Curriculum Vitae

Oleg Kargaltsev
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Education:

6/1999-12/2004	Ph.D., Astronomy & Astrophysics, Pennsylvania State University, USA Thesis title: "X-ray and Optical Emission from Neutron stars and Pulsar-Wind Nebulae"; Advisor: Prof. George Pavlov
9/1996-6/1998	M.S., Theoretical Physics, Moscow Institute of Physics and Technology, Russia, Thesis title: "Gamma-ray bursts from neutron stars"; Advisor: Prof. Yakov Istomin
1992-1996	B.S., Physics, Moscow Institute of Physics and Technology, Russia

Appointments:

8/2017-present	Associate Professor, Department of Physics, George Washington University
8/2012-8/2017	Assistant Professor, Department of Physics, George Washington University
2/2008-8/2012	Associate Scientist, Department of Astronomy, University of Florida
4/2007-2/2008	Research Associate, Department of Astronomy & Astrophysics, Pennsylvania State University
1/2005-3/2007	Postdoctoral Research Scholar, Department of Astronomy & Astrophysics, Penn State
6/2000-12/2004	Graduate Research Assistant, Dept. of Astronomy and Astrophysics, Penn State
9/1999-5/2000	Graduate Teaching Assistant, Dept. of Astronomy and Astrophysics, Penn State
8/1998-5/1999	Graduate Research Assistant, Department of Physics, University of Kansas
9/1996-5/1998	Research Assistant, P.N. Lebedev Physical Institute, Moscow, Russia

Summary of federally funded research:

During 2008-2018, I was a PI or Co-PI of 30 and Co-I of another 20 NASA and NSF funded programs with the total awarded federal funding of $2.2M (after subtracting co-investigator shares). *Since joining GW in August 2012, my research was awarded $1.7M in federal funding which primarily came from NASA grants.*

The complete list of funded research programs (including observing, archival, and theory programs). The dollar amounts reflect Kargaltsev's share and not the total award amount.

Projects awarded while at GW:

NASA. ADAP	Principal Investigator, "Multiwavelength Identification of Galactic High-Energy Sources", **$266.5K,** Dates: 04/01/2019-03/31/2021 **NASA**
Chandra Cycle 20	Principal Investigator, "Discovering compact objects in intermediate clusters", **$80K,** Dates: Dates: 04/01/2019-03/31/2021 **NASA/SAO**

Chandra Cycle 20	Co-Investigator (PI N. Klingler, PSU), "The Pulsar Wind Nebula of PSR J1016-5857", $**23.3K,** Dates: as soon as the observation takes place, **NASA/SAO**
Chandra Cycle 19	Principal Investigator, "Discovering extended sources in Chandra images", **$74.9K,** Dates: 01/01/2018-12/31/2019, **NASA/SAO**
Chandra Cycle 19	Principal Investigator, "X-ray Imaging of the High-mass Gamma-ray Binary HESS J0632+057", **$63K,** Dates: 01/01/2018-12/31/2019, **NASA/SAO**
Chandra Cycle 19	Admin. Investigator (science PI my GW PhD student Jeremy Hare), "Bright X-ray counterparts of galactic 3FGL sources", **$14.2K** Dates: 01/01/2018-12/31/2019, **NASA/SAO**
Chandra Cycle 19	Co-Investigator (PI R. Romani, Stanford University), "The Answer is Blowing in the Wind: Jet Sweepback in Three PWNe", **$41.5K,** Dates: 01/01/2018-12/31/2019, **NASA/SAO**
Chandra Cycle 19	Co-Investigator (PI A. Timokhin, NASA GSFC), "Testing pair production in pulsar magnetosphere", **$8.9K,** Dates: 01/01/2018-12/31/2019, **NASA/SAO**
Chandra Cycle 19	Co-Investigator (PI B. Rangelov, TSU), "Multi-wavelength classification of X-ray sources in M33", **$21.7K,** Dates: 01/01/2018-12/31/2019, **NASA/SAO**
Fermi Cycle 10	Principle Investigator, "Multiwavelength Identification of Fermi LAT Sources", **$57.9,** Dates: 01/01/2018-12/31/2018, **NASA/GSFC**
XMM-Newton Cycle 16	Admin. Investigator (science PI my GW PhD student Jeremy Hare), "Bright X-ray counterparts of galactic 3FGL sources", **$46.2K,** Dates: 01/01/2018-12/31/2018, **NASA/GSFC**
XMM-Newton Cycle 16	Principle Investigator, "Features in the X-ray spectrum of an isolated rotation-powered pulsar", **$79.7K,** Dates: 01/01/2018-12/31/2018, **NASA/GSFC**
NuSTAR Cycle 2	Principle Investigator, "Hard X-ray portrait of LS 5039", **$51.1K**, Dates: 01/01/2017-12/31/2017, **NASA/GSFC**
XMM-Newton Cycle 15	Principle Investigator, "Sleuthing for compact objects accreting from the interstellar medium", **$56.0K,** Dates: 01/01/2017-12/31/2017, **NASA/GSFC**

Hubble Cycle 23	Principle Investigator, “Establishing the nature of the far-UV emission from the double pulsar”, **$34K,** Dates: 2017-2019, **NASA/STScI,** funding approved pending successful observations
Swift Cycle 12	Co-Investigator (Admin PI), “Revealing pulsars hidden in the 3rd Fermi catalogue”, **$45.0K**, Dates: 10/01/2016-09/30/2017, **NASA/GSFC**
Hubble Cycle 23	Co-Investigator (Admin PI), “Intermediate Age Cluster GLIMPSE-C01”, **$23.3K**, Dates: 10/01/2015-09/30/2018, **NASA/STScI**
XMM-Newton Cycle 14	Principle Investigator, “Detailed study of PSR B0656+14”, **$53.3K**, Dates: 02/08/2016-02/07/2017, **NASA/GSFC**
Chandra Cycle 16	Principle Investigator, “X-ray counterparts of puzzling GeV-TeV sources”, **$58.9K,** Dates: 06/16/2015-06/15/2017, **NASA/SAO**
Chandra Cycle 16	Principle Investigator, “Snap-shot survey of unidentified Fermi sources”, **$50.4K,** Dates: 12/31/2014-01/31/2017, **NASA/SAO**
HST Cycle 22	Principle Investigator, “Thermal evolution of old neutron stars ”, **$10.8K**, Dates: 11/29/2014-11/30/2017, **NASA/STScI**
NASA ADAP	Co-Principal Investigator, “Revealing pulsars hidden in the 2nd Fermi catalogue”, **$42K**, Dates: 01/30/2013-01/31/2015, **NASA**
NASA ADAP	Principle Investigator, “XMM-Newton observation of a new energetic pulsar”, **$32.4K**, Dates: 01/30/2013-01/31/2015, **NASA/GSFC**
Hubble Cycle 20	Principle Investigator, “Multiwavelength spectra of the fine structure of the Crab”, **$29.3K,** Dates: 11/29/2012-11/29/2015, **NASA/STScI**
Chandra Cycle 14	Principle Investigator, “Unveiling the Nature of Galactic Sources Detected by Chandra”, **$64.5K,** Dates: 02/27/2013/-02/28/2016, **NASA/SAO**
Chandra Cycle 14	Principle Investigator, “PSR J1906+0746: Cheshire cat's grin”, **$36.7K,** Dates: 07/12/2013/-07/11/2015, **NASA/SAO**
Chandra Cycle 14	Principle Investigator, “Multiwavelength spectra of the fine structure of the Crab”, **$13.1K, Dates:** 11/29/2013-11/28/2015, **NASA/SAO**
LP Chandra Cycle 14	Principle Investigator, “A comparative study of two outstanding pulsar tails”, **$69.6K,** Dates: 06/01/2013-31/05/2016, **NASA/SAO**

