ILIAN T. ILIEV
Curriculum Vitae

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Personal Data:

Date of birth: August 14th, 1969, Pleven, Bulgaria.
Citizenship: Bulgarian
Languages: Bulgarian (native), English (fluent), Italian, Russian (good), Spanish (reading).

Education:

2000: Ph.D. in Physics, University of Texas at Austin.
1994: Diploma (M.Sc.-equivalent) in Physics, Sofia University, Sofia, Bulgaria.

Career Summary:

- May 2018 - present: Professor of Astrophysics at The University of Sussex, Brighton, United Kingdom.
- April 2014 - May 2018: Reader in Astronomy at The University of Sussex, Brighton, United Kingdom.
- October 2012 - April 2014: Senior Lecturer in Astronomy at The University of Sussex, Brighton, United Kingdom.
- January 2009 - Sept 2012: Lecturer in Astronomy at The University of Sussex, Brighton, United Kingdom.
- August 2007 - December 2008: Postdoctoral Researcher at the Institute for Theoretical Astrophysics, The University of Zürich, Switzerland.
- August 2003 - August 2007: Postdoctoral Researcher at the Canadian Institute for Theoretical Astrophysics (CITA), The University of Toronto, Toronto, Canada.
- April 2001 - July 2003: Postdoctoral Researcher with the European Research Network "The Physics of the Intergalactic Medium", Osservatorio Astrofisico di Arcetri, Florence, Italy.
- September 2000 - March 2001: US National Science Foundation International Research Fellow, Instituto de Astronomía, Universidad Nacional Autonoma de México (UNAM), México City, México.

Grants (chronological order, grants as PI highlighted):

2000 PI: NSF International Research Fellowship Award ($30,000).
2006 CoPI (PI: Paul Shapiro): NCSA computing time grant (100K processor-hours).
2006 CoPI: (PI: G. Mellema): DEISA computing time grant (100K processor-hours).

2007 PI: Marie Curie International Reintegration Grant under FP7: call PEOPLE-2007-4-3-IRG (Euro 100,000) (declined).

2008 CoPI (PI: Paul Shapiro): Lonestar computing time grant (Texas Advanced Computing Center) (550k processor-hours).

2008 CoPI (PI: Paul Shapiro): Ranger computing time grant (Texas Advanced Computing Center) (2M + 2M + 250k processor-hours).

2008 CoPI (PI: Paul Shapiro): Ranger computing time grant (TeraGrid) (0.8M processor-hours).

2008 PI: European Science Foundation Short Visit Grant (Euro 841).

2008 CoPI (PI: Paul Shapiro): TeraGrid computing time grant (9.5M processor-hours).

2009 SEPNet Fellow (permanent lectureship finded by SEPNet for the first 5 years).

2009 SEPNet Research Studentship Grant (£42,420).

2009 CoPI (PI: Paul Shapiro): TeraGrid computing time grant (9.5M processor-hours).

2009 Finalist, EU ERC Starting Grants, proposal rated above quality threshold.

2010 PI: Royal Society International Joint Project Grant (£10,400).

2010 CoPI (PI: Stefan Gottlöber): JUROPA (Jülich, Germany) computing time grant (1.44M processor-hours=Euro 70,000).

2011 PI: Royal Society Research Grant for organizing a workshop (£2,000).

2011 PI: European Science Foundation grant (through AstroSim project) for organizing a workshop (Euro 5,000).

2011 CoPI Sussex Astronomy Rolling Grant (PI: Andrew Liddle) (£2,992,024).

2011 CoPI (PI: Paul Shapiro): TeraGrid computing time grant (12M processor-hours).

2011 CoPI (PI: Stefan Gottlöber): JUROPA (Jülich, Germany) computing time grant (1.44M processor-hours=Euro 70,000)

2012 CoPI (PI: Ue-Li Pen): SciNet computing time grant (34M processor-hours).

2012 CoPI (PI: Paul Shapiro): XSEDE computing time grant (5.5M processor-hours).

2012 PI Partnership for Advanced Computing in Europe (PRACE) Tier-0 (Petascale) project "Our Neighbourhood in the Universe: From the First Stars to the Present Day" (26M processor-hours).

