

CURRICULUM VITAE

Name: Dr. Bidzina Kapanadze

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Date of Birth: 1976 April 27

Place of Birth: Akhaltsike, Georgia

Degree: Doctor of Astrophysics

Nationality: Georgian

Scientific Interest: extragalactic astronomy; active galactic astronomy; black holes; relativistic outflows; high-energy astronomy

Education:

- 2007-2010 - Ilia State University (PhD courses); PhD thesis: Optical Behaviour of X-ray Selected BL Lacertae Objects.
- 2000-2003 - Javakhishvili State University (postgraduate courses)
- 1998 - 2000 - Javakhishvili State University (master courses)
- 1993-1998 - Akhaltsikhe Branch of Javakhishvili State University
- 1983-1993 - Primary/secondary school

Work experience:

- 2016 - present - Ilia State University, associate professor at the School of Engineering and Natural Sciences
- 2016 - 2016 - Ilia State University, assistant- professor at the School of Engineering and Natural Sciences
- 2007 - present - Abastumani Astrophysical Observatory at Ilia State University, researcher
- 2001 - 2007 - Abastumani Astrophysical Observatory at Georgian Academy of

- Sciences , assistant-researcher
- 2000 - 2007 - Akhaltsikhe Branch of Javakhishvili Tbilisi State University, assistant

Supervising Students:

Supervisor of one PhD and two master students

Scientific Stays Abroad:

- 2016 July -- Julius-Maximilain University (Wuerzburg, Germany)
- 2015 March - April -- Astronomy Department of Michigan University (Ann Arbor, USA)
- 2013 January - March -- INAF/IASF-Palermo (Italy)
- 2011 December - 2012 February - INAF/IASF-Palermo (Italy)

Publications (last 10 years):

- Kapanadze, B.; Vercellone, S.; Romano, P.; Hughes, P., Aller, M., Aller, H., Kharshiladze, O., Kapanadze, S., Tabagari, L., *X-ray Flaring Activity of Markarian 421 in the First Half of 2013*, 2016, **The Astrophysical Journal**, 854, 66
- Kapanadze, B.; Dorner, D.; Vercellone, S.; Romano, P.; Hughes, P.; Aller, M.; Aller, H.; Reynolds, M.; Kapanadze, S.; Tabagari, L., *The second strong X-ray flare and multifrequency variability of 1ES 1959+650 in 2016 January-August*, 2018, **Montly Notices of Royal Astronomical Society**, 473, 2542
- Kapanadze, B.; Dorner, D.; Romano, P.; Vercellone, S.; Mannheim, K.; Lindfors, E.; Nilsson, K.; Reinthal, R.; Takalo, L.; Kapanadze, S.; Tabagari, L., 2017, *The prolonged X-ray flaring activity of Mrk 501 in 2014*, 2017, **Montly Notices of Royal Astronomical Society**, 469, 1655
- Kapanadze, S.; Kapanadze, B.; Romano, P.; Vercellone, S.; Tabagari, L., *The swift observations of BL Lacertae object 1ES 2344+514*, 2017, **Astrophysics and Space Science**, 362, 196
- Kapanadze, B.; Dorner, D., Romano, P.; Vercellone, S.; Aller, H., Aller, M., Hughes, P., Reynolds, M., Kapanadze, S., Tabagari, L., *X-ray Flaring Activity of Markarian 421 in the First Half of 2013*, 2016, **The Astrophysical Journal**, 831, 102
- Kapanadze, B.; Dorner, D., Romano, P.; Vercellone, S.; Kapanadze, S.; Mdzinarishvili, T., *A recent strong X-ray flaring activity of 1ES 1959+650 with possibly less efficient stochastic acceleration*, 2016, **Montly Notices of Royal Astronomical Society**, 461, L26
- Kapanadze, B.; Romano, P.; Vercellone, S.; Kapanadze, S.; Mdzinarishvili, T.; Kharshiladze, G., *The long-term Swift observations of the high-energy peaked BL Lacertae source 1ES 1959+650*, 2016, **Montly Notices of Royal Astronomical Society** , 457, 704
- Kapanadze, B.; Dorner, D.; Vercellone, S.; Romano, P.; Kapanadze, S.; Tabagari, L., 2017, *The GeV-band variability of Mrk 421*, **AIP Conference Proceedings**, id.050021
- Kapanadze, B.; Romano, P.; Vercellone, S.; Kapanadze, S.; Mdzinarishvili, T.;