XVP Chandra Cycle 14	Co-Investigator, "A Legacy Study of the Relativistic Shocks of PWNe", **$59.9K,** 11/18/2012-11/19/2015, **NASA/SAO**
Chandra Cycle 13	Principal Investigator, "Is HESS J1741-302 truly dark?", **$35.1K, Dates:** 10/28/2013-10/27/2014, **NASA/SAO**
NASA ADAP	Co-Investigator, "Archival Study of Isolated Pulsars and Their Winds", **$64.5K,** Dates:10/01/12-09/30/12, **NASA/GSFC via PSU**
Chandra Cycle 11	Co-Investigator, "Young, hot PSR J1357-6429 and its PWN", **$18.2K,** Dates: 01/25/13-01/24/14**, NASA/SAO**
Chandra Cycle 10	Principal Investigator, "X-ray emission from the double neutron star binary J1537+1155", **$12.8K,** Dates: 01/18/13-01/17/2014, **NASA/SAO**
Chandra Cycle 13	Co-Investigator, "The puzzling outflow from the PSR B1259-63/SS 2883 binary", **$21.7K,** Dates 12/19/2012-05/18/2015, **NASA/SAO**
Hubble Cycle 19	Co-Investigator (Admin. PI), "Thermal emission from the famous double pulsar J0737-3039", **$35.8K,** Dates: 11/29/2012 - 11/30/2016, **NASA/STScI**
Hubble Cycle 18	Principal Investigator, "ACS polarimetry of the Vela pulsar-wind nebula", **$42K,** Dates: 02/01/2013-01/31/2014**, NASA/STScI**

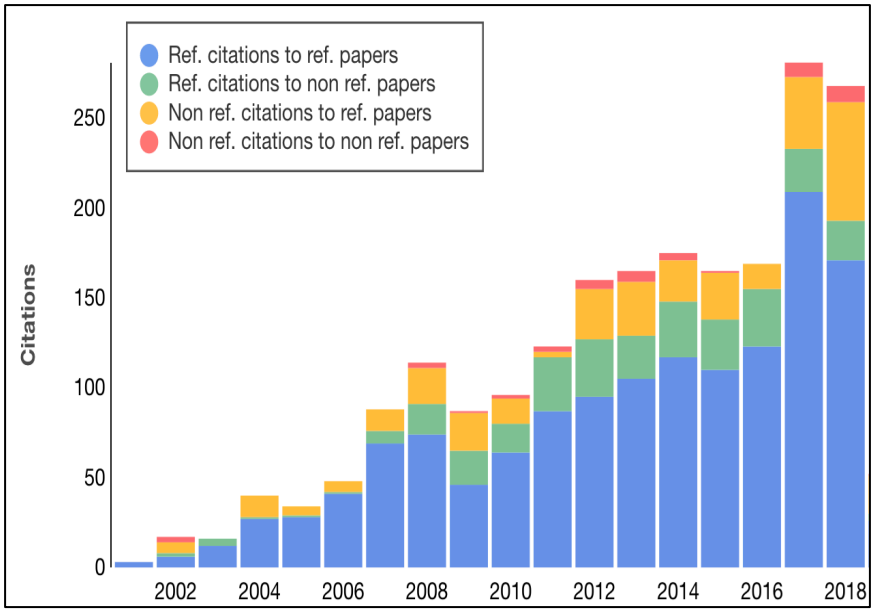
Projects awarded at UF prior to joining GW:

Chandra Cycle 12	Principal Investigator, "Is Swift J1834.9-0846 a magnetar related to SNR W41 and HESS J1834-087?", **$6K,** Dates: Closed, **NASA/SAO**
Hubble Cycle 18	Co-Investigator (Admin. PI), "The magnetar SGR 0418+5729 in the optical and infra-red", **$30K,** Dates: Closed, **NASA/STScI**
Chandra Cycle 11	Principal Investigator, "The long tail of PSR J1740+1000", **$43.1K,** Dates: Closed**, NASA/SAO**
XMM-Newton Cycle 8	Principal Investigator, "Searching for PWNe in three center-filled Supernova Remnants", **$40.3K,** Dates: Closed**, NASA**
Suzaku Cycle 4	Principle Investigator, "Crushed plerion HESS J1809-193: TeV to X-ray connection", **$25.2K, Dates:** Closed, **NASA/SAO**
NSF AAG	Principal Investigator, "Collaborative Research: Unidentified Galactic TeV Sources: Neutron Star Connection", **$252.5K,** Dates: Closed**, NSF**
NASA ADAP	Co-Investigator, "Archival Study of Isolated Pulsars and Their Winds", **$71.8K,** Dates: Closed, **NASA/GSFC**

NASA ADAP	Principal Investigator, "Multiwavelength study of unidentified extended TeV sources", **$286.2K,** Dates: Closed, **NASA/GSFC**
Hubble Cycle 17	Co-Investigator, "Far-UV Phase-resolved Spectroscopy of PSR B0656+14", **$34.6K,** Dates: Closed, **NASA/STScI**
LP Chandra Cycle 10	Co-Investigator, "The unique dynamical Vela pulsar-wind nebula", **$78.4K,** Dates: Closed, **NASA/SAO**

Summary of Publications:

187 publications (83 refereed), cited more than 1,751 times (as of 02/10/2019, excluding self-citations; according to NASA Astrophysics Data System: http://adsabs.harvard.edu/cgi-bin/nph-abs_connect?author=kargaltsev,+o). These include: first-author article in Science (journal impact factor 31.5), 67 articles in the Astrophysical Journal (16 as a leading author; the journal impact factor 6.3), 11 articles in other referred journals and publications, and 2 referred book chapters (as a leading author). The latest 30 peer-reviewed articles and two book chapters have been written at GW during the past 4 years. Other popular metrics: *h*-index=26; *tori*-index=12.9.



Number of citations per year for papers authored or co-authored by Kargaltsev as a function of time. *The 2018 record is still incomplete.*

Source – NASA ADS:: *https://ui.adsabs.harvard.edu/#search/q=%20author%3A%22Kargaltsev%22&sort=date%20desc%2C%20bibcode%20desc/metrics AAAAJ&hl=en*

Articles in Peer-Reviewed Journals

Below "g" denotes graduate student and "p" denotes postdoctoral scholar working under O. Kargaltsev's supervision.

1. Xu, S., Klingler[g], N., **Kargaltsev, O**., & Zhang, B., "On the broad-band synchrotron spectra of pulsar wind nebulae", 2019, ApJ (in press), arXiv:1812.10827

2. Guillot, S., Pavlov, G. G., Reyes, C., Reisenegger, A., Rodriguez, L., Rangelov, B. **Kargaltsev, O.**, "Hubble Space Telescope non-detection of PSR J2144-3933: the coldest known neutron star", 2019, ApJ accepted, arXiv:1901.07998

3. Arumugasamy, P., **Kargaltsev, O**., Posselt, B., Pavlov, G. G., & Hare[g], J., "Possible Phase-dependent Absorption Feature in the X-Ray Spectrum of the Middle-aged PSR J0659+1414", 2018, ApJ, 869, 97

4. Klingler[g], N., **Kargaltsev, O.**, Pavlov, G. G., & Posselt, B. 2018, "The Variable Pulsar Wind Nebula of PSR J1809–1917", ApJ, 868, 119

5. Hare[g], J., **Kargaltsev, O.**, & Rangelov, B., "Chandra X-Ray Observatory and Hubble Space Telescope Observations of the Intermediate-age Cluster GLIMPSE-C01", 2018, ApJ, 865, 33

6. Klingler[g], N., Kargaltsev, O., Pavlov, G. G., Ng, C.-Y., Beniamini, P., & Volkov[p], I., "The Mouse Pulsar Wind Nebula", 2018, ApJ, in press, arXiv:1803.10294

