

# CURRICULUM VITAE

## of Milan M. Ćirković

♣ with the complete list of publications ♣



### 1. Personal data

**Name:** Milan M. Ćirković

**Date of birth:** 11. III 1971.

**Place of birth:** Belgrade, Serbia (then Yugoslavia)

**Sex:** male

**Marital status:** single

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**Blog (in Serbian):** <http://blog.b92.net/blog/4464/Milan%20M.%20%C4%86irkovi%C4%87/>

### 2. Academic degrees

Year	Degree	Institution	Place	Subject
2000	Ph. D.	Dept. of Physics & Astronomy, State University of New York	Stony Brook, USA	Physics
1995	M. Sc.	Dept. of Earth & Space Sciences, State University of New York	Stony Brook, USA	Earth & Space Sciences
1994	B. Sc.	Faculty of Physics, University of Belgrade	Belgrade, Serbia	Theoretical physics

### 3. Professional background

Period	Position	Institution	Place
07/2004 – present	Senior Research Associate	Astronomical Observatory of Belgrade	Belgrade, Serbia
09/2003 – present	Assistant Professor	Department of Physics, University of Novi Sad	Novi Sad, Serbia
02/1997 – 07/2004	Research Associate	Astronomical Observatory of Belgrade	Belgrade, Serbia
02/1996 – 05/1998	Research Assistant	State University of New York	Stony Brook, USA
08/1994 – 01/1996	Teaching Assistant	State University of New York	Stony Brook, USA

## 4. Research interests

- 4.1. **Astrophysical cosmology.** Evolution of the gaseous content of the universe and QSO absorption line systems; baryonic dark matter in general and MACHOs in particular; two-populations models for the Ly $\alpha$  forest absorption systems; history of star formation in galaxies; opacity of galactic disks for the Lyman continuum photons; molecular hydrogen at high redshift; the problem of MACHO formation.
- 4.2. **Astrobiology.** Astronomical aspects of the terrestrial catastrophism; connection of structure and evolution of comets and the H<sub>2</sub> subcomponent of the Galactic disk; influence of astronomical catastrophes on the history of our (and hypothetical other) civilizations; possible impact on SETI studies; suggested periodicity of the major bombardment episodes and mass extinctions; philosophical aspects of astrobiology.
- 4.3. **History and philosophy of physical sciences.** Anthropic principle, its cognitive significance and connection with the values of cosmological parameters; philosophy of quantum mechanics; the influence of ideas of early cosmological models (classical steady-state, conformally invariant cosmology, etc.) on the modern astrophysical and cosmological thought; the problem of the arrow of time; existence of extraterrestrial intelligence and the anthropic reasoning; archaeoastronomy; history of physics and astronomy in Serbia and the Mediterranean.
- 4.4. **Physical eschatology.** Future evolution of the universe; duration of the stelliferous era and the history of future star formation in galaxies; non-conventional modes of star formation; cosmological future of intelligent life; epistemological basis of physical eschatology.
- 4.5. **Foundations of quantum mechanics and quantum information processing.** temporal correlations and the status of time in quantum mechanics; dynamical reduction quantum theories; the many-worlds “interpretation” of quantum mechanics and its cosmological and philosophical significance; quantum cosmology; quantum information and computation; possible role of quantum mechanics in mental states and processes.
- 4.6. **Scientific inspiration in arts and culture.** Cosmological paradigms and interpretation of the objects of art; archaeoastronomy; importance of astronomical and quantum-theoretical ideas and revolutions for the development of the modern democratic, humanistic and anti-totalitarian thought.

## 5. Theses and dissertations

**Note:** Here, as well as in the further cases of publications written in a different language, the original title will be quoted and the English translation will be given in brackets.

- 5.1. *Gaseous Galactic Haloes and Ly $\alpha$  Absorption Line Systems*: Ph. D. dissertation, State University of New York at Stony Brook, June 2000. Advisors: Profs. Peter W. Stephens and Philip M. Solomon.
- 5.2. *Stacionarne kosmologije i antropički princip*. [Stationary Cosmologies and the Anthropic Principle]: Alternative Academic Network (AAOM) thesis, Belgrade, January 2000. Advisor: Prof. Petar Grujić. Published in adapted form in reference 6.26.

- 5.3. *Nelokalnost vremena u svetlu Frensonovog eksperimenta* [Temporal Non-locality in Light of the Franson's Experiment]: B. Sc. thesis, Belgrade University, June 1994. Advisors: Profs. Fedor Herbut and Milan Vujičić.

## 6. Books

- 6.1. *Global Catastrophic Risks*. Nick Bostrom and Milan M. Ćirković (editors) (Oxford University Press, Oxford, 2008), 554 pages; ISBN 978-0198570509.
- 6.2. *Studying Nature Through Centuries: Proceedings of the Scientific Conference, Belgrade October 16-19, 2008*. Petar Grujić, Slobodan Ninković and Milan M. Ćirković (Publications of the Astronomical Observatory of Belgrade), in press.
- 6.3. *Uvod u vangalaktičku astronomiju* [An Introduction to Extragalactic Astronomy]. Milan M. Ćirković (University of Novi Sad, Novi Sad, 2008), 120 pages (in Serbian); ISBN 978-86-7031-113-8.
- 6.4. *Poslednjih 14 milijardi godina: astronomija u 609 pitanja i odgovora* [The Last 14 Billion Years: Astronomy in 609 Questions and Answers]. Milan M. Ćirković, Aleksandar Zorkić and Slobodan Spremo (Studio Spremo, Novi Sad, 2006), 377 pages (in Serbian); ISBN 86-86565-00-X.
- 6.5. *Proceedings of the XIV National Conference of Serbian Astronomers*. Zoran Knežević, Zorica Cvetković and Milan M. Ćirković (editors) (Publications of the Astronomical Observatory of Belgrade, vol. **80**, Belgrade, 2006), 383 pages; ISBN 86-80019-07-0.
- 6.6. *QSO Absorption Spectroscopy and Baryonic Dark Matter*. Milan M. Ćirković (Publications of the Astronomical Observatory of Belgrade, vol. **79**, 2005), 210 pages; ISBN 86-80019-05-4.

