

AstroMundus – Astrophysics, Editions 1 to 5 (2010-2016)

Scientific publications on professional journals and conference proceedings authored or co-authored by AstroMundus students and based on their Master thesis work or on other projects they worked on during their Masters – updated list as of June 2018

Student: **Khan Muhammad Bin Asad** (AstroMundus Edition 1)

- "Discovery of the correspondence between intra-cluster radio emission and a high pressure region detected through the Sunyaev-Zel'dovich effect"
Authors: C. Ferrari, H.T. Intema, E. Orrù, F. Govoni, M. Murgia, B. Mason, H. Bourdin, **K.M. Asad**, P. Mazzotta, M.W. Wise, T. Mroczkowski, and J. H. Croston
Astronomy & Astrophysics, 534, L12 (2011)
<https://www.aanda.org/articles/aa/pdf/2011/10/aa17788-11.pdf>

Student: **Yu-Cian Hong** (AstroMundus Edition 1)

- "Stability of Giant Planet Moons during Planet-Planet Scattering Events"
Authors: **Y-C. Hong**, S. N. Raymond, J. I. Lunine
Conference Proceedings - European Planetary Science Congress Abstracts
Vol. 6, EPSC-DPS2011-1696, 2011, EPSC-DPS Joint Meeting 2011
<http://meetingorganizer.copernicus.org/EPSC-DPS2011/EPSC-DPS2011-1696.pdf>

Student: **Christopher J. Marvin** (AstroMundus Edition 1)

- "CARMENES instrument overview"
Authors: Quirrenbach, A., Amado, P.J., Caballero, J.A., [...], **Marvin, C.J.**, et al.
SPIE - Proceedings Volume 9147, Ground-based and Airborne Instrumentation for Astronomy V; 91471F (2014), doi: 10.1117/12.2056453
<https://doi.org/10.1117/12.2056453>
- "CARMENES: an overview six months after first light"
Authors: Quirrenbach, A., Amado, P.J., Caballero, J.A., [...], **Marvin, C.**, et al.
SPIE - Proceedings Volume 9908, Ground-based and Airborne Instrumentation for Astronomy VI; 990812 (2016), doi: 10.1117/12.2231880
<https://doi.org/10.1117/12.2231880>

Student: **Remudin Reshid Mekuria** (AstroMundus Edition 1)

- "Cosmological fluid mechanics with adaptively refined large eddy simulations"
Authors: Schmidt, W., Almgren, A.S., Braun, H., Engels, J.F., Niemeyer, J.C., Schulz, J., **Mekuria, R.R.**, Aspden, A.J., Bell, J.B.
Monthly Notices of the Royal Astronomical Society 440, 3051 (2014)
<https://academic.oup.com/mnras/article/440/4/3051/1115781>

Student: **Nemanja Rakić** (AstroMundus Edition 1)

- "The intrinsic Baldwin effect in broad Balmer lines of six long-term monitored AGNs"
Authors: **Rakić, N.**, La Mura G., Ilić, D., Shapovalova A.I., Kollatschny, W., Rafanelli, P., Popović, L.C.
Astronomy & Astrophysics, 603, A49 (2017)
<http://adsabs.harvard.edu/abs/2017arXiv170306188R>

Student: **Gerardo Martinez-Aviles** (AstroMundus Edition 2)

- "Grandeur in this view of life: N-body simulation models of the Galactic habitable zone"
Authors: Vukotić, B., Steinhauser, D., **Martinez Aviles, G.**, Cirkovic, M. M., Micic, M., Schindler, S.
Monthly Notices of the Royal Astronomical Society, 459, 3512 (2016)
<https://arxiv.org/abs/1604.01664>

Student: **Kalyan Kumar Radhakrishnan Santhakumari** (AstroMundus Edition 2)

