Sheth**, et al. 2003
Publications of the Astronomical Society of Japan, 55, 739–755
38. Early-type galaxies in the Sloan Digital Sky Survey IV. Colors and chemical evolution
M. Bernardi, **Ravi K. Sheth**, et al. 2003
The Astronomical Journal, 125, 1882–1896
37. Early-type galaxies in the Sloan Digital Sky Survey III. The Fundamental Plane
M. Bernardi, **Ravi K. Sheth**, et al. 2003
The Astronomical Journal, 125, 1866–1881
36. Early-type galaxies in the Sloan Digital Sky Survey II. Correlations between observables
M. Bernardi, **Ravi K. Sheth**, et al. 2003
The Astronomical Journal, 125, 1849–1865
35. Early-type galaxies in the Sloan Digital Sky Survey I. The sample
M. Bernardi, **Ravi K. Sheth**, J. Annis, et al. 2003
The Astronomical Journal, 125, 1817–1848
34. A feature at $z \sim 3.2$ in the evolution of the Ly- α forest optical depth
M. Bernardi, **Ravi K. Sheth**, M. Subbarao, et al. 2003
The Astronomical Journal, 125, 32–52
33. Detection of He II reionization in the SDSS quasar sample
T. Theuns, M. Bernardi, J. Frieman, P. Hewett, J. Schaye, **Ravi K. Sheth** & M. Subbarao. 2002
The Astrophysical Journal Letters, 574, L111–L114

32. On the distribution of halos, galaxies and mass
R. Casas-Miranda, H. J. Mo, **Ravi K. Sheth** & G. Börner. 2002
Monthly Notices of the Royal Astronomical Society, 333, 730–738
31. PTHalos: A fast method for generating mock galaxy distributions
Román Scoccimarro & **Ravi K. Sheth**. 2002
Monthly Notices of the Royal Astronomical Society, 329, 629–640
30. An excursion set model of hierarchical clustering: Ellipsoidal collapse and the moving barrier
Ravi K. Sheth & G. Tormen. 2002
Monthly Notices of the Royal Astronomical Society, 329, 61–75
29. Non-gaussian CMB temperature fluctuations from peculiar velocities of clusters N. Yoshida, **Ravi K. Sheth**, & A. Diaferio. 2001
Monthly Notices of the Royal Astronomical Society, 328, 669–677
28. On the streaming motions of haloes and galaxies
Ravi K. Sheth, A. Diaferio, L. Hui & R. Scoccimarro. 2001
Monthly Notices of the Royal Astronomical Society, 326, 463–472
27. Linear and nonlinear contributions to pairwise peculiar velocities
Ravi K. Sheth, L. Hui, A. Diaferio & R. Scoccimarro. 2001
Monthly Notices of the Royal Astronomical Society, 325, 1288–1302
26. Ellipsoidal collapse and an improved model for the number and spatial distribution of dark matter haloes
Ravi K. Sheth, H. J. Mo & G. Tormen. 2001
Monthly Notices of the Royal Astronomical Society, 323, 1–12
25. Peculiar velocities of galaxies and clusters
Ravi K. Sheth & A. Diaferio. 2001
Monthly Notices of the Royal Astronomical Society, 322, 901–917
24. How many galaxies can fit in a halo? Constraints on galaxy formation efficiency from spatial clustering
R. Scoccimarro, **Ravi K. Sheth**, L. Hui & B. Jain. 2001
The Astrophysical Journal, 546, 20–34
23. Halo dark matter and ultra-high energy cosmic rays
P. Blasi & **Ravi K. Sheth**. 2000
Physics Letters B, 486, 233–238
22. The correlation of peaks in the microwave background
A. F. Heavens & **Ravi K. Sheth**. 1999
Monthly Notices of the Royal Astronomical Society, 310, 1062–1070
21. Large scale bias and the peak background split
Ravi K. Sheth & G. Tormen. 1999
Monthly Notices of the Royal Astronomical Society, 308, 119–126