## 7. Publications in research journals

- 7.1. The Total Mass of the Early-Type Galaxy NGC 4649 (M60). S. Samurović and M. M. Ćirković (2008): *Serbian Astronomical Journal*, vol. **177**, in press.
- 7.2. Astrobiological Phase Transition: Towards Resolution of Fermi's Paradox. Milan M. Ćirković and Branislav Vukotić (2008): *Origin of Life and Evolution of the Biosphere*, vol. **38**, pp. 535-547.
- 7.3. MOND vs. Newtonian dynamics in early-type galaxies. The case of NGC 4649 (M60). S. Samurović and Milan M. Ćirković (2008): *Astronomy and Astrophysics*, vol. **488**, pp. 873-877.
- 7.4. Against the Empire. Milan M. Ćirković (2008): *Journal of the British Interplanetary Society*, vol. **61**, pp. 246-254.
- 7.5. Minihalo Model for the Low-Redshift Ly $\alpha$  Absorbers Revisited. Ana Lalović and Milan M. Ćirković (2008): *Serbian Astronomical Journal*, vol. **176**, pp. 37-44.
- 7.6. Neocatastrophism and the Milky Way Astrobiological Landscape. Branislav Vukotić and Milan M. Ćirković (2008): *Serbian Astronomical Journal*, vol. **176**, pp. 71-79.
- 7.7. Mona Lisa – The Ineffable Smile of Quantum Mechanics. Slobodan Prvanović and Milan M. Ćirković (2007): *Symmetry*, vol. **18**, pp. 171-190.
- 7.8. Evolutionary Catastrophes and the Goldilocks Problem. Milan M. Ćirković (2007): *International Journal of Astrobiology*, vol. **6**, pp. 325-329.

- 7.9. On the Timescale Forcing in Astrobiology. Branislav Vukotić and Milan M. Ćirković (2007): *Serbian Astronomical Journal*, vol. **175**, pp. 45-50.
- 7.10. H<sub>2</sub> and HD Absorption Lines and the Cosmic Ray Flux in High-z Galaxies. Milan M. Ćirković, Ivana Damjanov, and Ana Lalović (2006): *Baltic Astronomy*, vol. **15**, pp. 571-580.
- 7.11. Too Early? On the Apparent Conflict of Astrobiology and Cosmology. Milan M. Ćirković (2006): *Biology and Philosophy*, vol. **21**, pp. 369-379.
- 7.12. Anthropoc Reasoning, Naturalism and the Contemporary Design Argument. Mark A. Walker and Milan M. Ćirković (2006): *International Studies in the Philosophy of Science*, vol. **20**, pp. 285-307.
- 7.13. Zloupotreba antropičkog načela: kvazireligiozna kvazinauka uhvaćena na delu. [Misuse of the Anthropic Principle: Quasireligious Quasiscience Caught in Act] Milan M. Ćirković (2006): *Theoria*, vol. **XLVIII/1-2** (January-March 2006), pp. 21-35 (in Serbian).
- 7.14. Galactic Gradients, Postbiological Evolution and the Apparent Failure of SETI. Milan M. Ćirković and Robert J. Bradbury (2006): *New Astronomy*, vol. **11**, pp. 628-639.
- 7.15. Is Quantum Suicide Painless? On an Apparent Violation of the Principal Principle. Milan M. Ćirković (2006): *Foundations of Science*, vol. **11**, pp. 287-296.
- 7.16. Brown Dwarf Accretion: Nonconventional Star Formation over Very Long Timescales. Milan M. Ćirković (2005): *Serbian Astronomical Journal*, vol. **171**, pp. 11-17.
- 7.17. Physics vs. Semantics: A Puzzling Case of a Missing Quantum Theory. Milan M. Ćirković (2005): *Foundations of Physics*, vol. **35**, pp. 817-838.
- 7.18. Adaptationism Fails to Resolve Fermi's Paradox. Milan M. Ćirković, Ivana Dragičević and Tanja Berić-Bjedov (2005): *Serbian Astronomical Journal*, vol. **170**, pp. 89-100.
- 7.19. "Permanence" – An Adaptationist Solution to Fermi's Paradox? Milan M. Ćirković (2005): *Journal of the British Interplanetary Society*, vol. **58**, pp. 62-70.
- 7.20. Kant i vangalaktička revolucija u astronomiji [Kant and the Extragalactic Revolution in Astronomy] Milan M. Ćirković (2005): *Theoria*, vol. **XLVII/1-2** (March-June 2004), pp. 95-109 (in Serbian).
- 7.21. On the Temporal Aspect of the Drake Equation and SETI. Milan M. Ćirković (2004): *Astrobiology*, vol. **4**, pp. 225-231.
- 7.22. Agencies, Capacities, and Anthropoc Self-Selection. Milan M. Ćirković (2004): *Philosophical Writings*, vol. **27** (Autumn 2004), pp. 43-62.
- 7.23. The Anthropoc Principle and the Duration of the Cosmological Past. Milan M. Ćirković (2004): *Astronomical and Astrophysical Transactions*, vol. **23**, pp. 567-597.
- 7.24. Is Many Likelier than Few? A Critical Assessment of the Self-Indicating Assumption. Milan M. Ćirković (2004): *Epistemologia*, vol. **27**, pp. 265-298.
- 7.25. Macroscopic Quantum Effects in Biophysics and Consciousness. Dejan Raković, Miroljub Dugić, and Milan M. Ćirković (2004): *Neuroquantology*, vol. **2**, issue **4**, pp. 237-262.
- 7.26. Is the "Star Trek" Concept of Aliens Really Naive? – A Comment on Duric and Field. Milan M. Ćirković (2004): *Serbian Astronomical Journal*, vol. **168**, pp. 71-74.
- 7.27. Forecast for the Next Eon: Applied Cosmology and the Long-Term Fate of Intelligent Beings. Milan M. Ćirković (2004): *Foundations of Physics*, vol. **34**, pp. 239-261.
- 7.28. Apparent Speed of Gravity and Backward Causation. Milan M. Ćirković and Miroljub Dugić (2004): *Epistemologia*, vol. **26**, pp. 107-118.