- "Ground layer correction: the heart of LINC-NIRVANA"
Authors: **Kalyan Kumar Radhakrishnan Santhakumari**, Luca Marafatto, Maria Bergomi, Valentina Viotto, Jacopo Farinato, Roberto Ragazzoni, Tom Herbst, Thomas Bertram, Marco Dima, Peter Bizenberger, Florian Briegel, Frank Kittmann, Lars Mohr, Demetrio Magrin
Proc. SPIE 9148, Adaptive Optics Systems IV, 91482R (21 July 2014)
doi: 10.1117/12.2054988
<https://doi.org/10.1117/12.2054988>
- "First light of the LINC-NIRVANA Pathfinder experiment"
Authors: M. Bergomi, V. Viotto, C. Arcidiacono, L. Marafatto, J. Farinato, H. Baumeister, T. Bertram, J. Berwein, F. Briegel, A. Conrad, F. Kittman, D. Kopon, R. Hofferbert, D. Magrin, **K. K. Radhakrishnan Santhakumari**, A. Puglisi, M. Xompero, R. Briguglio, F. Quiros-Pacheco, T. M. Herbst, R. Ragazzoni
Proc. SPIE 9148, Adaptive Optics Systems IV, 91482Y (21 July 2014)
doi: 10.1117/12.2055533
<https://doi.org/10.1117/12.2055533>
- "Shaping the PSF to nearly top-hat profile: CHEOPS laboratory results"
Auhors: Demetrio Magrin, Jacopo Farinato, Gabriele Umbriaco, **Kalyan Kumar Radhakrishnan Santhakumari**, Maria Bergomi, Marco Dima, Davide Greggio, Luca Marafatto, Roberto Ragazzoni, Valentina Viotto, Matteo Munari, Isabella Pagano, Gaetano Scandariato, Salvatore Scuderi, Giampaolo Piotto, Thomas Beck, Willy Benz, Christopher Broeg, Virginie Cessa, Andrea Fortier, Daniele Piazza
Proc. SPIE 9143, Space Telescopes and Instrumentation 2014: Optical, Infrared, and Millimeter Wave, 91434L (2 August 2014); doi: 10.1117/12.2055858
<https://doi.org/10.1117/12.2055858>
- "Wavefront sensing in a partially illuminated, rotating pupil"
Auhors: Thomas Bertram, **Kalyan Kumar Radhakrishnan Santhakumari**, Luca Marafatto, Carmelo Arcidiacono, Jürgen Berwein, Roberto Ragazzoni, Thomas M. Herbst
Proc. SPIE 9148, Adaptive Optics Systems IV, 91485M (22 August 2014)
doi: 10.1117/12.2057384
<https://doi.org/10.1117/12.2057384>

Student: **Rosita Kokotanekova** (AstroMundus Edition 3)

- "Viscous Kelvin-Helmholtz instabilities in highly ionized plasmas"
Authors: Roediger, E., Kraft, R.P., Nulsen, P., Churazov, E., Forman, W., Brueggen, M., **Kokotanekova, R.**
Monthly Notices of the Royal Astronomical Society, 436, 1721 (2013)
<https://academic.oup.com/mnras/article-pdf/436/2/1721/3952834/stt1691.pdf>

- "Stripped elliptical galaxies as probes of ICM physics. I. Tails, wakes, and flow patterns in and around stripped ellipticals"
Authors: Roediger, E., Kraft, R.P., Nulsen, P., Forman, W.R., Machacek, M., Randall, S., Jones, C., Churazov, E., **Kokotanekova, R.**
The Astrophysical Journal, 806, 103 (2015)
<http://iopscience.iop.org/article/10.1088/0004-637X/806/1/103/pdf>
- "Stripped elliptical galaxies as probes of ICM physics: II. Stirred, but mixed? Viscous and inviscid gas stripping of the Virgo elliptical M89"
Authors: Roediger, E., Kraft, R.P., Nulsen, P., Forman, W.R., Machacek, M., Randall, S., Jones, C., Churazov, E., **Kokotanekova, R.**
The Astrophysical Journal, 806, 104 (2015)
<http://iopscience.iop.org/article/10.1088/0004-637X/806/1/104/pdf>

Student: Uroš Meštrić (AstroMundus Edition 3)

- "Galaxy And Mass Assembly (GAMA): the Stellar Mass Budget by Galaxy Type"
Authors: Moffett, A. J., Ingarfield, S. A., Driver, S. P., Robotham, A. S. G., Kelvin, L. S., Lange, R., **Meštrić, U.**, Alpaslan, M., Baldry, I. K., Bland-Hawthorn, J., Brough, S., Cluver, M. E., Davies, L. J. M., Holwerda, B. W., Hopkins, A. M., Kafle, P. R., Kennedy, R., Norberg, P., Taylor, E.N.
Monthly Notices of the Royal Astronomical Society, 457, 1308 (2016)
<https://arxiv.org/pdf/1512.02342.pdf>

Student: Cikota Aleksandar (AstroMundus Edition 4)