7. **Kargaltsev, O.**, Klingler[g], N., Chastain[g], S., & Pavlov, G. G., "Toward understanding the physical underpinnings of spatial and spectral morphologies of pulsar wind nebulae", 2017, Journal of Physics: Conference Series, 932, 012050, 2017arXiv171102656

8. Pavlov, G. G., Rangelov, B., **Kargaltsev, O.**, Reisenegger, A., Guillot, S., & Reyes, C., "*Old but Still Warm: Far-UV Detection of PSR B0950+08*", 2017, ApJ, 850, 79, 2017ApJ...850...79P

9. **Kargaltsev, O.,** Pavlov, G. G., Klingler[g], N., & Rangelov[p], B. 2017, "*Pulsar Wind Nebulae Created by Fast-Moving Pulsars*", 2017, Journal of Plasma Physics, v. 93, 635830501, arXiv:1708.00456

10. Hare[g], J., **Kargaltsev, O.**, Pavlov, G. G., Rangelov[p], B., & Volkov[p], I., "*Chandra Observations of the field containing HESS J1616-508*", 2017, ApJ, 841, 81

11. Dubner, G., Castelletti, G., **Kargaltsev, O.**, Pavlov, G. G.; Bietenholz, M.; Talavera, A., "*Morphological Properties of the Crab Nebula: A Detailed Multiwavelength Study Based on New VLA, HST, Chandra, and XMM-Newton Images*", 2017, ApJ, 840, 82

12. Pannuti, T. G., Rho, J., **Kargaltsev, O**., et al., "*CTIO, ROSAT HRI, and Chandra ACIS Observations of the Archetypical Mixed-morphology Supernova Remnant W28 (G6.4-0.1)*", 2017, ApJ, 839, 59

13. Reynolds, S. P., Pavlov, G. G., **Kargaltsev, O.**, Klingler[g], N., Renaud, M., Mereghetti, S. 2017, "*Pulsar-Wind Nebulae and Magnetar Outflows: Observations at Radio, X-Ray, and Gamma-Ray Wavelengths*", Space Science Reviews, 2017, DOI 10.1007/s11214-017-0356-6

14. Rangelov[p], B., Pavlov, G., **Kargaltsev, O**., Reisenegger, A., Guillot, S., & Reyes, C., "*Hubble Space Telescope Detection Of The Millisecond Pulsar J2124-3358 And Its Far-Ultraviolet Bow Shock Nebula*", 2016, ApJ, 835, 264

15. Klingler[g], N., Rangelov[p], B., **Kargaltsev, O.**, Pavlov, G., Romani, R., Posselt, B., Slane, P., Temim, T., Ng, C.-Y., Bucciantini, N., Bykov, A. M., Swartz, D., & Buehler, R., "*Deep Chandra Observations Of The Pulsar Wind Nebula Created By PSR B0355+54*", 2016, ApJ, 828, 70

16. Rangelov[p], B., Pavlov, G. G., **Kargaltsev, O**., Durant, M., Bykov, A. M., & Krassilchtchikov, A., "*First Detection of a Pulsar Bow Shock Nebula in Far-UV: PSR J0437-4715*", 2016, ApJ, 831, 129

17. Klingler[g], N., **Kargaltsev, O**., Rangelov, B., Pavlov, G. G., Posselt, B. & Ng C.-Y. "*Chandra Observations of Outflows from PSR J1509-5850",* 2016, ApJ, 828, 70

18. Younes, G., Kouveliotou, C., **Kargaltsev, O.**, Gill, R., Granot, J., Watts, A. L., Gelfand, J., Baring, M. G., Harding, A., Pavlov, G. G., van der Horst, A. J., Huppenkothen, D., Göğüş, E., Lin, L., & Roberts, O. J. *"The wind nebula around magnetar Swift J1834.9-0846",* 2016, ApJ, 824, 138

19. Birzan, L., Pavlov, G. G., & **Kargaltsev, O.**, "*Chandra Observations of the Elusive Pulsar Wind Nebula around PSR B0656+14",* 2016, ApJ, 817, 129

20. Sonbas[p], E., Rangelov[p], B., **Kargaltsev, O.**, Dhuga, K. S., Hare, J., & Volkov, I. "*X-Ray Sources in the Dwarf Spheroidal Galaxy Draco",* 2016, ApJ, 821, 54

21. Hare[g], J., Rangelov[p], B., Sonbas[p], E., & **Kargaltsev, O**. "*Multi-wavelength study of HESS J1741-302"*, 2016, ApJ, 816, 52

22. Williams, B. J., Rangelov[p], B., **Kargaltsev, O**., & Pavlov, G. G. "*Magnesium-rich Ejecta in the SNR G284.3–1.8 Around the High-mass Gamma-Ray Binary 1FGL J1018.6–5856"*, 2015, ApJ, 808, L19

23. Pavlov, G. G., Hare[g], J., **Kargaltsev, O.**, Rangelov[p], B., & Durant, M. "*An Extended X-Ray Object Ejected from the PSRB1259-63/LS2883 Binary"*, 2015, ApJ, 806, 192

24. Auchettl, K., Slane, P., Romani, R., Posselt, B., Pavlov, G., **Kargaltsev, O.**, Ng, C.-Y., Temim, T., Weisskopf, M., Bykov, A., Swartz, D. "*X-ray analysis of the proper motion and the pulsar-wind nebula of PSR J1741-2054*", 2015, ApJ, 802, 68

25. Kirichenko, A., Danilenko, A., Shternin, P., Shibanov, Y., Ryspaeva, E., Zyuzin, D., Durant, M., **Kargaltsev, O.**, Pavlov, G. G., & Cabrera-Lavers, A. "Optical Observations of Psr J2021+3651 in the Dragonfly Nebula With the GTC", 2015, ApJ, 802, 17

26. Rangelov[p], B., Posselt, B., **Kargaltsev, O**., Pavlov, G., Hare[g], J., & Volkov[p], I. "*Multiwavelength Study of the Northeastern Outskirts of the Extended TeV Source HESS J1809-193*", 2014, ApJ, 796, 34

27. Aliu, E., et al. "*Spatially Resolving the Very High Energy Emission from MGRO J2019+37 with VERITAS*" 2014, ApJ, 788, 78 (This is VERITAS collaboration paper. According to collaboration rules, the list of authors is alphabetically ordered list of collaboration members consisting of about 90 names. For this paper **Kargaltsev** contributed approximately 30%.)

28. Arumugasamy, P., Pavlov, G. G., & **Kargaltsev, O.** 2014, "*XMM-Newton Observations of Young and Energetic Pulsar J2022+3842*" ApJ, 790, 103

29. **Kargaltsev, O**., Pavlov, G. G., Durant, M., Volkov[p], I., & Hare[g], J. "*The Dynamic X-Ray Nebula Powered by the Pulsar B1259-63*", 2014, ApJ, 784, 124

30. Durant[p], M., **Kargaltsev, O.**, & Pavlov, G. G. "*Hubble Space Telescope Detection of the Double Pulsar System J0737-3039 in the Far-ultraviolet*", 2014, ApJL, 783, L22

31. Aliu, E., et al. "*Observations of the Unidentified Gamma-Ray Source TeV J2032+4130 by VERITAS*", 2014, ApJ, 783, 16 (This is VERITAS collaboration paper. According to collaboration rules, the list of authors is alphabetically ordered list of collaboration members consisting of about 90 names. For this paper **Kargaltsev** contributed approximately 40%.)