- Kharshiladze, G., *The Presence of X-ray Spectral Curvature in HBLs at Different Redshifts*, 2015, Proceedings of Science, <http://pos.sissa.it/cgi-bin/reader/conf.cgi?confid=246>, id.56
- Kapanadze, B.; Romano, P.; Vercellone, S.; Kapanadze, S.; Kharshiladze, G., *The Swift-XRT observations of HBL Source 1ES 1959+650*, 2014, Proceedings of Swift: 10 Years of Discovery (SWIFT 10), held 2-5 December 2014 at La Sapienza University, Rome, Italy. Online at <http://pos.sissa.it/cgi-bin/reader/conf.cgi?confid=233>
- Kapanadze, B., *Microvariability of 0.3-10 keV Flux in HBL Source Mrk 421*, Instability and Evolution of Stars, Proceedings of the Byurakan-Abastumani Colloquium dedicated to Ludwik Mirzoyan's 90th anniversary, p. 116-119, 2014
- Kapanadze, B., Romano, P.; Vercellone, S.; Kapanadze, S., *The X-ray behaviour of the high-energy peaked BL Lacertae source PKS 2155-304 in the 0.3-10 keV band*, Monthly Notices of the Royal Astronomical Society, 2014, Vol. 444, Issue 2, pp.1077-1094
- Kapanadze, Bidzina; Kapanadze, Sergo; Vardosanidze, Manana, *Microvariability of 0.3-10 keV Flux in HBL Source PKS 2155-304*, International Journal of Modern Physics: Conference Series, Vol. 28, id. 1460179
- Kapanadze, B.; Kapanadze, S., *Swift/XRT observations of high-energy selected BL Lacertae source PKS 2155-304*, Memorie della Societa Astronomica Italiana, 2014, Vol. 84, pp.737-742
- Kapanadze, Bidzina Z. , *Catalog and Statistical Study of X-Ray Selected BL Lacertae Objects*, The Astronomical Journal, 2013, Vol. 145:31, 28 pp.
- Kapanadze, Bidzina Z.; Janiashvili, Edward, *Variable synchrotron emission from BL Lacertae objects. II. Optical and X-ray flares in HBL source 1ES 1959+650*, Astrophysics and Space Science, Volume 339, Issue 2, pp.339-353
- Kapanadze, Bidzina Z., *Variable Synchrotron Emission from BL Lacertae Objects. I. Shock-in-Jet Scenario*, Astrophysics and Space Science, Vol. 337, Iss.1, pp.343-35
- Kapanadze, B. Z., *X-ray selected BL Lacertae objects: catalogue and statistical properties*, Advances in Astronomy and Space Physics, Vol. 2, p.45-48
- Kapanadze, B., *Optical R band photometry of selected HBLs*, Memorie della Societa Astronomica Italiana, 2010, Vol. 81, p.235
- Kapanadze, Bidzina Z., *Optical R-band variability of seven X-ray-selected BL Lacertae objects*, Monthly Notices of the Royal Astronomical Society, Vol. 398, Issue 2, pp. 832-840
- Kapanadze, B. Z., *Observational evidences of multiple shock waves in X-ray selected BL Lacertae objects*, Astrophysics, Vol. 52, issue 3, pp. 358-368

Workshops:

- **The 29th Texas Symposium on Relativistic Astrophysics**, December 3-8, Cape Town, South Africa; oral cotribution: *Particle Acceleration Processes in the Jets of High-Energy Peaked BL Lacertae Objects*