2012 CoPI (PI: Garrelt Mellema): Partnership for Advanced Computing in Europe (PRACE) Tier-0 (Petascale) project "Simulating the Epoch of Reionization for LOFAR" (22M processor-hours).

2012 CoPI (PI: Paul Shapiro) 2013 Innovative and Novel Computational Impact on Theory and Experiment (INCITE) award "Simulating Reionization of the Local Universe: Witnessing our own Cosmic Dawn" (40M processor-hours).

2013 PI Partnership for Advanced Computing in Europe (PRACE) Tier-1 project (DECI-10 program) "Simulations of dark matter and galaxies as basis for semi analytical modeling" (10.7M processor-hours).

2013 CoPI (PI: Paul Shapiro): XSEDE computing time grant (13M processor-hours).

2014 PI Partnership for Advanced Computing in Europe (PRACE) Tier-1 project (DECI-12 program) "Our Neighbourhood in the Universe: From the First Stars to the Present Day" (3.5M processor-hours).

2014 Co-PI (PI: P. Thomas) Astrophysics and Cosmology - Sussex Consolidated Grant 01/04/14-31/03/17 Stfc-Science And Technology Facilities Council (£1,355,893)

2014 Co-PI (PI: P. Thomas) Additional AGP funding - supplementary to Sussex Consolidated Grant ST/L000652/1, 01/04/14-31/03/17 Stfc-Science And Technology Facilities Council (£98,270)

2014 PI Partnership for Advanced Computing in Europe (PRACE) Tier-0 (Petascale) project "Multi-scale simulations of cosmic reionization" (21.65M processor-hours).

2014 CoPI (PI: Garrelt Mellema): Partnership for Advanced Computing in Europe (PRACE) Tier-0 (Petascale) project "Simulating the Epoch of Reionization for LOFAR" (19M processor-hours).

2014 CoPI (PI: Stefan Gottlöber): JUROPA (Jülich, Germany) computing time grant (1.5M processor-hours=Euro 70,000)

2015 CoPI (PI: Paul Shapiro): XSEDE computing time grant (2.2 million processor-hours).

2015 PI Partnership for Advanced Computing in Europe (PRACE) Tier-0 (Petascale) project "Multi-scale simulations of cosmic reionization" (14M processor-hours).

2015 Co-PI, "Demonstrating a new methodology for the 3D modelling of complex interstellar environments" 01/01/15-31/08/15, University Of Sussex, (£13,598)

2015 PI, Square Kilometre Array Office - Amazon Web Services (AWS) Astro-Compute grant inder the AWS in Education Research Grants program, $17500

2015 CoPI (PI: Paul Shapiro) 2015 Innovative and Novel Computational Impact on Theory and Experiment (INCITE) award "Simulating Reionization of the Local Universe: Witnessing our own Cosmic Dawn" (70M processor-hours).

2015 PI (w/S. Gottlöber): JURECA (Jülich, Germany) computing time grant (2.7M processor-hours=Euro 135,000)

2016 PI (w/S. Gottlöber): JURECA (Jülich, Germany) computing time grant (4.3M processor-hours=Euro 215,000)

2016 PI: Royal Astronomical Society Summer Studentship Award (£1200)

2017 Co-PI (PI: P. Thomas) Astrophysics and Cosmology - Sussex Consolidated Grant 01/04/17-31/03/20 Stfc-Science And Technology Facilities Council (£834,303)

2017 PI Partnership for Advanced Computing in Europe (PRACE) Tier-0 (Petascale) project "Multi-scale simulations of cosmic reionization" (86M processor-hours).

2017 PI Partnership for Advanced Computing in Europe (PRACE) Tier-1 project (DECI-14 program), project "SubgridEoR" (20.16M standartised hours).