- 7.29. A Comment on Tectonics and the Future of Life on Terrestrial Planets. Milan M. Ćirković (2004): *Precambrian Research*, vol. **130**, pp. 289-291.
- 7.30. Geo-Engineering Gone Awry: A New Partial Solution of Fermi's Paradox. Milan M. Ćirković and Richard B. Cathcart (2004): *Journal of the British Interplanetary Society*, vol. **57**, pp. 209-215.
- 7.31. Three's a Crowd: On Causes, Entropy, and Physical Eschatology. Milan M. Ćirković and Vesna Milošević-Zdjelar (2004): *Foundations of Science*, vol. **9**, pp. 1-24.
- 7.32. Earths: Rare in Time, Not Space? Milan M. Ćirković (2004): *Journal of the British Interplanetary Society*, vol. **57**, pp. 53-59.
- 7.33. Cosmic Irony: SETI Optimism from Catastrophes? Milan M. Ćirković (2004): *Contact in Context*, vol. **2**, issue 1  
(<http://cic.setileague.org/cic/v2i1/irony.pdf>).
- 7.34. Ancient Origins of a Modern Anthropic Cosmological Argument. Milan M. Ćirković (2003): *Astronomical and Astrophysical Transactions*, vol. **22**, pp. 879-886.
- 7.35. The Thermodynamical Arrow of Time: Reinterpreting the Boltzmann-Schuetz Argument. Milan M. Ćirković (2003): *Foundations of Physics*, vol. **33**, pp. 467-490.
- 7.36. On Determination of the Cosmic Ray Flux Using Molecular Hydrogen Absorption Lines. Milan M. Ćirković and Ivana Damjanov (2003): *Serbian Astronomical Journal*, vol. **167**, pp. 17-22.
- 7.37. On the Importance of SETI for Transhumanism. Milan M. Ćirković (2003): *Journal of Evolution and Technology*, vol. **13**  
(<http://www.jetpress.org/volumel3/cirkovic.html>).
- 7.38. **Resource Letter PEs-1**: Physical eschatology. Milan M. Ćirković (2003): *American Journal of Physics*, vol. **71**, pp. 122-133.
- 7.39. The Chemical Composition of the Halo and Evolutionary Problems. Slobodan Ninković and Milan M. Ćirković (2003): *Astrophysics and Space Science*, vol. **284**, pp. 783-786.
- 7.40. The Doomsday Argument and the Self-Indication Assumption: Reply to Olum. Nick Bostrom and Milan M. Ćirković (2003): *Philosophical Quarterly*, vol. **53**, pp. 83-91.
- 7.41. Kinematics in the  $z = 2.81$  Galaxy and the Evidence for Rotation. Milan M. Ćirković (2003): *Astrophysics and Space Science*, vol. **283**, pp. 269-273.
- 7.42. Extraterrestrial Intelligence and Doomsday: A Critical Assessment of the No-Outsider Requirement. Milan M. Ćirković and Vesna Milošević-Zdjelar (2003): *Serbian Astronomical Journal*, vol. **166**, pp. 1-11.
- 7.43. How Many Universes Are Necessary for an Ice Cream to Melt? Milan M. Ćirković (2003): *Serbian Astronomical Journal*, vol. **166**, pp. 55-59.
- 7.44. On the First Anthropic Argument in Astrobiology. Milan M. Ćirković (2002): *Earth, Moon, and Planets*, vol. **91**, pp. 243-254.
- 7.45. Quantum Information Processing: The Case of Vanishing Interaction Energy. Miroljub Dugić and Milan M. Ćirković (2002): *Physics Letters A*, vol. **302**, pp. 291-298.
- 7.46. A new proposition for redating the Mithraic tauroctony scene. Edi Bon, Milan M. Ćirković, and Ivana Milosavljević (2002): *Astronomische Nachrichten*, vol. **323**, pp. 579-580.
- 7.47. Quantum Parallelism in Quantum Information Processing. Miroljub Dugić and Milan M. Ćirković (2002): *International Journal for Theoretical Physics*, vol. **41**, pp. 1641-1649.
- 7.48. Is the Universe Really That Simple? Milan M. Ćirković (2002): *Foundations of Physics*, vol. **32**, pp. 1141-1157.