32. **Kargaltsev, O**., Rangelov[p], B., Hare[g], J., & Pavlov, G. G. "*Chandra imaging of gamma-ray binaries*", 2014, Astronomische Nachrichten, 335, 301

33. Pannuti, T. G., **Kargaltsev, O.**, Napier, J. P., & Brehm, D. "*XMM-Newton and Chandra Observations of the Ejecta-dominated Mixed-morphology Galactic Supernova Remnant G352.7-0.1*", 2014, ApJ, 782, 102

34. Posselt, B., Pavlov, G.G., Suleimanov, V., & **Kargaltsev, O.** "*New Constraints on the Cooling of the Central Compact Object in Cas A*", 2013, ApJ, 779, 186

35. Aliu, E. et al. "*Discovery of the TeV Gamma-ray Emission from CTA by VERITAS*", 2012, ApJ, 764, 38 (This is VERITAS collaboration paper. According to collaboration rules, the list of authors is alphabetically ordered list of collaboration members consisting of about 90 names. For this paper **Kargaltsev** contributed approximately 40%.)

36. Durant[P], M., **Kargaltsev, O**., Pavlov, G. G., Kropotina, J., & Levenfish, K. "*The Helical Jet of the Vela Pulsar*", 2013, ApJ, 763, 72

37. **Kargaltsev, O.,** Durant, M., & Pavlov, G. G. "*Pulsar Wind Nebulae from X-rays to VHE γ-rays*", 2013, ASPC, 466, 167

38. Posselt, B., Arumugasamy, P., Pavlov, G. G., Manchester, R. N., Shannon, R. M., & **Kargaltsev, O.** "*XMM-Newton Observation of the Very Old Pulsar J0108-1431*", 2012, ApJ, 761, 117

39. Younes, G. Kouveliotou, C., **Kargaltsev, O**., Pavlov, G. G.; Göğüş, E.; Wachter, S. "*XMM-Newton View of Swift J1834.9-0846 and Its Magnetar Wind Nebula*", 2012, ApJ, 757, 39

40. **Kargaltsev, O.,** Durant[P], M., Misanovic, Z., Pavlov, G. G. "*Absorption Features in the X-ray Spectrum of an Ordinary Radio Pulsar*", 2012, Science, 337, 946

41. Posselt, B., Pavlov, G. G., Manchester, R. N., **Kargaltsev, O.** & Garmire, G. P. "*Chandra Observations of the Old Pulsar PSR B1451-68*", 2012, ApJ, 749, 146

42. **Kargaltsev, O.**, Durant[P], M., Pavlov, G. G., & Garmire, G. "*Chandra Pulsar Survey (ChaPS)*", 2012, ApJS, 201, 37

43. **Kargaltsev, O.**, Kouveliotou, C., Pavlov, G. G., et al. "*X-ray Observations of a New Unusual Magnetar Swift J1834.9-0846*", 2012, ApJ, 748, 26

44. Durant[P], M., **Kargaltsev, O.**, Pavlov, G. G., Kowalski, P. M., Posselt, B., van Kerkwijk, M. H., & Kaplan, D. L. "*The spectrum of the recycled PSR J0437-4715 and its white dwarf companion*", 2012, ApJ, 746, 6

45. **Kargaltsev, O.**, Schmitt, B., Pavlov, G., & Misanovic, Z. "*XMM-Newton Observations of Two Candidate Supernova Remnants*", 2012, ApJ, 745, 99

46. Chang, C. Pavlov, G. G., **Kargaltsev, O.**, & Shibanov, Y. A. "*X-Ray Observations of the Young Pulsar J1357−6429 and Its Pulsar Wind Nebula*", 2012, ApJ, 744, 81

47. Durant[P], M., **Kargaltsev, O.**, Pavlov, G., & Chang, C. "*Extended X-ray emission in the vicinity of LS 5039: pulsar wind nebula?*", 2011, ApJ, 735, 58

48. Durant[P], M., **Kargaltsev, O.**, & Pavlov, G. G. "*Search for the Optical Counterpart to SGR 0418+5729*", 2011, ApJ, 742, 77

49. Durant[P], M., **Kargaltsev, O.**, & Pavlov, G. "*Orbital Variation of the X-Ray Emission from the Double Neutron Star Binary J1537+1155*", 2011, ApJ, 741, 65

50. Mignani, R. P., Pavlov, G. G., & **Kargaltsev, O.** "*VLT observations of the candidate counterpart to PSR J0108-1431*", 2011, A&A, 531, 105

51. Durant[P], M., **Kargaltsev, O.**, & Pavlov, G. G. "*Multiwavelength Spectroscopy of PSR B0656+14*", 2011, ApJ, 743, 38

52. Pavlov, G., Chang, C., & **Kargaltsev, O.** "*Extended Emission from the PSR B1259-63/SS 2883 Binary Detected with Chandra*", 2011, ApJ, 730, 2

53. Misanovic, Z., **Kargaltsev, O.**, & Pavlov, G. "*Chandra observations of the TeV source HESS J1834–*

087", 2011, ApJ, 735, 33

54. Misanovic, Z., **Kargaltsev, O.**, & Pavlov, G. "*XMM-Newton observations of SNRs G27.8+0.6 and G28.8+1.5*", 2010, ApJ, 725, 931

55. Mignani, R. P., Pavlov, G. G., & **Kargaltsev, O.** "*Optical-Ultraviolet Spectrum and Proper Motion of the Middle-aged Pulsar B1055–52*", 2010, ApJ, 720, 1635

56. **Kargaltsev, O.,** & Pavlov, G. G. "*Pulsar-wind nebulae in X-rays and TeV γ -rays*", 2010, AIP Conf. Proc., 1248, 25 (arXiv:1002.0885)

57. **Kargaltsev, O.** & Pavlov, G. G. "*Chandra observation of the relativistic binary J1906+0746*", 2009, ApJ, 702, 433

58. Park, S, **Kargaltsev, O.**, Pavlov, G. G., Mori, K., Slane, P. O., Hughes, J. P., Burrows, D. N., & Garmire, G. P. "*Nonthermal X-Rays from Supernova Remnant G330.2+1.0 and the Characteristics of its Central Compact Object*", 2009, ApJ, 695, 431

59. **Kargaltsev O.**, Pavlov G. G. & Wong J. "*Young energetic pulsar J1617-5055 and its underluminous nebula*", 2009, ApJ, 690, 891

60. Pavlov, G., **Kargaltsev, O.**, Wong, J. A., & Garmire, G. P. "*Detection of X-ray Emission from the Very Old Pulsar J0108-1431*", 2009, ApJ, 691, 458

61. Mignani R., Pavlov G., & **Kargaltsev, O.** "*A possible optical counterpart for the old nearby radio pulsar J0108-1431*", 2008, A&A, 488, 1027

62. **Kargaltsev, O.** & Pavlov, G. G. "*Pulsar-Wind Nebulae in the Chandra Era", in Proc. of "40 Years of Pulsars: Millisecond Pulsars, Magnetars and More*", 2008, AIP Conf. Proc., 983, 171

63. **Kargaltsev O.**, Misanovic Z., Pavlov, G., Wong J., and Garmire G. P. "*X-ray observations of parsec-scale tails behind two middle-aged pulsars*" 2008, ApJ, 684, 542

64. Pavlov G. G., **Kargaltsev O.**, & Brisken W. F. "*Chandra Observation of PSR B1823-13 and its Pulsar Wind Nebula*", 2008, ApJ, 675, 683

65. **Kargaltsev, O.**, Pavlov, G. G., & Garmire, G. P., "*HESS J1804-216 in X-rays and at other wavelengths*", 2007, ApJ, 670, 643

66. **Kargaltsev, O.**, & Pavlov G. G., "*X-ray emission from PSR J1809–1917 and its pulsar wind nebula, possibly associated with the TeV gamma-ray source HESS J1809–193*", 2007, ApJ, 670, 655

67. Pavlov, G., **Kargaltsev, O.**, Garmire, G., & Wolszczan, A., "*X-ray emission from the planet pulsar B1257+12*", 2007, ApJ, 664, 1072

68. **Kargaltsev, O.**, Pavlov, G. G., & Garmire, G. P., "*X-ray emission from PSR B1800-21 and its pulsar-wind nebula*", 2007, ApJ, 660, 1417