2017 PI (w/S. Gottlöber): JURECA (Jülich, Germany) computing time grant (3.3M processor-hours=Euro 165,000)

2018 PI Partnership for Advanced Computing in Europe (PRACE) Tier-0 (Petascale) project "Multi-scale simulations of cosmic reionization" (20.8M processor-hours).

2018 PI (w/S. Gottlöber): JUWELS (Jülich, Germany) computing time grant (3.5M processor-hours=Euro 175,000)

2018 CoPI (PI: Paul Shapiro): XSEDE computing time grant (132,361 Node Hours)

2019 PI Partnership for Advanced Computing in Europe (PRACE) Tier-1 project (DECI-15 program), project "SubgridEoR" (20.8M DECI standartized hours).

2019 CoPI (PI: Pierre Ocvirk) 2019 Innovative and Novel Computational Impact on Theory and Experiment (INCITE) award "Simulating Reionization of the Local Universe: Witnessing our own Cosmic Dawn" (24M processor-hours).

2019 PI (w/S. Gottlöber): JUWELS (Jülich, Germany) computing time grant (3.5M processor-hours+0.1M GPU-h=Euro 175,000)

Conference Organization/Project Leadership:

- Cosmological Radiative Transfer Comparison Project Workshop I, CITA, May 2005.
- Cosmological Radiative Transfer Comparison Project Workshop II, Lorentz Center, Netherlands, December 2005.
- Cosmological Radiative Transfer Comparison Project Workshop III, The University of Texas, Austin, USA, December 2008.
- CLUES Project Workshop, University of Sussex, Brighton, UK, June 2011.
- Cosmological Radiative Transfer Comparison Project Workshop IV, The University of Texas, Austin, USA, December 2012.
- National Astronomy Meeting 2014 session "Theory and observations of the first galaxies", Portsmouth, UK, June 2014.
- Member of SOC, Exascale Radio Astronomy, AAS meeting, Monterey, USA, 30 March-4 April, 2014.

Teaching Experience (chronological order):

- 1994 - 1997: Teaching Assistant, Physics Department, University of Texas at Austin.
- 1997 - 2000: Assistant Instructor, Physics Dept., University of Texas at Austin.
- 1998 - 2000: Assistant Instructor, Astronomy Dept., University of Texas at Austin.
- 2009 - 2012: Lecturer at University of Sussex.
- 2012 - 2014: Senior Lecturer at University of Sussex.
- 2014 - 2018: Reader at University of Sussex.
- 2018 - : Professor of Astrophysics at University of Sussex.

  Taught courses: Relativity (Year 1), Introduction to Scientific Computing for Physicists/Scientific Computing (Year 2), Astronomy Research Skills (Masters), Electricity and Magnetism (Year 0), Galactic Structure (Year 3 and Masters), Radiative Processes

in Astrophysics (Year 3 and Masters), Galaxies (Year 3 and Masters), Atomic Physics (Year 3), Astrophysical Processes (Year 4 and Masters), Skills in Physics II (Year 2). Currently supervising 3 PhD students, five more PhD students succesfully completed their degrees in July 2013, December 2014, May 2016, November 2017, and August 2018, respectively.

Fellowships and Awards:

- 1989-1991: University Scholarship, Sofia University, Bulgaria.
- 1990-1994: Annual Rector's Award for Academic Excellence, Sofia University, Bulgaria.
- 1991-1994: University Fellowship, Sofia University, Bulgaria.
- 1998: Professional Development Award, Graduate School, University of Texas at Austin.
- 2000: Lady Davis Trust Fellowship, Hebrew University of Jerusalem (declined).
- 2000: NSF International Research Fellow Award.
- 2009 SEPNet Lectureship.

