Prot. n. 0004735 del 28/07/2025 - Contratti - Convenzioni (AOO Periferiche) 85/2025

7/7/2025

CURRICULUM VITAE: RAVI K. SHETH (June 2025)

Department of Physics and Astronomy
University of Pennsylvania
[redacted]
Philadelphia, PA 19104

Phone: [redacted]
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Email: [redacted]

Date of birth: [redacted]
Nationality: [redacted]

Place of birth: [redacted]

Faculty Appointments:

2021 – 2025	Chair, Physics & Astronomy Graduate Group	
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:

TAP Lectureship	University of Arizona	Arizona (December 2025)
Visiting Professor	INAF Bologna	Italy (October 2025)
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 (2015–2022)
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.

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 is 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. The effect is now called Assembly of Secondary Bias. I have also used physically motivated models to illustrate the ubiquity of what are now called scale-dependent bias, tidal bias and velocity bias. This has led to new insights which are essential for placing unbiased constraints on cosmological parameters from biased tracers of the cosmic web. E.g., in 2016, my collaborators and I described a more general standard ruler for cosmological measurements. And in 2022, I showed that tests of the Strong Equivalence Principle must first account for inherent correlations between galaxy clustering and galaxy properties, thus correcting a significant oversight in the literature.

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. From 2004 to 2006 I extended the approach to predict how the morphology (sheets, filaments, voids) rather than simply the density, of large scale structure evolves. I have since studied 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. In 2020, I extended these methods to estimate the abundance of Primordial Black Holes. Since 2021, I have been developing efficient methods for estimating the cosmic distance scale; one of these exploits recent advances in the field of Optimal Transport.

In 1996 I solved an old combinatorial problem on the partitions of integers which turns out to have interesting connections to coagulation and branching processes, and the spread of disease. In 1998 I showed how to extend the approach to model the counts in cells distribution in the nonlinear density field. In 2002, I developed a new method for estimating the evolution of the optical depth in the Lyman-alpha forest. In 2005, I showed how to use Mark Correlations to quantify and model environmental trends in the galaxy distribution, and in 2012 I used them to provide a novel test of the hypothesis that the brightest cluster galaxies follow Extreme Value statistics. In 2007 my collaborators and I showed that local black hole samples are a biased subset of all galaxies, a study that has seen renewed interest since 2016. Between 2007-2009 I developed methods for making unbiased estimates of the galaxy luminosity function and galaxy scaling relations from photometric redshift surveys. My methods 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. In 2018 I showed that self-consistently accounting for stellar population gradients yields good agreement between dynamical (Jeans equation) and stellar population based estimates of the stellar masses in galaxies.

In 2013, I showed how to unify the Excursion Set and Peaks Theory descriptions of the Cosmic Web, and provided the first quantitative predictions for the effects of tides on the large scale struc-

Courses Developed and Taught at Penn:

Fall 2024	Survey of the Universe	27 non-science majors
Fall 2023	Survey of the Universe	27 non-science majors
Spring 2023	Introduction to Astrophysics II	10 science majors
Fall 2022	Survey of the Universe	24 non-science majors
Spring 2022	Introduction to Astrophysics II	12 science majors
Fall 2021	Survey of the Universe	49 non-science majors
Spring 2021	Survey of the Universe	78 non-science majors
Fall 2020	Introduction to Astrophysics I	47 science majors
Fall 2019	Introduction to Astrophysics I	33 science majors
Spring 2019	Cosmology	10 PhD students
Fall 2018	The Big Bang and Beyond	18 freshmen
Spring 2018	Survey of the Universe	35 non-science majors
Fall 2017	The Big Bang and Beyond	35 freshmen
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 freshmen
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 freshmen
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	25 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	Nonlinear structure formation	Bologna (September 2025)
Lecturer	Primordial black holes	Barcelona (June 2024)
Lecturer	Primordial black hole abundances	Barcelona (June 2023)
Lecturer	Precise cosmological distances	UPenn (June 2020)
Lecturer	Observational probes of cosmology	EAIFR, 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 Janeiro (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, Belgrade (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)

Organization of International Conferences:

Team Research Program: Reconstruction Strikes Back
IPPU, Trieste, Italy (14-19 April 2025)

Scientific Organizing Committee: Mind the Gap
Workshop on Galaxies and the Large Scale Structure
Cordoba, Argentina (2-6 December 2024)

Co-Director: ICTP Cosmology Summer School
ICTP, Trieste, Italy (17-28 June 2024)

Local Organizing Committee - APS CUWiP 2024 @ UPenn
Philadelphia, PA (19-21 January 2024)

Organizing Committee - Cosmological tensions and implications for concordance cosmology
IPPU, Trieste, Italy (12-23 June 2023)

Convener - Large Scale Structure: 2nd Roman Juszkiewicz Symposium
Warsaw, Poland (26-30 September 2022)

Convener - Cosmology Session: PASCOS 2022
MPIK, Heidelberg, Germany (25-29 July 2022)

Co-Director: ICTP Cosmology Summer School
ICTP, Trieste, Italy (04-15 July 2022)

Convener - Cosmology Session: PASCOS 2020
MPIK, Heidelberg, Germany (13-17 July 2020 - canceled/pandemic)

Co-Director: ICTP Cosmology Summer School
ICTP, Trieste, Italy (11-22 May 2020 - canceled/pandemic)

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
Paul Scherrer 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)

201. The statistics of primordial black holes in a radiation dominated Universe: Recent and new results
C. Germani & **Ravi K. Sheth**. 2023
Universe, 9, 421 (22 pages)