- 7.49. Entropy and Eschatology: A Comment on Kutrovátz's Paper 'Heat Death in Ancient and Modern Thermodynamics'. Milan M. Čirković (2002): *Open Systems and Information Dynamics*, vol. **9**, pp. 291-299.
- 7.50. Cosmological Forecast and Its Practical Significance. Milan M. Čirković (2002): *Journal of Evolution and Technology* (online journal at <http://www.jetpress.org>), vol. **12** (<http://www.jetpress.org/volume12/CosmologicalForecast.htm>).
- 7.51. Laudatores Temporis Acti, or Why Cosmology is Alive and Well – A Reply to Disney. Milan M. Čirković (2002): *General Relativity and Gravitation*, vol. **34**, pp. 119-130.
- 7.52. Backward Causation, Isolation and the Pursuit of Justice. Milan M. Čirković and Suzana Cvetičanin (2002): *Epistemologia*, vol. **25**, pp. 145-162.
- 7.53. Anthropic Fluctuations vs. Weak Anthropic Principle. Milan M. Čirković (2002): *Foundations of Science*, vol. **7**, pp. 453-463.
- 7.54. On a Possible Physical Metatheory of Consciousness. Miroљub Dugić, Milan M. Čirković, and Dejan Raković (2002): *Open Systems and Information Dynamics*, vol. **9**, pp. 153-166.
- 7.55. Computationalism and Anthropocentrism: That Old Double Standard. Milan M. Čirković and Ana Vljaković (2002): *The Noetic Journal*, vol. **3**, pp. 162-168.
- 7.56. The Anthropic Arrow of Time and Realistic World Models: On Price and Atemporal Universe. Milan M. Čirković (2001): *Serbian Astronomical Journal*, vol. **164**, pp. 41-52.
- 7.57. Cosmological Constant and the Fate of the DDM Theory. Milan M. Čirković and Srdjan Samurović (2001): *Astronomy and Astrophysics*, vol. **373**, pp. 377-380.
- 7.58. On the Maximal Quantity of Processed Information in the Physical Eschatological Context. Milan M. Čirković and Marina Radujkov (2001), *Serbian Astronomical Journal*, vol. **163**, pp. 53-56.
- 7.59. Arsenijević, Dajson, singularnost [Arsenijević, Dyson, Singularity] Milan M. Čirković (2000): *Theoria*, vol. **XLIII**, **1/2**, pp. 87-103 (in Serbian).
- 7.60. On the Small-Scale Clustering of Ly $\alpha$  Forest Clouds. Milan M. Čirković and Kenneth M. Lanzetta (2000): *Monthly Notices of the Royal Astronomical Society*, vol. **315**, pp. 473-478.
- 7.61. Cosmological Constant and the Final Anthropic Hypothesis. Milan M. Čirković and Nick Bostrom (2000): *Astrophysics and Space Science*, vol. **274**, pp. 675-687.
- 7.62. Cooling vs. Absorption Radius in Galaxies. Milan M. Čirković, Srdjan Samurović and Aleksandra Djorić (2000): *Astrophysics and Space Science*, vol. **274**, pp. 867-875.
- 7.63. Note on Singularities and the Arrow of Time. Milan M. Čirković (2000): *Serbian Astronomical Journal*, vol. **162**, pp. 91-95.
- 7.64. The Anthropic Argument against Infinite Past and the Eddington-Lemaître Universe. Milan M. Čirković (2000): *Serbian Astronomical Journal*, vol. **161**, pp. 33-37.
- 7.65. Kinematics of a High-Redshift Galaxy: A Case Study. Milan M. Čirković (2000): *Serbian Astronomical Journal*, vol. **161**, pp. 5-8.
- 7.66. Column Density Distribution of Galactic Ly $\alpha$  Absorption Systems. Milan M. Čirković and Srdjan Samurović (2000): *Astrophysics and Space Science*, vol. **271**, pp. 91-95.
- 7.67. Stacionarne kosmologije i antropički princip [Stationary Cosmologies and the Anthropic Principle] Milan M. Čirković (1999), *Theoria*, vol. **1-2/1999**, pp. 81-111 (in Serbian).
- 7.68. Massive Neutrino Decay and the Shape of the Galactic Dark Halo. Srdjan Samurović and Milan M. Čirković (1999): *Journal of Research in Physics*, vol. **28**, pp. 171-180.

- 7.69. Flattened Galactic Haloes and Baryonic Dark Matter. Srdjan Samurović, Milan M. Čirković, and Vesna Milošević-Zdjelar (1999): *Monthly Notices of the Royal Astronomical Society*, vol. **309**, pp. 63-79.
- 7.70. Towards a Direct Detection of Warm Gas in Galactic Haloes at Cosmological Distances. Milan M. Čirković, Jonathan Bland-Hawthorn, and Srdjan Samurović (1999): *Monthly Notices of the Royal Astronomical Society*, vol. **306**, pp. L15-L18.
- 7.71. Damped Ly $\alpha$  System Toward QSO 1854+116 - A New Type Of Absorber? Milan M. Čirković (1999): *Serbian Astronomical Journal*, vol. **160**, pp. 11-14.
- 7.72. Future of Galaxies and the Fate of Intelligent Beings. Milan M. Čirković (1999): *Serbian Astronomical Journal*, vol. **159**, pp. 79-86.
- 7.73. On the Stability of Protogalactic Clouds. I. Field Length in the Adiabatic Models. Milan M. Čirković (1999): *Serbian Astronomical Journal*, vol. **159**, pp. 39-44.
- 7.74. Some Consequences of a Class of Gaseous Galactic Halo Models. Milan M. Čirković (1998): *Astrophysics and Space Science*, vol. **262**, pp. 497-508.
- 7.75. Intergalactic Pressure and the Maximal Extent of Gaseous Haloes of Field Galaxies. Milan M. Čirković and Alexei V. Yurchenko (1998): *Astrophysics and Space Science*, vol. **262**, pp. 39-52.
- 7.76. On the Comparison of Metal and Ly $\alpha$  Absorption in Galactic Gaseous Haloes. Milan M. Čirković (1998): *Serbian Astronomical Journal*, vol. **158**, pp. 9-13.
- 7.77. On the Total Absorption Cross-Section of Galaxies. II. The Case of  $\Lambda$  Cosmologies and the Covering Factor Variation. Milan M. Čirković and S. Samurović (1998): *Serbian Astronomical Journal*, vol. **158**, pp. 3-7.
- 7.78. Pressure at the ISM-Halo Interface: A Reheating Frequency Dependence. Milan M. Čirković (1998): *Serbian Astronomical Journal*, vol. **157**, pp. 19-24.
- 7.79. On the Possible Observations of Intergalactic or Halo Clouds in Optical Emission. Milan M. Čirković and Srđan Samurović (1998): *Astrophysics and Space Science*, vol. **257**, pp. 95-106.
- 7.80. A Note on the Total Absorption Cross-Section of Galaxies and Ly $\alpha$  Forest Clouds. M. M. Čirković, S. Samurović, D. Ilić, and J. Petrović (1997): *Bulletin Astronomique de Belgrade*, vol. **156**, pp. 37-41.