Professional Services and Managing Experience:

- Fellow of the Royal Astronomical Society.
- Fellow of the Higher Education Academy.
- Core member of the LOFAR Epoch of Reionization Key Science Project.
- Coordinator of the Full Numerical Simulations for Calibration Focus Group within the SKA Epoch of Reionization project.
- Member of the SKA Epoch of Reionization & the Dark Ages Science Working Group.
- Member of the Euclid project Science Working Groups on Simulations, Theory and the High-redshift Universe.
- Member of the LOFAR-UK Managing Committee.
- Leader and manager of the Cosmological Radiative Transfer Code Comparison Project (2005-).
- STFC Projects Peer Review Panel member (2017-2019).
- Expert evaluator of the Spanish State Agency for Research (2017-)
- Former member of the SEPnet (SouthEast Physics Network) Astro Managing Committee.

- Former member of the Petascale User Committee at The Texas Advanced Computing Center.
- Referee for Astrophysical Journal, Astrophysical Journal Letters, Monthly Notices of the Royal Astronomical Society, Astronomy & Astrophysics, Publications of the Astronomical Society of Japan (PASJ) and Astrophysics & Space Science.
- US National Science Foundation proposal review panelist (Extragalactic Astronomy and Cosmology Theory and Simulations) (2006-2016).
- NASA Astrophysics Theory Program proposal invited review panelist (2010).
- Panel review member for the Partnership for Advanced Computing in Europe (PRACE) Tier-0 computing allocation proposals (2016).
- Reviewer for Partnership for Advanced Computing in Europe (PRACE) Tier-0 computing allocation proposals.
- Reviewer of STFC proposals (2011-).
- Appointed reviewer (2013-2017) of computing allocation proposals for the Barcelona Supercomputing Centre.
- Reviewer for the US National Science Foundation Petascale Computing Resource Allocation (PRAC) proposals.
- Referee for Royal Society proposals.
- Reviewer of observing time proposals for Gemini Observatories.
- Reviewer of grant proposals for NWO (Netherlands Science Foundation).
- Reviewer of grant proposals for L'Agence Nationale de la Recherche (French National Research Agency).
- Reviewer of grant proposals for Israel National Science Foundation.

Recent Invited Reviews and Invited Talks at Conferences, Workshops and Schools:

- Invited Review on "Reionization: constraints from the CMB and 21-cm observations", Kingston Theoretical Astrophysics Meeting, University of British Columbia, November 2003.
- Invited Speaker at the Oort Workshop on "CMB and first objects at the end of the dark ages: observational consequences of reionization", Leiden, Netherlands, April 2004.
- Invited Speaker at the TIARA (Theoretical Institute for Advanced Research in Astrophysics) Workshop on Reionization, Taiwan, Feb. 13-Mar. 3, 2006.

- Lecturer at Cosmology Winter School at Theoretical Institute for Advanced Research in Astrophysics, Taiwan, Feb. 13-Feb. 17, 2006.
- Invited Review on "Numerical Simulations of Reionization" at "The End of the Dark Ages: From First Light to Reionization", STScI Workshop, U.S.A., March 2006.
- Invited Speaker at 2006 Mitchell Symposium on Astronomy, Cosmology and Fundamental Physics, Texas A&M University, U.S.A., April 2006.
- Invited Speaker at the 2006 Great Lakes Cosmology Meeting, Perimeter Institute, Waterloo, Canada, November 2006.
- Invited Speaker at the 2007 Niels Bohr Institute workshop on "The Nature of the First Stars", Copenhagen, Denmark, April 16-20, 2007.
- Invited Speaker at the 2007 Nordita Symposium "New Trends in Radiation Hydrodynamics", Stockholm, Sweden, May 9-11, 2007.
- Lecturer at Summer School on "Particle Physics, Cosmology and Strings", Perimeter Institute, Waterloo, Canada, August 6 - 18, 2007.
- Invited Speaker at the Euro-VO DCA workshop "Theory in the Virtual Observatory", April 7-9, 2008, Garching, Germany.
- Invited Review on "Cosmological Simulations of Hydrogen Reionization" at "21cm Cosmology" Harvard Conference, Harvard, May 12-15, 2008.
- Invited Speaker at the "Frontiers in Computational Astrophysics: The Origin of Stars, Planets and Galaxies", Ascona, Switzerland, July 13-18, 2008.
- Invited Speaker at the 2008 Heidelberg workshop on "Cosmic Dust & Radiative Transfer - a workshop devoted to radiative transfer coding", Max-Planck-Institut für Astronomie Heidelberg, 15-17 September 2008.
- Invited Review on "Simulations of Hydrogen Reionization" at Reionization@Ringberg Conference, Ringberg Castle, Germany, March 23-27, 2009.
- Invited Speaker at "The local universe: from dwarf galaxies to galaxy clusters", Jablonna, Poland, June 28 - July 4, 2009.
- Invited Speaker at "Reionization with Multi-frequency Datasets", Stockholm, Sweden, 17-21 August 2009.
- Invited Speaker at The 4th KIAS workshop on "Cosmology and Structure Formation", KIAS, Seoul, Korea, Nov 4-6, 2010.
- Invited Speaker at "CosmoFirstObjects: International Meeting on High-z Cosmology", Laboratoire d'Astrophysique de Marseille (LAM), Marseille, France, May 3-6, 2011.