20. The forest of merger history trees associated with the formation of dark matter halos
Ravi K. Sheth & G. Lemson. 1999
Monthly Notices of the Royal Astronomical Society, 305, 946–956
19. Biasing and the distribution of dark matter halos
Ravi K. Sheth & G. Lemson. 1999
Monthly Notices of the Royal Astronomical Society, 304, 767–792
18. Mass growth and density profiles of dark matter halos in hierarchical clustering
Adi Nusser & **Ravi K. Sheth**. 1998
Monthly Notices of the Royal Astronomical Society, 303, 685–695
17. An excursion set model for the distribution of dark matter and dark matter halos
Ravi K. Sheth. 1998
Monthly Notices of the Royal Astronomical Society, 300, 1057–1070
16. The Generalized Poisson distribution and a model of clustering from Poisson initial conditions
Ravi K. Sheth. 1998
Monthly Notices of the Royal Astronomical Society, 299, 207–217
15. Random walks and the additive coagulation equation
Ravi K. Sheth. 1998
Monthly Notices of the Royal Astronomical Society, 295, 869–872
14. Coagulation and branching process models of gravitational clustering
Ravi K. Sheth & J. Pitman. 1997
Monthly Notices of the Royal Astronomical Society, 289, 66–82
13. The nonlinear correlation function and density profiles of virialized halos
Ravi K. Sheth & B. Jain. 1997
Monthly Notices of the Royal Astronomical Society, 285, 231–238
12. Scale dependence of nonlinear gravitational clustering in the Universe
Ravi K. Sheth & W. C. Saslaw. 1996
The Astrophysical Journal, 470, 78–91
11. Galton–Watson branching processes and the growth of gravitational clustering
Ravi K. Sheth. 1996
Monthly Notices of the Royal Astronomical Society, 281, 1277–1289
10. The distribution of counts in cells in the nonlinear regime
Ravi K. Sheth. 1996
Monthly Notices of the Royal Astronomical Society, 281, 1124–1132
9. The distribution of pairwise peculiar velocities in the nonlinear regime
Ravi K. Sheth. 1996
Monthly Notices of the Royal Astronomical Society, 279, 1310–1324

8. Random dilutions, generating functions, and the void probability distribution function
Ravi K. Sheth. 1996
Monthly Notices of the Royal Astronomical Society, 278, 101–110
7. Constrained realizations and minimum variance reconstructions of non-Gaussian random fields
Ravi K. Sheth. 1995
Monthly Notices of the Royal Astronomical Society, 277, 933–944
6. Merging and hierarchical clustering from an initially Poisson distribution
Ravi K. Sheth. 1995
Monthly Notices of the Royal Astronomical Society, 276, 796–824
5. Press-Schechter, thermodynamics, and nonlinear gravitational clustering
Ravi K. Sheth. 1995
Monthly Notices of the Royal Astronomical Society, 274, 213–220
4. Synthesizing the observed distribution of galaxies
Ravi K. Sheth & W. C. Saslaw. 1994
The Astrophysical Journal, 437, 35–55
3. The distribution of IRAS galaxies on linear and nonlinear scales
Ravi K. Sheth, H. J. Mo & W. C. Saslaw. 1994
The Astrophysical Journal, 427, 562–573
2. Nonlinear properties and time evolution of gravitational galaxy clustering
W. C. Saslaw & **Ravi K. Sheth.** 1993
The Astrophysical Journal, 409, 504–516
1. Competition between direct and concerted movements in surface diffusion with application to the Au(110) surface
L. D. Roelofs, J. I. Martin & **Ravi K. Sheth.** 1991
Surface Science, 250, 17–26

Other Refereed Publications:

25. Revisiting the BulgeHalo Conspiracy. I. Dependence on Galaxy Properties and Halo Mass
F. Shankar, Sonnenfeld A., Mamon G., et al. 2017
The Astrophysical Journal, 840, 34 (22 pages)
24. Avoiding Progenitor Bias: The Structural and Mass Evolution of Brightest Group and Cluster Galaxies in Hierarchical Models since $z \sim 1$
F. Shankar., S. Buchan, A. Rettura, et al. 2015
The Astrophysical Journal, 802, 73–82
23. Environmental dependence of bulge-dominated galaxy sizes in hierarchical models of galaxy formation: Comparison with the local Universe
F. Shankar et al. 2014
Monthly Notices of the Royal Astronomical Society, 439, 3189–3212

22. The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: a large sample of mock galaxy catalogues
M. Manera et al. (The BOSS collaboration). 2013
Monthly Notices of the Royal Astronomical Society, 428, 1036–1054
21. Bispectrum and nonlinear biasing of galaxies: Perturbation analysis, numerical simulation and SDSS galaxy clustering
T. Nishimichi et al. 2006
Proceedings of the Astronomical Society of Japan, 59, 93–106
20. Cosmological Constraints from the SDSS Luminous Red Galaxies
M. Tegmark et al. (The SDSS collaboration). 2006
Physical Review D, 74, 123507
19. Detection of Cosmic Magnification with the SDSS
R. Scranton et al. 2005
The Astrophysical Journal, 633, 589–602
18. Large Scale Clustering of SDSS Quasars: Impact of the Baryon Density and the Cosmological Constant
K. Yahata et al. 2005
Proceedings of the Astronomical Society of Japan, 57, 529–540
17. The luminosity and color dependence of the galaxy correlation function
I. Zehavi et al. 2005
The Astrophysical Journal, 630, 1-27
16. The C4 clustering algorithm: Clusters of galaxies in the SDSS
C. J. Miller et al. 2005
The Astronomical Journal, 130, 968–1001
15. A hierarchy of voids
R. van de Weygaert, **Ravi K. Sheth** & E. Platen. 2004
Proceedings of IAU Colloquium 195, ed. A. Diaferio, p.58–63
14. Physical evidence for dark energy
R. Scranton et al. (The SDSS collaboration). 2003
Physics Reviews D, submitted (astro-ph/0307335)
13. Three-point correlation functions of SDSS galaxies in redshift space: Morphology, color, and luminosity dependence
I. Kayo et al. 2004
Publications of the Astronomical Society of Japan, 56, 415–423
12. Cosmological parameters from SDSS and WMAP
M. Tegmark et al. (The SDSS collaboration). 2004
Physical Review D, 69, 103501 (26 pages)

11. The three-dimensional power spectrum of galaxies from the SDSS
M. Tegmark et al. (The SDSS collaboration). 2004
The Astrophysical Journal, 606, 702–740
10. Karhunen-Loeve estimation of the power spectrum parameters from the angular distribution of galaxies in early SDSS data
A. S. Szalay et al. (The SDSS collaboration). 2003
The Astrophysical Journal, 591, 1–11
9. The environment of passive spiral galaxies in the SDSS
T. Goto et al. 2003
Publications of the Astronomical Society of Japan, 55, 757–770
8. Galaxy star formation as a function of environment in the EDR of the SDSS
P. Gomez et al. 2003
The Astrophysical Journal, 584, 210–227
7. Analysis of systematic effects and statistical uncertainties in angular clustering of galaxies from early SDSS Data
R. Scranton et al. (The SDSS collaboration). 2002
The Astrophysical Journal, 579, 48–75
6. The angular correlation function of galaxies from Early SDSS Data
A. Connolly et al. (The SDSS collaboration). 2002
The Astrophysical Journal, 579, 42–47
5. Composite luminosity functions of the SDSS Cut and Enhance galaxy cluster catalog
T. Goto et al. 2002
Publications of the Astronomical Society of Japan, 54, 515–525
4. The 3D power spectrum from angular clustering of galaxies in early SDSS data
S. Dodelson et al. (The SDSS collaboration) 2002
The Astrophysical Journal, 572, 140–156
3. The angular power spectrum of galaxies from early SDSS data
M. Tegmark et al. (The SDSS collaboration) 2002
The Astrophysical Journal, 571, 191–205
2. Galaxy clustering in early SDSS redshift data
Idit Zehavi et al. (The SDSS collaboration). 2002
The Astrophysical Journal, 571, 172–190
1. Sloan Digital Sky Survey: Early Data Release
C. Stoughton et al. (The SDSS collaboration). 2002
The Astronomical Journal, 123, 485–548