## 8. Summaries and abstracts

- 8.1. Astrobiological Phase Transition. Milan M. Čirković (2006): in *Proceedings of the XIV National Conference of Serbian Astronomers*, ed. by Z. Knežević, Z. Cvetković and M. M. Čirković (Publications of the Astronomical Observatory of Belgrade, vol. **80**, Belgrade), p. 205.
- 8.2. Gaseous Galactic Haloes and Ly $\alpha$  Absorption Line Systems. Milan M. Čirković (2003): Dissertation abstract in *Proceedings of the XIII National Conference of Yugoslav Astronomers*, October 17-20, 2002, ed. J. Milogradov-Turin and G. M. Popović, Publications of the Astronomical Observatory of Belgrade, vol. **75**, pp. 143-144.
- 8.3. A New Proposition for Redating of the Mithraic Tauroctony Scene. Edi Bon, Milan M. Čirković, and Ivana Milosavljević (2001): in *Abstracts of Contributed Talks and Posters presented at the Joint European and National Meeting JENAM 2001* of the European Astronomical Society and the Astronomische Gesellschaft at Munich,



- September 10-15, 2001, ed. Reinhard E. Schielicke (Astronomische Gesellschaft Abstract Series No. 18, 2001), p. 261.
- 8.4. Gaseous Galactic Haloes and Ly $\alpha$  Absorption Line Systems. Milan M. Čirković (2000): *Publications of the Astronomical Society of the Pacific*, vol. **112**, p. 1507.

## 9. Book reviews

- 9.1. **A review of Ian McDonald's *Brazyl***. Milan M. Čirković (2008): *Journal of Evolution and Technology*, vol. **18**, pp. 84-92 (<http://jetpress.org/v17/cirkovic.htm>).
- 9.2. **Natural History**, by Justina Robson. Milan M. Čirković (2007): *Journal of Evolution and Technology*, vol. **16**, 167-170 (<http://www.jetpress.org/v16/cirkovic.html>).
- 9.3. **Minding the Heavens: The Story of Our Discovery of the Milky Way**, by Leila Belkora. Milan M. Čirković (2006): *Europhysics News*, vol. **37/1**, p. 32.
- 9.4. **Where is Everybody? Fifty Solutions to the Fermi's Paradox** by Stephen Webb – Book Review. Milan M. Čirković (2005): *Origin of Life and Evolution of the Biosphere*, vol. **35**, pp. 61-68.
- 9.5. **Book Review: Modern Cosmology**, by Scott Dodelson. Milan M. Čirković (2004): *Foundations of Physics*, vol. **34**, pp. 541-544.
- 9.6. **Real Space: The fate of physical presence in the digital age, on and off planet**, by Paul Levinson. Milan M. Čirković (2004): *Spaceflight*, vol. **46**, no. 3 (March issue), p. 130.
- 9.7. **Anthropic Bias: Observation Selection Effects in Science and Philosophy**, by Nick Bostrom – Book Review. Milan M. Čirković (2003): *Foundations of Science*, vol. **8**, pp. 417-423.
- 9.8. **Cosmic Rays at Earth: Researcher's Reference Manual and Data Book**, by Peter K. F. Grieder. Milan M. Čirković (2002): *Europhysics News*, vol. **33/6**, p. 219.
- 9.9. Book Review: **Anthropic Bias: Observation Selection Effects in Science and Philosophy**, by Nick Bostrom. Milan M. Čirković (2002): *Foundations of Physics*, vol. **32**, pp. 1797-1801.

## 10. Book chapters

- 10.1. Observation selection effects: the Fermi paradox, the Doomsday argument, and the Simulation argument. Milan M. Čirković (2008): in *Global Catastrophic Risks* (Oxford University Press, Oxford, ISBN 978-0198570509), pp. 120-145.
- 10.2. Zloupotreba antropičkog načela u svrhe kreacionizma: kvazireligiozna kvazinauka uhvaćena na delu [Misuse of the Anthropic Principle by Creationists: Quasireligious Pseudoscience Caught in Act]. Milan M. Čirković (2007): in *Religion and Epistemology* (Dereta, Beograd), pp. 239-261 (in Serbian).
- 10.3. Macroengineering in the Galactic Context: A New Agenda for Astrobiology. Milan M. Čirković (2006): in *Macro-Engineering: A Challenge for the Future*, ed. by Viorel Badescu, Richard B. Cathcart, and Roelof D. Schuiling (Springer Verlag, New York, ISBN-10 1-4020-3739-2), pp. 281-300.
- 10.4. Extreme Climate Control Membrane Structures: N<sup>th</sup> Degree Macro-Engineering. Richard B. Cathcart and Milan M. Čirković (2006): in *Macro-Engineering: a*



- Challenge for the Future*, ed. by Viorel Badescu, Richard B. Cathcart, and Roelof D. Schuiling (Springer Verlag, New York, ISBN-10 1-4020-3739-2), pp. 151-174.
- 10.5. Bor, Everet i Šerlok Holms: zagonetni slučaj nestale kvantne teorije. [Bohr, Everett, and Sherlock Holmes: The Puzzling Case of the Missing Quantum Theory] Milan M. Ćirković (2004): in *Epistemološki problemi u nauci* [Epistemological Problems in Science], ed. by Petar V. Grujić and Miroslav Ivanović (Institut za kriminološka i sociološka istraživanja, Belgrade, ISBN 86-902557-8-8), pp. 301-332.