69. **Kargaltsev, O.**, & Pavlov, G., "*UV emission from young and middle-aged pulsars*", 2007, Astrophysics and Space Science, 308, 287

70. Park, S., Mori, K., **Kargaltsev, O.**, Slane, P. O., Hughes, J. P., Burrows, D. N.; Garmire, G. P., & Pavlov, G. G., "*Discovery of a Candidate Central Compact Object in the Galactic Nonthermal*

SNR G330.2+1.0", 2006, ApJ, 653L, 37

71. **Kargaltsev, O.**, Pavlov, G. G., & Garmire, G. P., "*X-ray Emission from the Double Neutron Star Binary J1537+1155*", 2006, ApJ, 646, 1139

72. **Kargaltsev, O.**, Pavlov, G. G., & Garmire, G. P., "*X-ray Emission from the Nearby PSR B1133+16 and Other Old Pulsars*", 2006, ApJ, 636, 406

73. Romani, R. W., **Kargaltsev, O.**, & Pavlov, G. G., "*The Vela pulsar in UV*", 2005, ApJ, 627, 383

74. **Kargaltsev, O.**, Pavlov, G. G., Romani R. W., & Zavlin, V. E., "*Ultraviolet Emission from the Geminga Pulsar: Connecting X-rays with the Optical*", 2005, ApJ, 625, 307

75. Mignani, R. P., Pulone L., Iannicola, G., Pavlov, G. G., Townsley, L., & **Kargaltsev, O.**, "*Search for the elusive optical counterpart of PSR J0537-6910 with the HST Advanced Camera for Surveys*", 2005, A&A, 431, 569

76. **Kargaltsev, O.**, Pavlov, G. G., & Romani, R. W., "*Ultraviolet Emission from the Millisecond Pulsar J0437-4715*", 2004, ApJ, 602, 327

77. **Kargaltsev, O.**, Pavlov, G. G., Teter, M. A., Sanwal, D., "*The jets of the Vela pulsar*", 2003, New Astronomy Reviews, 47, 487

78. Mignani, R. P., De Luca, A., **Kargaltsev, O.**, Pavlov G. G., Zaggia S., Caraveo P. A., & Becker W., "*Search for the Optical Counterpart of the Vela Pulsar X-ray Nebula*", 2003, ApJ, 594, 419

79. Pavlov, G. G., Teter, M. A., **Kargaltsev, O.**, & Sanwal, D., "*The Variable Jet of the Vela Pulsar*", 2003, ApJ, 591, 1157

80. **Kargaltsev, O.**, Pavlov, G. G., Sanwal, D., & Garmire, G. P., "*The Compact Central Source of the SNR G266.2-1.2*", 2002, ApJ, 580, 1060

81. Pavlov, G. G., **Kargaltsev, O.**, Sanwal D., & Garmire, G. P., "*Variability of the Vela Pulsar Wind Nebula Observed with Chandra*", 2001, ApJ, 554, L189

Refereed Book Chapters:

(https://dl.dropboxusercontent.com/u/32774245/Kargaltsev_Refereed_Book_Chapters.pdf)

1. **Kargaltsev O**., Rangelov[p], B., & Pavlov G. "*Pulsar-Wind Nebulae as a Dominant Population of Galactic VHE Sources*" in "The Universe Evolution. Astrophysical and Nuclear Aspects", Eds. I. Strakovsky & L. Blokhintsev, 2013, Nova Science Publishers, Inc., ISBN: 978-1628085457

2. **Kargaltsev, O.**, Lyubarsky, Y., Striani, E., & Cerutti, B. "*Pulsar-Wind Nebulae Recent Progress in Observations*" in "The strongest magnetic fields in the Universe", Springer 2016, ISBN: 978-1493935499

Selected Non-refereed Publications

1. **Kargaltsev O**., "*X-ray view of pulsar wind nebulae: What we can learn with Athena?*", Exploring the Hot and Energetic Universe: The first scientific conference dedicated to the Athena X-ray observatory, Madrid, Spain, 8-10 September 2015, Proceedings of a conference held 8-10 September, 2015 in Madrid, Spain, p.60, available online

2. Levenfish, K. P., Bykov, A. M., Durant, M., **Kargaltsev, O.**, Kropotina, Y. A., Pavlov, G. G., Krassilchtchikov, A. M., & Uvarov, Y. A. "*Finest persistent structures in the Vela PWN*" 2013, Memorie della Societa Astronomica Italiana, 84, 588

3. **Kargaltsev, O.**, Gogus, E., Kouveliotou, C., & Pavlov, G. 2011, "*Unusually strong X-ray pulsations from Swift J1834.9-0846*", The Astronomer's Telegram, 3600, 1

4. Gogus, E., Kouveliotou, C., **Kargaltsev, O.**, & Pavlov, G. 2011, "*Swift J1834.9-0846: Precise X-ray Position and the Confirmation of its Spin Period*", The Astronomer's Telegram, 3576, 1

5. Pavlov, G. G., Misanovic, Z., **Kargaltsev, O.**, & Garmire, G. P. 2011, "*Chandra and XMM-Newton Observations of the Gamma-ray Binary 1FGL J1018.6-5856*", The Astronomer's Telegram, 3228, 1

6. Gogus, E., Kouveliotou, C., **Kargaltsev, O.**, & Pavlov, G. 2011, "*Swift J1834.9-0846: precise X-ray position and the confirmation of its spin period*", GRB Coordinates Network, 12302, 1

7. Paerels, F., Méndez, M., Agueros, M., Baring, M., Barret, D., Bhattacharyya, S., Cackett, E.; Cottam, J., Diaz Trigo, M., Fox, D.; Garcia, M., Gotthelf, E., Hermsen, W., Ho, W., Hurley, K., Konker, P., Juett, A., Kaaret, P., **Kargaltsev, O.**, Lattimer, J., Matt, G., Özel, F., Pavlov, G., Rutledge, R., Smith, R., Stella, L., Strohmayer, T., Tananbaum, H., Uttley, P., van Kerkwijk, M., Weisskopf, M., & Zane, S. 2009, "*The Behavior Of Matter Under Extreme Conditions*", Astro2010: The Astronomy and Astrophysics Decadal Survey, Science White Papers, no. 230 (arXiv:0904.0435v1)

8. Misanovic, Z., Pavlov, G. G. & **Kargaltsev, O.** "*X-ray observations of pulsar J1740+1000*", in Proc. of "8 years of Science with Chandra", (http://cxc.harvard.edu/symposium_2007/proceedings/topic_3.html)

9. **Kargaltsev, O.** & Pavlov, G. G., "*Vela PWN: A new perspective*", 2004, in "Young Neutron Stars and Their Environments" (IAU Symposium 218, ASP Conf. Proc.), eds F. Camilo and B. M. Gaensler, p. 195, (astro-ph/0310767)

10. Sanwal, D., Pavlov, G. G., **Kargaltsev, O.**, Garmire, G. P., Zavlin, V. E., Burwitz, V., Manchester, R. N. & Dodson, R., "*X-ray Spectrum and Pulsations of the Vela Pulsar*", in Neutron Stars in Supernova Remnants, ASP ser., v. 271, p. 353, 2002, eds. P.O. Slane & B. M. Gaensler.

11. **Kargaltsev, O.**, Pavlov, G. G., Sanwal D., & Garmire, G. P., "*The Vela pulsar wind nebula resolved with Chandra*", in Neutron Stars in Supernova Remnants, ASP ser., v. 271, p. 181, 2002, eds. P.O. Slane & B. M. Gaensler.