- Invited Speaker at CLUES (Constrained Local UniversE Simulations) meeting, Lyon, France, June 18-21, 2012.
- Keynote Speaker at Intel/COSMOS Numerical Cosmology Workshop, Cambridge, UK, 17-20 July 2012.
- Invited Speaker at The SEPnet Grand Challenge conference, Southampton, UK, 12-13 September 2012.
- Invited Speaker at The 5th KIAS workshop on "Cosmology and Structure Formation", KIAS, Seoul, Korea, Oct 30th - Nov 2nd, 2012.
- Invited Speaker, Photo-Evaporation in Astrophysical Systems, NORDITA Program, Stockholm, June, 2013.
- Invited Speaker, Exascale Computing in Astrophysics, Ascona, Switzerland 8-13 September 2013.
- Invited Speaker, workshop on "Origin of cosmic structures: numerical and theoretical approaches", IHP, Paris, 25-29 November, 2013.
- Member of SOC and Invited Speaker, Exascale Radio Astronomy, AAS meeting, Monterey, USA, 30 March-4 April, 2014.
- Invited Plenary Speaker, 9th Bulgarian National Astronomy Meeting, Shumen University, Shumen, Bulgaria, May 16-18, 2014.
- Invited Speaker, IAU Symposium 308 "The Zeldovich Universe: Genesis and Growth of the Cosmic Web", Tallinn, Estonia, June 23-28, 2014.
- Invited Speaker at The 6th KIAS workshop on "Cosmology and Structure Formation", KIAS, Seoul, Korea, Nov. 3-7, 2014.
- Invited Speaker at Cosmology and First Light conference, IAP, Paris, Dec. 7-10, 2015.
- Invited Speaker at Computational Cosmology, Lorentz Center, Leiden, December 14-18, 2015.
- Invited participant, MIAPP Program on Cosmic Reionization, Munich, Germany, April 4-17, 2016.
- Invited Speaker, PRACEdays17, Barcelona, Spain, May 16-18, 2017.
- Invited Speaker, Next-Generation Cosmology with Next-Generation Radio Telescopes, Sesto,Italy, March 4-9, 2018
- Invited Speaker, PRACEdays18, Ljubliana, Slovenia, May 28-June 1, 2018.

- Invited Plenary Talk, 6th "Fundamental Cosmology Meeting", Granada, Spain, May 28-30, 2018.
- Invited Speaker, Next-Generation Cosmology with Next-Generation Radio Telescopes II, Sesto, Italy, Jan 27-31 2020
- Invited colloquia and seminars at Leiden Observatory, Stockholm Observatory, University of California at Santa Barbara, Potsdam Observatory, University of Texas, University of Sofia, Leicester University, University of Sussex, University of Durham, Portsmouth University, University of Kent, MSSL, Imperial College London, Queen Mary's University.