## 11. Papers currently in the publication procedure and in preparation

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- 11.2. O neuspehu redukcionizma u kosmologiji. [On the Failure of Reductionism in Cosmology] Milan M. Ćirković (2008): *Theoria*, vol. **51**, in press (in Serbian).
- 11.3. Column Density Distribution Function of Hypothetical Ly $\alpha$  Absorption Systems in Galaxies. Ana Lalović and Milan M. Ćirković (2008): *New Astronomy*, submitted for publication.
- 11.4. Sailing the Archipelago. Milan M. Ćirković (2008): *Collapse*, vol. **6**, in press.
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- 13.41. Zašto treba ukinuti NASA? [Why NASA Should Be Abolished] Milan M. Čirković (2005): *Astronomija*, vol. **16** (November 2005), pp. 8-11.
- 13.42. Astrologija i alhemija – dve različite sudbine? [Astrology and Alchemy – Different Fates?] Milan M. Čirković (2005): in Nataša Stanić & Milutin Tadić, *Astrolagija* (Zavod za udžbenike i nastavna sredstva, Belgrade), pp. 80-84.
- 13.43. Komete i savremeni katastrofizam. [Comets and Modern Catastrophism] Milan M. Čirković (2005): in Nataša Stanić & Milutin Tadić, *Astrolagija* (Zavod za udžbenike i nastavna sredstva, Belgrade), pp. 132-141.
- 13.44. Samo teorija? [Just a Theory?] Milan M. Čirković (2006): *Astronomija*, vol. **18** (March/April 2006), pp. 22-29.
- 13.45. Antički astronomski računar. [An Ancient Astronomical Computer] Milan M. Čirković (2006): *Astronomija*, vol. **21**, (September/October 2006) p. 32.
- 13.46. Slučaj Pluton ili mnogo vike ni oko čega. [The Pluto Affair, or Much Ado about Nothing] Milan M. Čirković (2006): *Treći program*, vol. **131-132**, pp. 369-372.
- 13.47. In Memoriam: Bohdan Pačinski. [In Memoriam: Bohdan Paczynski] Srdjan Samurović and Milan M. Čirković (2007): *Astronomija*, vol. **26** (July/August 2007), p. 35.
- 13.48. Najveći astronom starog veka – ili prevarant? [The Greatest Ancient Astronomer – or a Fraud?] Milan M. Čirković (2007): *Politikin zabavnik*, vol. **2898** (24. 8. 2007), pp. 14-16.
- 13.49. Lindeova fraktalna kosmologija. [Linde's Fractal Cosmology] Milan M. Čirković (2007): *Treći program*, vol. **133-134** (I-II-2002), pp. 422-425.
- 13.50. Zagonetni slučaj jedne žabe [Mysterious Case of a Toad]. Milan M. Čirković (2007): *Politikin zabavnik*, vol. **2900** (7. 9. 2007), pp. 54-55.
- 13.51. „Nestašni” psiholog [A Mischievous Psychologist]. Milan M. Čirković (2007): *Politikin zabavnik*, vol. **2907** (26. 10. 2007), pp. 8-9.
- 13.52. Obojeni miševi Vilijama Samerlina [The Colored Mice of William Summerlin]. Milan M. Čirković (2007): *Politikin zabavnik*, vol. **2913** (7. 12. 2007), pp. 14-15.
- 13.53. Sazdani smo od zvezdane građe [We're Made of Stellar Stuff]. Milan M. Čirković (2008): *Danas* daily, weekend edition, (19-20. 1. 2008.), p. XVI.
- 13.54. Leteći cirkus Hendrika Šena [The Flying Circus of Hendrik A. Schon]. Milan M. Čirković (2008): *Politikin zabavnik*, vol. **2925** (29. 2. 2008), pp. 26-28.
- 13.55. Seoba Vatikanske opservatorije [Vatican Observatory on the Move]. Milan M. Čirković (2008): *Danas* daily, weekend edition, (1-2. 3. 2008.), p. XVI.
- 13.56. Promišljati “izlazak iz kolevke” [Rethinking “Outgrowing the Cradle”]. Milan M. Čirković (2008): *Danas* daily, weekend edition, (12-13. 4. 2008.), p. XXI.
- 13.57. Nauka i evropske integracije [Science and European Integrations]. Milan M. Čirković (2008): *Danas* daily, weekend edition, (10-11. 5. 2008.), p. II.
- 13.58. How can we reduce the risk of human extinction? Anders Sandberg, Jason G. Matheny, and Milan M. Čirković (2008): *Bulletin of the Atomic Scientists*, web edition, 9. September 2008 (<http://www.thebulletin.org/web-edition/features/how-can-we-reduce-the-risk-of-human-extinction>).
- 13.59. Naš naj(ne)slavniji predak [Our most (in)famous ancestor]. Milan M. Čirković (2008): *Politikin zabavnik*, vol. **2957** (10. 10. 2008), pp. 24-26.

- 13.60. Gde su vanzemaljci? Astronomsko nadahnuće kralja strave i užasa [Where are the Aliens? Astronomical Inspiration of the King of Horror]. Milan M. Ćirković (2008): *Politikin zabavnik*, vol. **2961** (7. 11. 2008), pp. 47-49.

## 14. Membership

- 14.1. International Astronomical Union
- 14.2. Fellow of the Institute for Ethics and Emerging Technologies (<http://ieet.org/>)
- 14.3. Serbian Astronomical Society (Secretary 1998-2002; President 2002-2005)
- 14.4. Serbian Society for Science Fiction (co-founder; Secretary 1999-present)
- 14.5. National Committee of the Astronomers of Serbia (2002-2005)
- 14.6. Petnica Science Center astronomy programme
- 14.7. CASE artistic project
- 14.8. Philosophical Society of Serbia
- 14.9. World Transhumanist Association (<http://www.transhumanism.org/>)
- 14.10. Society for the History of Science, Belgrade
- 14.11. Photon Tide Group (<http://www.photontide.org/>)