Selected Conference Talks and Other Talks and Contributions

Invited talks

1. **Kargaltsev O.,** "*X-ray Observations of Pulsars and Pulsar Wind Nebulae"*, JSI Cosmic Accelerators meeting, Annapolis, MD, USA, November 6-9, 2017

2. **Kargaltsev O.,** "*VHE Sources: X-ray and TeV connections*", 16th AAS HEAD meeting, Sun Valley, ID, USA, August 20-24, 2017

3. **Kargaltsev O.,** "*Pulsar wind nebulae*", Physics of Neutron Stars – 2017, St. Petersburg, Russia, July 28 - August 1, 2017

4. **Kargaltsev O.,** "*Population of galactic GeV-TeV sources seen by Fermi, VERITAS, and HAWC with a focus on pulsar wind nebulae*.", Fermi/VERITAS/HAWC workshop 2017, College Park, MD USA, March 10-11, 2017

5. **Kargaltsev O.,** "*Chandra view of manifestations of neutron stars: particle outflows and synchrotron nebulae*", Chandra Science for the Next Decade, Cambridge, MA USA, August 16-19, 2016

6. **Kargaltsev O.,** "*Is there a useful connection between the pulsar magnetosphere geometry and PWN morphology?*", The Physics of Pulsar Magnetospheres workshop, NASA GSFC, June 7, 2016

7. **Kargaltsev O**., "*X-ray View of Pulsar Wind Nebulae: What Chandra Did Not Tell Us*", X-Ray Vision Workshop: Probing the Universe in Depth and Detail with the X-Ray Surveyor, Washington, DC, USA, 6-8 October 2015

8. **Kargaltsev, O.**, "*High-energy astrophysics of pulsars and their winds*", Physics Department colloquium talk at University of Maryland Baltimore County, October, 7, 2015

9. **Kargaltsev, O.**, Pavlov., G. G. & Rangelov B. "*Pulsar wind nebulae in X-ray, TeV and in between*", Future Space-based Gamma-ray Observatories, NASA GSF, February 5-6, 2015

10. **Kargaltsev, O.**, "*Multiwavelength observations of pulsar wind nebulae*", Physics of Neutron Stars – 2014, July 28 - August 1, 2014, St. Petersburg, Russia

11. **Kargaltsev, O.** "*X-ray emission properties of rotation-powered pulsars*", 40th COSPAR Scientific Assembly, Moscow, Russia, Aug 2-10, 2014

12. **Kargaltsev, O**., *Gamma-Ray Emission from Pulsar Wind Nebulae*, 2nd Workshop on Galactic Physics with VERITAS, Columbia University, NY, May 5-7, 2014

13. **Kargaltsev, O. "**Isolated NSs and non-accreting pulsars**" ,** "Neutron Stars (NSs) as Physics Labs: Future Opportunities with NICER Symposium, NASA GSFC, Greenbelt, MD, March 27, 2014

14. **Kargaltsev, O.**, *Observations of Pulsar-Wind Nebulae*, The Strongest Magnetic Fields in the Universe, Bern, Switzerland, Feb 16-20, 2014

15. **Kargaltsev, O**, "*Isolated Neutron Stars and Non-Accreting Pulsars"*, Symposium *Neutron Stars as Physics Labs: Future Opportunities with NICER*, NASA GSFC, March 27, 2014

16. **Kargaltsev, O.**, Pavlov, G., & Durant, M. "*X-ray observations of pulsar-wind nebulae: current status and future prospects*" 2013, XMM-Newton Workshop: The Fast and the Furious: Energetic Phenomena in Isolated Neutron Stars, Pulsar Wind Nebulae and Supernova Remnants, Madrid, Spain, 22-24 May, 2013

17. **Kargaltsev, O.** "*X-ray and gamma-ray properties of pulsar-wind nebulae*", Physics Department colloquium at the University of Texas Arlington, Nov 28, 2012

18. **Kargaltsev, O.** "*Multiwavelength properties of pulsars and their wind nebulae*", the Supernova Seminar at NASA Goddard Space Flight Center, Dec 12, 2012

19. **Kargaltsev, O.** "*Electromagnetic Radiation From Pulsars And Magnetars*", 2012, Apr 25, University of Zielona Góra, Zielona Gora, Poland

20. **Kargaltsev, O.** "*Pulsar-wind nebulae in X-rays and gamma-rays: highlights, population analysis, and outlook*" 2012, January 18-21, Tucson, Arizona, VERITAS collaboration meeting

21. **Kargaltsev, O.** "*Multiwavelength observations of pulsar wind nebulae*", 2011, July 11-15, St. Petersburg, Russia, "Physics of Neutron Stars - 2011" conference

22. **Kargaltsev O.** "*Pulsar Wind Nebulae in Gamma-Rays*" , Barnard College, Columbia University, NYC, May 28-29, 2010 "VERITAS Workshop on High Energy Galactic Physics"

23. **Kargaltsev O.** "*Pulsar-wind nebulae in X-rays and TeV gamma-rays*", September 7-11, 2009, Bologna, Italy, "X-ray Astronomy 2009: Present Status, Multi-Wavelength Approach And Future Perspectives"

24. **Kargaltsev O.** "*Pulsar winds across the electromagnetic spectrum*", Purdue University, October 27, 2009, Lafayette, IN, the HEA colloquium at the Department of Physics

25. **Kargaltsev O.** & Pavlov G. "*Chandra observations of Pulsar-Wind Nebulae*" , June 15-18, 2009, Marciana Marina, Isola d'Elba, Italy, "Pulsars in their diversity" conference

26. **Kargaltsev, O.** "*Pulsars and Pulsar-Wind Nebulae: TeV to X-Ray Connection*", 2008, TeV Unidentified Sources Workshop, Penn State University, PA, June 2008

27. **Kargaltsev, O.** "*X-ray view of Pulsar-Wind Nebulae*", 2008, 37th COSPAR Scientific Assembly, 13-20 July 2008, Montréal, Canada., p.1447

28. **Kargaltsev, O.** "*Chandra Observations of Radio Pulsars*", 2005, in Six Years of Science with Chandra: Dedicated to Leon Van Speybroeck

Other talks and conference presentations

1. **Kargaltsev O.,** "*Spatially resolved spectra and dynamics of PWNe*", 5th Session of the Sant Cugat Forum on Astrophysics, Sant Cugat, Spain, June 14-17, 2016, contributed talk

2. **Kargaltsev, O.**, Pavlov, G. G., Rangelov, B., Hare, J. "*Fast-moving ejecta from the gamma-ray binary PSR B1259-63/LS 2883*", 29th International Astronomical Union General Assembly, Honolulu, August 3-14, 2015, contributed talk

3. O'Donnel, C., Hahn, P., **Kargaltsev**, **O**., Cobb, B., & Teodorescu, R. "*Improved Conceptual Understanding in Active Learning Reformed Introductory Astronomy Courses*", 2015 AAPT meeting, July 25-29, 2015, College Park, MD

4. **Kargaltsev, O.**, Pavlov, G. G., Durant, M., Volkov, I., & Hare, J. "*Variable nebula of PSR B1259-63 resolved by Chandra*", American Astronomical Society, AAS Meeting #223, 2014, #114.05

   Kargaltsev, O., Bykov, A., Krassilchtchikov, A., Rangelov, B., Pavlov, G., Klingler, N., Kropotina, J., & Levenfish, K., "*The inner structure of the Vela pulsar-wind nebula*", 40th COSPAR Scientific Assembly, 2-10 August 2014, Moscow, Russia, Abstract E1.15-10-14

5. Brehm, D., **Kargaltsev, O.**, Rangelov, B., Volkov, I., & Pavlov, G. G. "*Automated classification of Chandra X-ray sources*" 2014, American Astronomical Society Meeting Abstracts, 223, \#255.13

6. Klingler, N., Rangelov, B., **Kargaltsev, O.**, et al. "*Deep Chandra observations of pulsar tails: PSR B0355+54*" 2014, American Astronomical Society Meeting Abstracts, 223, #153.28

7. Rangelov, B., **Kargaltsev, O**., & Pavlov, G. G. "*Gamma-ray and X-ray Properties of Pulsar Wind Nebulae and Unidentified Galactic TeV Sources*" 2014, American Astronomical Society Meeting Abstracts, 223, #153.22

8. Hare, J., Rangelov, B., Posselt, B., **Kargaltsev, O**., & Pavlov, G. G. "*Chandra and Suzaku observations of two galactic TeV sources*" 2014, American Astronomical Society Meeting Abstracts, 223, #153.21

9. **Kargaltsev, O.**, Pavlov, G. G., Durant, M., Volkov, I., & Hare, J. "*Variable nebula of PSR B1259-63 resolved by Chandra*" 2014, American Astronomical Society Meeting Abstracts, 223, #114.05

10. Arumugasamy, P., Pavlov, G., **Kargaltsev, O.** "*XMM-Newton observations of the distant energetic pulsar J2022+3842*" 2013, XMM-Newton Workshop: The Fast and the Furious: Energetic Phenomena in Isolated Neutron Stars, Pulsar Wind Nebulae and Supernova Remnants, 22-24 May, 2013, Madrid, Spain.