Non-Refereed Conference Proceedings/White papers:

12. Cosmic voids, a novel probe to shed light on our Universe
A. Pisani, E. Massara, D. Spergel et al. 2019
Astro2020 White Paper (arXiv:1903.0)
11. Effect of distance errors: Applications to SDSS early-type galaxies
G. Rossi & **Ravi K. Sheth**. 2008
Proceedings of the XLIIIst Rencontres de Moriond (arXiv:0804.0818)
10. SMBH mass function from velocity dispersion and luminosity
E. Tundo, M. Bernardi, **Ravi K. Sheth**, J. B. Hyde & A. Pizella. 2007
ASP Conference Series, Vol. 380, p. 565 eds. Alonso, Ferguson, Mobasher, Norris. Proceedings of the conference held in Sintra, Portugal (9-13 October 2006).
9. Hot and cold spots in the WMAP sky
G. Rossi & **Ravi K. Sheth**. 2006
Proceedings of the Cosmology School at Moriond (March 2006)
8. Void hierarchy and cosmic structure
R. van de Weygaert & **Ravi K. Sheth**. 2003
in “Multi-Wavelength Cosmology”, Astrophysics and Space Science Library, 301, p.223.
ed. M. Plionis. Proceedings of the conference at Mykonos, Greece (17–20 June 2003).
7. On halo and galaxy bias
R. Casas-Miranda, H. J. Mo, **Ravi K. Sheth** & G. Börner. 2002
Proceedings of the 11th UN/ESA Workshop on Basic Space Sciences, Cordoba, Argentina (9–13 September 2002).
6. Small scale anisotropies of UHECRs from super-heavy halo dark matter
P. Blasi & **Ravi K. Sheth**. 2001
in Proceedings of the 27th International Cosmic Ray Conference, p. 1951, Hamburg, Germany (07–15 August 2001).
5. A random walk through models of nonlinear clustering
Ravi K. Sheth. 2001
in the Annals of the N.Y. Academy of Science, 927, 1–12. eds. J. N. Fry, R. Bucher and H. Kandrup. Proceedings of the “The onset of nonlinearity in cosmology” workshop, Gainesville, Florida (16–19 February 2000).
4. A nonlinear and biased view of dark matters
Ravi K. Sheth. 1999
in ASP Conference Series, 201, 337–345. eds. S. Courteau and J. Willick. Proceedings of the “Cosmic Flows Workshop”, Victoria, Canada (13–17 July 1999)
3. Stochastic biasing and the forest of merger history trees
Ravi K. Sheth. 1998
in “From stars to the Universe”. Proceedings of the workshop in Shanghai, China (October 1998)

2. Dark matters

Ravi K. Sheth. 1998

in “From stars to galaxies to the Universe”, p.31–39. eds. G. Börner and H. J. Mo. Proceedings of the workshop at Ringberg Castle, Germany (2–5 June 1998)

1. A model of the dark matter distribution

Ravi K. Sheth. 1998

in “Large scale structure: Tracks and traces”, p.41–42. eds. V. Müller, S. Gottlöber, J. P. Mücke and J. Wambsganss. Proceedings of the 12th Potsdam Cosmology Workshop (15–19 September 1997)