## 15. Profession-related skills

- 15.1. **Computer skills:** Routine usage of Fortran 90 (and acquaintance with the Numerical Recipes) and IDL. Detailed knowledge of both DOS/Windows and UNIX/Linux operating systems. Common scientific applications, like Maple, Origin, Mathematica and SuperMongo, as well as non-scientific ones, but important for the general research work, e.g. MS Office, CorelDraw, Adobe Acrobat and Adobe Photoshop. Fair knowledge of HTML and Internet-related software. Acquaintance with software for Web-publishing and design, like Adobe PageMaker and MS FrontPage.
- 15.2. **Teaching experience:** Have been working as a Teaching Assistant at SUNY, Stony Brook (USA) for four semesters, in the following courses: Search for Life in the Universe (AST248, 2 terms), Introduction to Astronomy (AST101, 1 term) and Introduction to Planetary Science (AST105, 1 term). Have been teaching occasionally astronomy at intermediate undergraduate level at the Belgrade Planetarium, and have given more than 100 popular talks and lectures on astronomical topics in the 1996-2003 period. Currently in preparations for teaching a one-semester undergraduate course in cosmology at the Astronomy Group, Faculty of Sciences, University of Novi Sad. Currently supervising several advanced undergraduate research projects in theoretical astrophysics in collaboration with the Petnica Science Center.
- 15.3. **Linguistic skills:** Knowledge of English, Russian (fluent) and French (fair), as well as all of the languages of the former Yugoslavia.
- 15.4. **Organizational and administrative experience:** member of the Governing Board of the Astronomical Observatory of Belgrade (2005-2008). Have organized three yearly cycles of lectures "Summer Astronomical Meetings" in the Planetarium of National Observatory of Belgrade (1998-2000). As a Secretary and subsequently President of the newly (re)formed Serbian Astronomical Society, contributed to the organizing and coordinating work of local astronomical community. The same applies to activities in the Serbian Society for Science Fiction, the first such organization on a national level

- in Yugoslavia. Member of scientific or local organizing committees for: The 2<sup>nd</sup> Conference on Development of Astronomy among Serbs (April 5-7 2002, Belgrade, Serbia and Montenegro), XIII National Conference of Yugoslav Astronomers (October 17-20, 2002, Belgrade, Serbia and Montenegro) and IAU Colloquium 197, Dynamics of Populations of Planetary Systems (August 31-September 4 2004, Belgrade, Serbia and Montenegro), XIV National Conference of the Astronomers of Serbia and Montenegro (October 12-15, 2005), meeting on *Religion and Epistemology* (Department of Philosophy, University of Belgrade, June 17-19, 2005).
- 15.5. **Librarian experience:** Have attended a course in librarian techniques organized by the National Library of Serbia in Fall 1996 at the request and expense of National Observatory, Belgrade, and afterwards helped in organization and maintenance of the National Observatory library.
- 15.6. **Popularization skills:** Apart from popular papers and lectures (§ 10 and 13), have for about 3 years worked on gathering news and writing short notes and reports for “Vasiona”, mainly in the field of cosmology. Regular associate of “Astronomski magazin”, an e-journal for popular astronomy (available at <http://www.astronomija.co.yu/>), as well as the science page of the B92 web site (<http://www.b92.net/zivot/nauka.php>). Has helped in publishing written several popular science books in Serbian language (consulting, writing prefaces/forewords, etc.). Works since Spring 2002 as an associate of the Third Channel radio programme of the National Radio Television of Serbia, devoted exclusively to cultural and scientific affairs. Has created 8 episodes of the TV series *Quark* for the local Studio B in Belgrade.
- 15.7. **Reviewing.** Served as a referee for *Theoretical and Applied Mechanics*, *Foundations of Physics*, *Astrobiology*, *International Journal of Astrobiology*, *Journal of Evolution and Technology*, *Australasian Journal of Philosophy*, *Facta Universitatis*, and *Serbian Astronomical Journal*.
- 15.8. **Editorial experience:** Member of the Editorial Board of *Open Aerospace Engineering Journal* (<http://www.bentham.org/open/toaej/EBM.htm>; 2007-present). Member of the Editorial Board of the “Astronomija” (2002-2007). Technical Editor of the *Publications of the Astronomical Observatory of Belgrade* (<http://www.aob.bg.ac.yu/paob/>; 2002-present). Edited a special theme issue of *Treći program* “On Einstein” devoted to Einstein's 1905-2005 jubilee (vol. **121-122**, issue I-II 2004, pp. 53-109). Acted as a consultant of the publishing company “Laguna” of Belgrade for the popular-science editions (2004-2006).
- 15.9. **Miscellaneous:** Work reported in *Sky & Telescope*, vol. **107**, No. 3, March 2004, p. 47 in “The Anthropic Principle’s Astronomical Roots” by Govert Schilling. Inspired citation in the *Introduction* by Stephen Baxter to *The Engine of Recall* by Karl Schroeder (Robert J. Sawyer Books, Calgary, 2005), p. 7.

## 16. Sample talks and lectures

**Note:** Full list (of about 200 items) is available upon request.

- 16.1. *Interaction of Galactic Subsystems and QSO Absorption Lines*, Astronomical Observatory Belgrade, 18. VI 1997.

- 16.2. *The Cosmological Constant*, Dept. of Mathematics, University of Belgrade, 24. VI 1998.
- 16.3. *The Ionization History of the Universe*, National Observatory, Belgrade 7. VIII 1998.
- 16.4. *MACHOs and Baryonic Dark Matter*, Astronomical Observatory Belgrade, 21. X 1998.
- 16.5. *Structure Formation in the Universe*, Petnica Research Center, 26. II 1999.
- 16.6. *Growth of Complexity and Anthropic Principles*, Petnica Research Center, 18. X 1999.
- 16.7. *Anthropic Principles in Cosmology*, Institute of Physics, University of Kragujevac, 24. II 2000.
- 16.8. *Physical Eschatology*, Astronomical Observatory Belgrade, 19. IV 2000.
- 16.9. *Quantum Mechanics and Cosmology*, Dept. of Mathematics, University of Belgrade, 6. III 2001.
- 16.10. *Five Roads to the Arrow of Time*, Eötvös Loránd University, Dept. of Philosophy, Budapest, Hungary, 29. III 2004.