11. Pavlov, G., **Kargaltsev, O**., Posselt, B.; Durant, M. "*X-ray observations of rotation-powered pulsars*" 2013, XMM-Newton Workshop: The Fast and the Furious: Energetic Phenomena in Isolated Neutron Stars, Pulsar Wind Nebulae and Supernova Remnants, 22-24 May, 2013, Madrid, Spain.

12. Pavlov, G. & **Kargaltsev, O.** "*X-ray properties of rotation-powered pulsars*", 2013, IAU Symposium, 291, 117

13. **Kargaltsev, O.**, Durant, M., Pavlov, G. G., Bykov, A. M., Kropotina, J. & Levenfish, K. "*The Rotating Spiral Structure of the Vela Pulsar Jet*", 2013, American Astronomical Society, AAS Meeting #221, #443.21

14. Arumguasamy, P., Posselt, B., Pavlov, G. G., Manchester, R. N. & Shannon, R. & **Kargaltsev, O.** "*XMM-Newton Observation of the Very Old Pulsar J0108-1431*", 2013, American Astronomical Society Meeting Abstracts, 221, #412.07

15. **Kargaltsev, O.**, Pavlov, G. G., Durant, M., Kropotina, J., Levenfish, K., Bykov, A. M. "*Resolving The Remarkable Vela Pulsar Wind Nebula In Space And Time With Chandra*." 2011, AAS High Energy Astrophysics Division, 12, #20.09

16. Durant, M., **Kargaltsev, O.**, & Pavlov, G. G. "*Pulsar Spectra from IR to Gamma-rays*", 2011, AAS High Energy Astrophysics Division, 12, #20.06

17. Durant, M., **Kargaltsev, O.**, & Pavlov G. G., "*Pulsar-wind nebulae: Studying particle SED and its evolution with spatially-resolved spectra*", 2011, July 11-15, St. Petersburg, Russia

18. Durant, M., **Kargaltsev, O.**, & Pavlov, G. "*Old But Hot: Ultraviolet Spectrum Of The Millisecond Pulsar J0437-4715*", 2010, Bulletin of the American Astronomical Society, 41, #315.05

19. Durant, Martin, **Kargaltsev, O**., & Pavlov, G. "*Old But Hot: Ultraviolet Spectrum Of The Millisecond Pulsar J0437-4715*", AAS Meeting #216, #315.05

20. Pavlov, G. & **Kargaltsev, O.** "*Chandra Observations of the Vela Pulsar Wind Nebula*", Chandra's First Decade of Discovery, 22-25 September, 2009 in Boston, MA

21. **Kargaltsev O.** & Pavlov G. "*Pulsar-Wind Nebulae in the Chandra Era*" at "Supernova Remnants And Pulsar Wind Nebulae In The Chandra Era", July 8-10, 2009, Boston, MA

22. Schmitt, B., **Kargaltsev, O.**, & Pavlov, G. G. "*XMM-Newton Observations of Two Candidate Supernova Remnants*" July 8-10, 2009, Boston, MA

23. Park, Sangwook, **Kargaltsev, O**., Pavlov, G., Mori, K., Slane, P. O., Hughes, J. P., Burrows, D. N., & Garmire, G. P. 2009 "*Nonthermal X-Rays from Supernova Remnant G330.2+1.0 and the Characteristics of its Central Compact Object* ", BAAS, 41, 503

24. Mori, K., **Kargaltsev, O**., Pavlov, G. G. et al. "*Suzaku mapping observations of the Vela X*", 2008, 37th COSPAR Scientific Assembly, 13-20 July 2008, Montréal, Canada., p. 2105

25. **Kargaltsev, O.** & Pavlov, G. G. "*The Puzzles of the Vela Pulsar-Wind Nebula*", 2008, 10th AAS High Energy Astrophysics Division Meeting, HEAD, #21.06

26. Pavlov, G. G., **Kargaltsev, O**., & Wong, J. "*Young Energetic PSR J1617-5055, Its Underluminous Nebula, And TeV Source HESS J1616-508*" ", 2008, 10th AAS High Energy Astrophysics Division Meeting, HEAD, #12.07

27. **Kargaltsev, O.** & Pavlov G. G. "*New puzzles from Vela pulsar-wind nebula*", 2008, AAS High-Energy Astrophysics Division Meeting #10, #12.06

28. **Kargaltsev, O.**, Pavlov, G., Sanwal, D., et al. "*X-ray Emission From Vela-like Pulsar B1800-21 And Other Young Pulsars Observed With Chandra*" 2006, AAS High-Energy Astrophysics Division Meeting #9, #7.57

29. **Kargaltsev, O**., & Pavlov, G. G., "*X-ray Properties of Pulsars and their Wind Nebulae*", 2004, AAS Meeting 205, #102.14

30. Pavlov, G. G., **Kargaltsev, O**., Romani, R., & Zavlin, V. , "*Far-UV radiation from pulsars: Connecting X-rays with optical*", 2004, American Astronomical Society, HEAD meeting #8, #11.02

31. Pavlov G. G., **Kargaltsev, O**., Zavlin V. E., & Sanwal, D, "*Pulsars and Pulsar-wind Nebulae in the Chandra Era*", 2003, in Four Years of Chandra Observations: A Tribute to Riccardo Giacconi

32. Teter, M. A., Pavlov, G. G., Sanwal, D. & **Kargaltsev, O**., "*The Twisting Jet from the Vela Pulsar*", 2002, 200th AAS Meeting, #78.06; BAAS, Vol. 34, p.779

33. **Kargaltsev, O**., Pavlov, G. G., Sanwal, D., Garmire, G. P., "*The Compact Central Source of the SNR G266.2-1.2*", 2002, 200th AAS Meeting, #72.02; BAAS, Vol. 34, p.764

34. Pavlov, G. G., Sanwal D., **Kargaltsev, O**., & Garmire, G. P., "*The Vela Pulsar and its Synchrotron Nebula: Surprises from Chandra*" , 2001, in Two Years of Science with Chandra Symposium in Washington.