References:

Prof. Paul R. Shapiro, Department of Astronomy, The University of Texas at Austin, 2511 Speedway, RLM 15.306, C1400, Austin, TX 78712, USA; e-mail: `shapiro@astro.as.utexas.edu`, telephone: +1-512-471-9422.

Prof. J. Richard Bond, CITA, McLennan Labs, University of Toronto, 60 St. George Street, Toronto, Ontario M5S 3H8, Canada; e-mail: `bond@cita.utoronto.ca`, telephone: +1-416-978-6874.

Prof. Ue-Li Pen, CITA, McLennan Labs, University of Toronto, 60 St. George Street, Toronto, Ontario M5S 3H8, Canada; e-mail: `pen@cita.utoronto.ca`, telephone: +1-416-978-6477.

Prof. Garrelt Mellema, Stockholm University AlbaNova University Center, Stockholm Observatory Department of Astronomy, SE-106 91 Stockholm, Sweden; e-mail: `garrelt@astro.su.se`, telephone +46 8 5537 8552, fax: +46 8 5537 8510.

Refereed Publications (in chronological order):

1. Shapiro, P. R., Iliev, I. T., Raga, A. C. "A model for the postcollapse equilibrium of cosmological structure: truncated isothermal spheres from top-hat density perturbations", 1999, MNRAS, 307, 203.

2. Shapiro, P. R., Iliev, I. T. "On the Mass Profile of Galaxy Cluster CL 0024+1654 Inferred from Strong Lensing", 2000, ApJ, 542, 1L.

3. Iliev, I. T., Shapiro, P. R. "On the Origin of the Rotation Curves of Dark Matter-dominated Galaxies", 2001, ApJ, 546, 5L.

4. Iliev, I. T., Shapiro, P. R. "The postcollapse equilibrium structure of cosmological halos in a low density universe" 2002, MNRAS, 325, 468.

5. Shapiro, P. R., Iliev, I. T. "The Central Mass and Phase-Space Densities of Dark Matter Halos: Cosmological Implications", 2002, ApJ, 565, 1L.

6. Iliev, I. T., Shapiro, P. R., Ferrara, A., Martel, H. "On the Direct Detectability of the Cosmic Dark Ages: 21 Centimeter Emission from Minihalos ", 2002, ApJ, 572, 123L.

7. Iliev, I. T., Scannapieco, E., Martel, H., Shapiro, P. R., "Nonlinear clustering during the cosmic Dark Ages and its effect on the 21-cm background from minihalos", 2003, MNRAS, 341, 81.

8. Shapiro, P. R., Iliev, I. T., Raga, A. C. "Photoevaporation of cosmological minihaloes during reionization", 2004, MNRAS, 348, 753.

9. Iliev, I. T., Shapiro, P. R., Scannapieco, E., Raga, A. C. "Effects of small-scale structure on the progress and duration of reionization" 2004, in *Outskirts of Galaxy Clusters: Intense Life in the Suburbs* (Refereed Proceedings of IAU Colloquium 195), ed. A. Diaferio, Cambridge University Press, pp. 549-551.

10. Iliev, I. T., Shapiro, P. R., Raga, A. C. "Photoevaporation times and ionizing photon consumption rates of individual minihalos during cosmic reionization", 2005, MNRAS, 361, 405.

11. Iliev, I. T., Scannapieco, E., Shapiro, P. R. "The Impact of Small-Scale Structure on Cosmological Ionization Fronts and Reionization", 2005, ApJ, 624, 491.

12. Mellema, G., Iliev, I. T., Alvarez, M. A., Shapiro, P. R. "C^2-Ray: A new method for photon-conserving transport of ionizing radiation", 2006, NewA, 11, 374.

13. Ciardi, B., Scannapieco, E., Stoehr, F., Ferrara, A., Iliev, I. T., Shapiro, P. R. "The effect of minihaloes on cosmic reionization", 2006, MNRAS, 366, 689.

14. Iliev, I. T., Hirashita, H., Ferrara, A. "Fate of clumps in damped Lyα systems", 2006, MNRAS, 368, 1885.

15. Shapiro, P. R., Iliev, I. T., Alvarez, M. A., Scannapieco, E., "Relativistic Ionization Fronts", 2006, ApJ, 648, 922.