- **Mondelo Workshop 2017: Multifrequency Behaviour of Coemic Sources**, June 12-17, 2017, Palermo, Italy; oral contribution: *The TeV-Detected Blazar 1ES 1959+650: A Short Review*
- **HAP Workshop: Monitoring the Non-thermal Universe**, December 7-9, 2017, Cochem, Germany. Poster contribution: *The Second Strong X-ray Flare in 1ES 1959+650* (co-presenter: Daniela Dorner)
- **6th International Symposium on High-Energy Gamma-Ray Astronomy (Gamma2016)**, July 11-15, 2016, Heidelberg, Germany; oral contribution: *The GeV-band Variability of Markarian 421*
- **Multifrequency Behaviour of High Energy Cosmic Sources - XI, Palermo, Italy**; 2015 May 25-30; oral contribution: *The Presence of X-ray Spectral Curvature in HBLs at Different Redshifts.*
- **Swift: 10 Years of Discovery, La Sapienza University, Rome, Italy**; 2014 December 2-5; poster contribution: *The Swift-XRT observations of HBL Source 1ES 1959+650*
- **The Swift Science Planning Meeting, State College, Pennsylvania, USA**; 2013 October 28-31; oral contribution: *Variability Studies of High-Energy Peaked BL Lacs*
- **The 4th High Energy Phenomena in Relativistic Outflows (HEPRO IV), Heidelberg, Germany**; 2013 July 23-26; oral contribution: *Microvariability Of 0.3-10 Kev Flux In HBL Source PKS 2155-304*
- **Byurakan – Abastumani Colloquium Devoted to the 90th Anniversary of L.V.Mirzozjan, Byurakan, Armenia**; 2013 August 26-28; oral contribution: *X-ray Microvariability in Markarian 421*
- **X-ray astronomy: towards next 50 years, Milan, Italy**; 2013 October 1-4; poster contribution: *Swift/XRT Observations of High-Energy Selected BL Lacertae Source PKS 2155-304*
- **18TH Young Scientists' Conference on Astronomy and Space Physics, Kiev, Ukraine**; 2011 May 2-5; invited talk: *X-Ray Selected BL Lacertae Objects: Complete Catalogue and Statistical Properties.*
- **Magnetic Fields on Scales from Kilometers to Kiloparsec: Properties and Origin, Crakow, Poland**; 2010 May 17-21; oral contribution: *Magnetic Fields in Blazar Jets*
- **Radiation of Cosmic Objects from Radio through Gamma-rays, Abastumani, Georgia**; 2009 October 8-10; oral contribution: *Emission Processes in Blazars.*
- **FRASCATI WORKSHOP 2009: Multifrequency Behaviour of High-energy Cosmic Sources, Vulcano, Italy**; 2009 May 25-30; oral contribution: *Optical R band Photometry of Selected HBLs*

Lecture Courses:

- **Introduction into Stellar and Extragalactic Astronomy** (Bachelors, Ilia State University)
- **Extragalactic Astronomy** (PhD and master students, Ilia State University)
- **Physics of Cosmic Rays** (PhD and master students, Ilia State University)
- **Multifrequency Astronomy** (PhD and master students, Ilia State University)
- **Selected topics in Astronomy** (PhD and master students, Ilia State University)
- **Astronomical Software Packages** (PhD students, Ilia State University)
- **Introduction in Stellar and Extragalactic Astronomy** (bachelor students, Ilia State University)

Grants:

- **Fundamental Research Grant**, Shota Rustaveli National Science Foundation (Principal Investigator, 2015 May - 2018 May)
- **Weiser Foundation Grant** (2015 March-April)
- **Science Internship Grant**, Shota Rustaveli National Science Foundation (2011 November - 2012 February, 2013 January-March)
- **President Grant for Fellow Researchers**, Shota Rustaveli National Science Foundation, 2010-2011)
- **Individual Travel Grant**, Shota Rustaveli National Science Foundation (2009, 2011, 2012, 2013(2), 2014, 2015, 2016)
- **Mobility Grant**, Shota Rustaveli National Science Foundation (2017)

International Collaboration:

- Stefano Vercellone, Patrizia Romano (Osservatorio di Brera, Milano, Italy)
- Daniela Dorner, Karl Mannheim, Amit Shukla (Julius-Maximilian University of Wuerzburg, Germany)
- Hugh Aller, Margo Aller, Phylip Hughes, Mark Reynolds (University of Michigan, USA)
- Segio Cellone (San-Juan Observatory, Argentina)
- The Swift Target of Opportunity Observations Program (The Swift Satellite, NASA; 110 approved requests to date)

Languages:

Georgian - native language

English - fluent

Russian - fluent

Italian - intermediate

German - intermediate