Awards, nominations, and fellowships:

2016	GW OVPR Early Career Researcher Award
2015	Innovative Cross-Disciplinary Excellence (DICE) Award
2015	Columbian College Facilitating Fund (CCFF) Award
2015	Nominated from GW for 2016 Blavatnik National Awards for Young Scientists
2004	Graduate Alumni Association Dissertation Award, Penn State
2002	Daniel Zaccheus Foundation for Astronomical Science, Travel Grant
1998-2001	Braddock Fellowship, Penn State (for excellence in studying)
1996, 1998	I. E. Tamm Theoretical Department fellowship at P. N. Lebedev Physical Institute

1997-1998 Russian Foundation in Fundamental Research, grant #96-02-18203

Professional Peer Review Panel Service:

Natural Sciences and Engineering Research Council of Canada, external reviewer: 2018/12
NASA Postdoctoral Fellowship program: 2018/11, 2018/04, 2017/08, 2016/03, 2015/12, 2014/11, 2011/08
NASA *Chandra X-ray Observatory* panels: 2018/06, 2014/06, 2010/06
NYU Abu Dhabi Research Enhancement Fund, external reviewer: 2016/03
European Space Agency *XMM-Newton X-ray Observatory* panel: 2015/11
NASA *NuSTAR X-ray Observatory Cycle 1* panel: 2015/02
NASA *Hubble Space Telescope* Cycle 21 panel: 2013/05 :
NASA *Fermi Gamma-ray Observatory* panel: 2010/04
NASA Astrophysics Data Analysis panel: 2009/08

Journal Refereeing:

Regular reviewer (5-6 papers per year) for top-ranked international astronomy and astrophysics journals including Nature, Astrophysical Journal, Astronomy and Astrophysics, Monthly Notices of Royal Astronomical Society, Publications of the Astronomical Society of Japan.

Membership in professional societies:

- 2016 – present Honorary Member of Sigma Pi Sigma Society
- 2014 – present American Association of Physics Teachers
- 2000 – present American Astronomical Society

Research collaboration membership:

- 2017 – present Member of eXTP collaboration (X-ray timing mission) led by China with NASA contribution
- 2016 – present Member of AMEGO (gamma-ray mission proposed to NASA) team
- 2015 – present Member of Athena X-ray Observatory Science Working Group
- 2014 – present Member of SCORPIO (formerly OCTOCAM; new instrument on Gemini 8-m telescope) team
- 2012 – present Member of Chandra X-ray Visionary Project team "A Legacy Study of the Relativistic Shocks in Pulsar-Wind Nebulae" (with Harvard, Stanford, and Penn State scientists)
- 2008 – present Associate Member of the VERITAS collaboration

Press releases:

- "A tale of two pulsars' tails", the Pennsylvania State University News Release, 01/17/2017
- "Observatories combine to crack open the Crab nebula", NASA/STScI News Release, 05/10/2017
- "Astronomers Find the First 'Wind Nebula' Around a Magnetar", NASA News Release, 06/21/2016
- "Pulsar Punches Hole in Stellar Disk", NASA/CXC News Release, 07/22/2015
- "Supernova Cleans Up Its Surroundings", NASA/CXC Media Release, 04/10/2014
- "New Chandra Movie Features Neutron Star Action", NASA/CXC News Release, 01/07/2013
- "Strange emissions may help unlock mysteries of pulsars", NBC News, 8/23/2012
- "Geriatric Pulsar Still Kicking", NASA/CXC News Release, 02/26/2009
- "Firehose-like jet discovered in action", NASA/CXC News Release, 06/30/2003

Postdoctoral scholars/scientists supervised:

- Blagoy Rangelov, 2013-2016, now assistant professor (tenure-track) at the Texas State University
- Martin Durant, 2008-2012, now data scientist and software engineer at Continuum Analytics

Physics Ph.D. Students Directed at GW:

- Jeremy Hare, Ph. D. 2018, postdoc at the University of California, Berkeley since September 2018
- Noel Klingler, Ph.D. 2018, postdoc at the Pennsylvania State University starting January 2018

Undergraduate Physics students supervised at GW:

- Derek Brehm (now graduate student at the John Hopkins University)
- Ali Ajmiri (now Systems Developer at Accenture Federal Services)
- Laura Carpenter (now Manager, Acquisiton Marketing at Casper)
- Jacob Mator Aketch (now Research and Teaching Assistant at University of Juba)

High-school student research at GW:

- Samantha O'Sullivan, 2017-2018, now undergraduate student at Harvard University
- Amir McGettrick, 2016
- Corinne Hall, 2016-2017

Courses taught at GW:

- "Stars, Planets and Life in the Universe" (ASTR 1001)
- "Origins of Cosmos" (ASTR-1002)
- "Space Astrophysics" (ASTR-3161)
- "Computational Physics" (PHYS-3181)
- "Applied Statistics and Data Analysis in Physics"' (PHYS 6810)
- "Special Topics in Astrophysics" (PHYS 8150)

Semester	Course	Course Title	Students	Credits	Level	Development
Spring 2018	PHYS 6810*	Applied Statistics and Data Analysis in Physics	5	3	G	Term Project Component
Spring 2018	PHYS 3181	Computational Physics	6	3	aUG	New topics added
Fall 2017	ASTR-1001-11	Stars, Planets, and Life in the Universe (*Scale-Up*)	64	4	UG	Course re-design
Spring 2017	PHYS 3181	Computational Physics	5	3	aUG	Course Development
Fall 2016	ASTR-1001-10	Stars, Planets, and Life in the Universe (Lect.)	102	4	UG	Research activities
Fall 2016	ASTR-1001-30	Stars, Planets, and Life in the Universe (Lab)	22	0	UG	Lab quiz & discussion
Fall 2016	ASTR-1001-31	Stars, Planets, and Life in the Universe (Lab)	28	0	UG	Lab quiz & discussion
Fall 2016	ASTR-1001-32	Stars, Planets, and Life in the Universe (Lab)	24	0	UG	Lab quiz & discussion
Fall 2016	ASTR-1001-33	Stars, Planets, and Life in the Universe (Lab)	28	0	UG	Lab quiz & discussion
Spring 2016	ASTR-3161	Space Astrophysics	11	3	aUG	Group problem-solving
Spring 2016	PHYS 6810*	Applied Statistics and Data Analysis in Physics	8	3	G	New course
Fall 2015	PHYS 6810*	Applied Statistics and Data Analysis in Physics	–	3	G	Course Development
Fall 2015	—	Mid-tenure teaching release	–	–	–	–
Spring 2015	AST 1002	Origins of the Cosmos (*Scale-Up*)	49	4	UG	Group Peer Evaluation
Spring 2015	PHYS 4195	Undergraduate Research in Astrophysics	1	3	aGU	Individual
Spring 2015	PHYS 8150	Selected Topics in Astrophysics	4	3	G	Group-problem solving
Fall 2014	AST 1002	Origins of the Cosmos (*Scale-Up*)	58	4	UG	Remote observing
Fall 2014	PHYS 4195	Undergraduate Research in Astrophysics	2	3	aGU	Individual
Spring 2014	ASTR-2161†	Space Astrophysics	3	3	aUG	Research paper
Spring 2014	PHYS-6630†	Astrophysics I	3	3	G	Extra content and HW
Spring 2014	PHYS 4195	Undergraduate Research in Astrophysics	2	3	aGU	Individual
Fall 2013	AST 1002‡	Origins of the Cosmos (*Scale-Up*)	36	4	UG	Group Peer Evaluation
Fall 2013	PHYS 4195	Undergraduate Research in Astrophysics	1	3	aGU	Individual
Spring 2013	ASTR-2161	Space Astrophysics	4	3	aUG	New course
Spring 2013	PHYS 4195	Undergraduate Research in Astrophysics	1	3	aGU	Individual
Fall 2012	ASTR-2161	Space Astrophysics	4	3	aUG	Course Development

Notes: iUG – introductory undergraduate, aUG – advanced undergraduate (3XXX or higher number), G – graduate; * – taught 1/3 of the course content; † – these two courses were cross-listed and taught simultaneously; ‡ – co-taught with Prof. Cobb Kung (primary instructor).

Notes: I am on sabbatical leave starting Fall 2018. Scale-Up=flipped classroom teaching mode.

Service appointments at GW:

- Graduate Admissions Director for Physics Department (01/2016-09/2018)
- Member of the astrophysics faculty search committee in 2015-2016
- Physics Department Colloquium Committee, Member, 2012, 2014
- Chair of the Astronomy Intro Courses teaching team, 2014-2015
- Physics Department Web Committee, Member, 2013-2015
- Physics Department Equipment committee, Member, 2013.