16. Shapiro, P. R., Ahn, K., Alvarez, M. A., Iliev, I. T., Martel, H., Ryu, D. "The 21 Centimeter Background from the Cosmic Dark Ages: Minihalos and the Intergalactic Medium before Reionization" 2006, ApJ, 646, 681.

17. Iliev, I. T., Mellema, G., Pen, U.-L., Merz, H., Shapiro, P. R., Alvarez, M. A. "Simulating Cosmic Reionization on Large Scales I: the Geometry of Reionization", 2006, MNRAS, 369, 1625.

18. Mellema, G., Arthur, S. J., Henney, W. J., Iliev, I. T., Shapiro, P. R. "Dynamical H II Region Evolution in Turbulent Molecular Clouds", 2006, ApJ, 647, 397.

19. Iliev, I. T., et al. "Cosmological Radiative Transfer Codes Comparison Project I: The Static Density Field Tests", 2006, MNRAS, 371, 1057.

20. Mellema, G., Iliev, I. T., Pen, U.-L., Shapiro, P. R. "Simulating Cosmic Reionization at Large Scales II: the 21-cm Emission Features and Statistical Signals", 2006, MNRAS, 372, 679.

21. Alvarez, M. A., Shapiro, P. R., Ahn, K., Iliev, I. T. "Implications of WMAP Three Year Data for Reionization" 2006, ApJ, 644, 101L.

22. Iliev, I. T., Mellema, G., Shapiro, P. R., Pen, U.-L. "Self-Regulated Reionization" 2007, MNRAS, 376, 534.

23. Iliev, I. T., Pen, U.-L., Bond, J. R., Mellema, G., Shapiro, P. R. "The Kinetic Sunyaev-Zel'dovich Effect from Radiative Transfer Simulations of Patchy Reionization", 2007, ApJ, 660, 933.

24. Holder, G. P., Iliev, I. T., Mellema, G. "Reconstructing the Thomson Optical Depth due to Patchy Reionization from 21-cm Fluctuation Maps" 2007, ApJL, 663, 1.

25. Iliev, I. T., Mellema, G., Pen, U.-L., Bond, J. R.,& Shapiro, P. R. "Current Models of the Observable Consequences of Cosmic Reionization and their Detectability", MNRAS, 2008, 384, 863.

26. Doré, O., Holder, G. P., Alvarez, M. A., Iliev, I. T., Mellema, G., Pen, U.-L., & Shapiro, P. R "The Signature of Patchy Reionization in the Polarization Anisotropy of the CMB" 2007, Physical Review D, 76, 043002.

27. Weinmann, S. M., Macciò, A. V., Iliev, I. T., Mellema, G. & Moore, B."Dependence of the Local Reionization History on Halo Mass and Environment: did Virgo Reionize the Local Group?" 2007, MNRAS, 381, 367.

28. Iliev, I. T., Shapiro P. R., Mellema, G., Pen, U.-L., McDonald, P. & Alvarez, M. A. "Reionization: Characteristic Scales, Topology and Observability", 2008, AP&SS, 320, 39

29. Iliev, I. T., Shapiro, P. R., McDonald, P., Mellema, G., & Pen, U.-L. "The Effect of the Intergalactic Environment on the Observability of Ly-α Emitters During Reionization", 2008, MNRAS, 391, 63.

30. Iliev, I. T., Mellema, G., Pen, U.-L. & Shapiro P. R. "Character and detectability of the dark ages and the epoch of reionization: the view from the simulations", in "From Planets to Dark Energy: The Modern Radio Universe", Manchester, UK, refereed proceedings published by "Proceedings of Science" (PoS) online journal PoS (MRU) 018 (arXiv:0712.1356).

31. Iliev, I. T., Mellema, G., Merz, H., Shapiro, P. R. & Pen, U.-L. "Simulating Cosmic Reionization" 2008, in refereed proceedings of TegaGrid08, (arXiv:0806.2887).