## 17. Translations

- 17.1. *Poslednja tri minuta* [The Last Three Minutes], by Paul C. W. Davies (Basic Books, New York, 1994), published March 2000 by Polaris Publishing Studio, Belgrade, 166 pages.
- 17.2. *Staljin* [Stalin – translated from Russian, with Danica Ćirković], by Edward Radzinsky (Lynn C. Franklin Associates, New York, 1996), independent translator's edition of Danica Ćirković, 1997, 630 pages.
- 17.3. *Carev novi um* [Emperor's New Mind], by Sir Roger Penrose (Oxford University Press, Oxford 1989), published January 2004 by Informatica, Belgrade, 480 pages.
- 17.4. *Kvantna elektrodinamika – neobična teorija materije i svetlosti* [QED – A Strange Theory of Light and Matter], by Richard P. Feynman (Princeton University Press, Princeton, 1985), expected to be published by the end of 2008.
- 17.5. *Kosmologija i naučna fantastika* [Cosmology and Science Fiction], by Stanislaw Lem, Polaris, vol. 4 (October 2003), pp. 94-103, Belgrade 2003.

## 18. Literary works and criticism

- 18.1. Prekognicija, populizam i politička korektnost [Precognition, Populism and Political Corectness], Milan M. Ćirković (2001): Orbis (časopis za književnost, umetnost i kulturu, Kanjiža, izlazi na srpskom i madjarskom jeziku), year VI, issue 1/2001, pp. 15-21.
- 18.2. Martin Hajdeger i Jagoš Purić – razmišljanja o dva rektora [Martin Heidegger and Jagoš Purić – Some Thoughts on Two University Presidents], Milan M. Ćirković (2002): Republika, br. 284-285, May 1-31. 2002, pp. 41-44.
- 18.3. Ciklična filozofija istorije u Simonsovoj “Tetralogiji o Hiperionu” [Cyclic Philosophy of History in Simmons' “Hyperion Tetralogy”]. Milan M. Ćirković (2003): Polaris, vol. 4 (October 2003), pp. 104-124.
- 18.4. Permanence: An Adaptationist Solution to Fermi's Paradox. Milan M. Ćirković (2005): *New York Review of Science Fiction*, vol. 17, issue 202, pp. 1-6.

- 18.5. Kvantni Černobilj, ili kako pasti na Olimp. [Quantum Chernobyl, Or How to Fall Down to Olympos] Milan M. Čirković (2006): review of Dan Simmons' *Olympos*, fanzin *Nova*, vol. **04** (January 2006), pp. 7-8.
- 18.6. Književnost i antropički princip. [Fiction and the Anthropic Principle]. Milan M. Čirković (2006): *Književni magazin*, vol. **66** (December 2006), pp. 2-7.
- 18.7. Lavkraft, astronomija, demitologizacija [Lovecraft, Astronomy, Demythologization]. Milan M. Čirković (2007): *Književni magazin*, vol. **71** (May 2007), pp. 36-38.
- 18.8. Robert Enton Vilson (1932-2007): Legenda ovog i paralelnih svetova [Robert Anton Wilson (1932-2007): A Legend of This and Parallel Universes]. Milan M. Čirković (2007): *Think Tank*, vol. **15-16**, pp. 45-47.
- 18.9. Ko predviđa predviđače? [Who Predicts the Predictors?] Milan M. Čirković (2007): *Gradina* (Niš), vol. **19/2007**, pp. 320-328; reprinted in *Think Tank* (Leskovac), vol. **21-22**, pp. 33-36 (2008).
- 18.10. Aljehinov žanrovski apokrif [Alekhine's Genre Apocrypha]. Milan M. Čirković (2007): *Think Tank*, vol. **19-20**, pp. 44-47.
- 18.11. *An Artifact for Space Travel: Essays on Science and Fantasy*. Milan M. Čirković (2008): a collection of essays currently in preparation.

## 19. References

**Note:** Additional references are available upon request.

- 19.1. **Prof. Nick Bostrom**, Director, Oxford Future of Humanity Institute, Faculty of Philosophy & James Martin 21st Century School, Oxford University; e-mail: [nick@nickbostrom.com](mailto:nick@nickbostrom.com); fax: +44 (0)1865 286 889.
- 19.2. **Prof. Fred Walter**, Department of Physics and Astronomy, State University of New York at Stony Brook, Stony Brook, NY 11794-3800, USA; e-mail: [fwalter@astro.sunysb.edu](mailto:fwalter@astro.sunysb.edu); fax: (+1-631) 632-8176.
- 19.3. **Dr Zoran Knežević**, Astronomical Observatory of Belgrade, Volgina 7, 11000 Belgrade, Serbia; e-mail: [zoran@aob.bg.ac.yu](mailto:zoran@aob.bg.ac.yu); fax: (+381-11) 2419-553.
- 19.4. **Prof. Philip M. Solomon**, Department of Physics and Astronomy, State University of New York at Stony Brook, Stony Brook, NY 11794-3800, USA; e-mail: [Philip.Solomon@sunysb.edu](mailto:Philip.Solomon@sunysb.edu); fax: (+1-631) 632-8176.
- 19.5. **Prof. Petar V. Grujić**, Institute of Physics, P. O. Box 57, 11001 Belgrade, Serbia; e-mail: [grujic@phy.bg.ac.yu](mailto:grujic@phy.bg.ac.yu); fax: (+381-11) 316-2190.
- 19.6. **Prof. Miroljub Dugić**, Department of Physics, Faculty of Science, P.O.Box 60, 34000 Kragujevac, Serbia; e-mail: [dugic@knez.uis.kg.ac.yu](mailto:dugic@knez.uis.kg.ac.yu); fax: (+381-34) 335-040.