200. Model-agnostic cosmological constraints from the BAO feature in redshift space
A. Paranjape & **Ravi K. Sheth**. 2023
Monthly Notices of the Royal Astronomical Society, 526, 700–716

199. Getting in shape with minimum energy: A variational principle for protohaloes
M. Musso & **Ravi K. Sheth**. 2023
Monthly Notices of the Royal Astronomical Society, 523, L4–L8

198. Stellar population analysis of MaNGA early-type galaxies: IMF dependence and systematic effects M. Bernardi, H. Domínguez Sánchez & **Ravi K. Sheth**. 2023
Monthly Notices of the Royal Astronomical Society, 518, 4713–4733

197. The half mass radius of MaNGA galaxies: Effect of IMF gradients
M. Bernardi, **Ravi K. Sheth**, et al. 2023
Monthly Notices of the Royal Astronomical Society, 518, 3494–3508

196. Optimal Transport reconstruction of baryon acoustic oscillations
F. Nikakhtar, **Ravi K. Sheth**, B. Lévy & R. Mohayaee. 2022
Physical Review Letters, 129, 251101 (5 pages)

195. Bayesian evidence comparison for distance scale estimates
A. Paranjape & **Ravi K. Sheth**. 2022
Monthly Notices of the Royal Astronomical Society, 517, 4696–4704

194. The phenomenology of the external field effect in cold dark matter models
A. Paranjape & **Ravi K. Sheth**. 2022
Monthly Notices of the Royal Astronomical Society, 517, 130–139

193. The weak dependence of velocity dispersion on disk fractions, mass-to-light ratio and redshift: Implications for galaxy and black hole evolution
C. Marsden, F. Shankar, M. Bernardi, **Ravi K. Sheth**, H. Fu & A. Lapi. 2022
Monthly Notices of the Royal Astronomical Society, 510, 5639–5660

192. Smearing scale in Laguerre reconstructions of the correlation function
F. Nikakhtar, **Ravi K. Sheth** & I. Zehavi. 2022
Physical Review D, 105, 043536 (12 pages)

191. The distribution of HI velocity profiles in a ΛCDM universe
A. Paranjape, R. Srianand, T. R. Choudhury & **Ravi K. Sheth**. 2021
Monthly Notices of the Royal Astronomical Society, submitted (arXiv:2105.04570)

190. Excursion set peaks in energy as a model for halos
M. Musso & **Ravi K. Sheth**. 2021
Monthly Notices of the Royal Astronomical Society, 508, 3634–3648

189. Laguerre reconstruction of the BAO feature in halo-based mock galaxy catalogues
F. Nikakhtar, **Ravi K. Sheth** & I. Zehavi. 2021
Physical Review D, 104, 063504 (11 pages)

188. Laguerre reconstruction of the correlation function on BAO scales
F. Nikakhtar, **Ravi K. Sheth** & I. Zehavi. 2021
Physical Review D, 104, 043530 (16 pages)

187. The radial acceleration relation in a ΛCDM universe
A. Paranjape & **Ravi K. Sheth**. 2021
Monthly Notices of the Royal Astronomical Society, 507, 632–650

186. Multi-wavelength mock galaxy catalogs of the low-redshift Universe
A. Paranjape, T. R. Choudhury & **Ravi K. Sheth**. 2021
Monthly Notices of the Royal Astronomical Society, 503, 4147–4162

185. Mock halo catalogs: Assigning unresolved halo properties using correlations with local halo environment
S. Ramakrishnan, A. Paranjape & **Ravi K. Sheth**. 2021
Monthly Notices of the Royal Astronomical Society, 503, 2053–3064

184. The effects of massive neutrinos on the linear point of the correlation function
G. Parimbelli, S. Anselmi, M. Viel, C. Carbone, F. Villaescusa-Navarro, P. S. Corasaniti, Y. Rasera, **Ravi K. Sheth**, G. Starkman & I. Zehavi. 2021
Journal of Cosmology and Astroparticle Physics, 01, 009 (29 pages)

183. Analytical thresholds for black hole formation in general cosmological backgrounds
A. Escrivà, C. Germani & **Ravi K. Sheth**. 2021
Journal of Cosmology and Astroparticle Physics, 01, 030 (25 pages)

182. On the presence of a universal acceleration scale in elliptical galaxies
K.-H. Chae, M. Bernardi, H. Domínguez Sánchez & **Ravi K. Sheth**. 2020
The Astrophysical Journal Letters, 903, L31 (6 pages)

181. Galaxy properties as revealed by MaNGA. III. Kinematic profiles and stellar population gradients in S0s
M. Bernardi, H. Domínguez Sánchez, F. Nikakhtar, B. Margalef-Bentabol & **Ravi K. Sheth**. 2020
Monthly Notices of the Royal Astronomical Society, 495, 2894–2908

180. The Stellar Mass Fundamental Plane: The virial relation and a thin plane for slow rotators
M. Bernardi, H. Domínguez Sánchez, B. Margalef-Bentabol, F. Nikakhtar & **Ravi K. Sheth**. 2020
Monthly Notices of the Royal Astronomical Society, 494, 5148–5160

179. Linear Point and Sound Horizon as purely geometric 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** & I. Zehavi. 2019
Physical Review D, 101, 083517 (13 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-Chun, **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-Chun, **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. Allevato, 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

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. Poorate, J. M. Diego, **Ravi K. Sheth**, C. Burigana, S. Kaufmann & 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 $k \gg 1 h\mathrm{Mpc}^{-1}$
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, P. 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, P. 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

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