32. Ahn, K., Shapiro, P. R., Iliev, I. T., Mellema, G., & Pen, U.-L. "The Inhomogeneous Background of H_2 Dissociating Radiation During Cosmic Reionization", 2009, ApJ, 695,1430.

33. Harker, G. J. A., et al. (the LOFAR EoR collaboration) "Detection and Extraction of Signals from the Epoch of Reionization Using Higher Order One-Point Statistics", 2009, MNRAS, 393, 1449.

34. Desjacques, V., Seljak, U. & Iliev, I. T., "Scale-dependent bias induced by local non-Gaussianity: A comparison to N-body simulations ", 2009, MNRAS, 396, 85.

35. Iliev, I. T., et al. "Cosmological Radiative Transfer Code Comparison Project II: the Radiative Hydrodynamic Tests", 2009, MNRAS, 400, 1283.

36. Tilvi, V., Malhotra, S., Rhoads, J. E., Scannapieco, E., Thacker, R. J., Iliev, I. T., Mellema, G., "A Physical Model of Lyman Alpha Emitters", 2009, ApJ, 704, 724.

37. Fernandez, E. R., Komatsu, E., Iliev, I. T., Shapiro, P. R., "The Cosmic Near Infrared Background II: Fluctuations", 2010, ApJ, 710, 1089.

38. Ichikawa, K., Barkana, R., Iliev, I. T., Mellema, G., Shapiro, P. R., "Measuring the History of Cosmic Reionization using the 21-cm PDF from Simulations", 2010, MNRAS, 406, 2521.

39. Iliev, I. T., Moore, B., Gottlöber, S., Yepes, G., Hoffman, Y., Mellema, G. "Reionization of the Local Group", 2011, MNRAS, 413, 2093.

40. Zackrisson, E., Scott, P., Rydberg, C.-E., Iocco, F., Sivertsson, S., Östlin, G., Mellema, G., Iliev, I. T., Shapiro, P. R. "Observational constraints on supermassive dark stars", 2010, MNRAS Letters, 407, 74.

41. Friedrich, M. M., Mellema, G., Alvarez, M. A., Shapiro, P. R., Iliev, I. T. "Topology and Sizes of HII Regions during Cosmic Reionization", 2011, MNRAS, 413, 1353.

42. Daruru, S., Gupta, G., Iliev, I. T., Xu, W., Navratil, P., Marin, N. Ghosh, J. "Distributed, Scalable Clustering for Detecting Halos in Terascale Astronomy" in refereed proceedings of KDCloud-10.

43. Mao, Y., Shapiro, P. R., Mellema, G., Iliev, I. T., Koda, J., Ahn, K. "Redshift Space Distortion of the 21cm Background from the Epoch of Reionization I: Methodology Re-examined", 2012, MNRAS, 422, 926.

44. Obradovic, M., Kunz, M., Hindmarsh, M., Iliev, I. T. "Particle motion in weak relativistic gravitational fields", 2012, Physical Review D, 86, 064018.

45. Iliev, I. T., Mellema, G., Shapiro, P. R.; Pen, U.-L., Mao, Y., Koda, J., Ahn, K. "Can 21-cm observations discriminate between high-mass and low-mass galaxies as reionization sources?", 2012, MNRAS, 423, 2222.

46. Datta, K., Mellema, G., Mao, Y., Iliev, I. T., Shapiro, P. R., Ahn, K. "Light cone effect on the reionization 21-cm power spectrum", 2012, MNRAS, 424, 1877.

47. Ilie, C., Freese, K., Valluri, M., Iliev, I. T., Shapiro, P. R. "Observing Dark Stars with JWST", 2012, MNRAS, 422, 2164.

48. Friedrich, M. M., Mellema, G., Iliev, I. T., Shapiro, P. R. "Radiative transfer of hard photons: X-rays and helium chemistry in C^2-Ray", 2012, MNRAS, 421, 2232.

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