- "A photometric search for active Main Belt asteroids"
Authors: Cikota, S., Ortiz, J. L., **Cikota, A.**, Morales, N., Tancredi, G.
Astronomy & Astrophysics 562, A94 (2014)
<https://www.aanda.org/articles/aa/pdf/2014/02/aa21679-13.pdf>
- "Gamma-Ray Bursts Trace UV Metrics of Star Formation over $3 < z < 5$ "
Authors: Greiner, J., Fox, D. B., Schady, P., Krühler, T., Trenti, M., **Cikota, A.**, Bolmer, J., Elliott, J., Delvaux, C., Perna, R., Afonso, P., Kann, D. A., Klose, S., Savaglio, S., Schmidl, S., Schweyer, T., Tanga, M., Varela, K.
The Astrophysical Journal, 809, 76 (2015)
<http://iopscience.iop.org/article/10.1088/0004-637X/809/1/76/pdf>
- "Determining Type Ia Supernova Host Galaxy Extinction Probabilities and a Statistical Approach to Estimating the Absorption-to-reddening Ratio R_V "
Authors: **Cikota, A.**, Deustua, S., Marleau, F.
The Astrophysical Journal, 819, 152 (2016)
<http://iopscience.iop.org/article/10.3847/0004-637X/819/2/152/pdf>

Student: Lovrić Mija (AstroMundus Edition 4)

- "The dependence of the [FUV-MUV] colour on solar cycle"
Authors: **Lovrić M.**, Tosone, F., Pietropaolo, E., Del Moro, D., Giovannelli, L., Cagnazzo, C., Berrilli, F.
Journal of Space Weather and Space Climate, Vol.7, A6 (2017)
<https://doi.org/10.1051/swsc/2017001>

Student: **Yana Khusanova** (AstroMundus Edition 5)

- “Adaptation of LSST Software Stack to ESO-NTT Near-Infrared Camera”
Authors: **Khusanova, Y.**, Jevremović, D., Temporin, S.G.
Poster paper and short presentation at the international scientific meeting LSST@Europe2 held in Belgrade, June 2016, “Session 4: LSST Science: Galaxies & poster presentation” (video-clip on the conference youtube channel, from minute 43:30 to 46:35):
https://youtu.be/Xuzn_dIT5cA
- Code developed as part of the Master thesis, publicly available on github
https://github.com/JanaSuna/obs_sofi

Student: **Ernesto Perez-Hernandez** (AstroMundus Edition 5)

- "Oscillatory patterns in the light curves of five long-term monitored type 1 active galactic nuclei"
Authors: Kovačević, A. B., **Perez-Hernandez, E.**, Popović, L. C., Shapovalova, A. I., Kollatschny, W., Ilic, D.
Monthly Notices of the Royal Astronomical Society, 475, 2051 (2018)
<https://arxiv.org/abs/1712.00309>

Student: **Bastian Proxauf** (AstroMundus Edition 5)

- "On a new and homogeneous metallicity scale for Galactic classical Cepheids I. Physical parameters"
Authors: **Proxauf, B.**, da Silva, R., Kovtyukh, V. V., Bono, G., Inno, L., Lemasle, B., Pritchard, J., Przybilla, N., Storm, J., Urbaneja, M. A., Valenti, E., Bergemann, M., Buonanno, R., D'Orazi, V., Fabrizio, M., Ferraro, I., Fiorentino, G., Francois, P., Iannicola, G., Laney, C. D., Kudritzki, R.-P., Matsunaga, N., Nonino, M., Primas, F., Romaniello, M., and Thevenin, F.
Astronomy & Astrophysics, submitted (2018)
<https://arxiv.org/abs/1805.00727>
- "Classical Cepheids and RR Lyrae stars: similar, but not too much",
Authors: Bono, G., Braga, V. F., Pietrinferni, A., Magurno, D., Dall'Ora, M., Fiorentino, G., Fukue, K., Inno, L., Marengo, M., Bergemann, M., Buonanno, R., da Silva, R., Fabrizio, M., Ferraro, I., Gilmozzi, R., Iannicola, G., Kausch, W., Kobayashi, N., Kovtyukh, V., Lemasle, B., Marconi, M., Marinoni, S., Marrese, P. M., Martinez-Vazquez, C. E., Matsunaga, N., Monelli, M., Neeley, J., Nonino, M., **Proxauf, B.**, Przybilla, N., Romaniello, M., Salaris, M., Sneden, C., Stetson, P. B., Thevenin, F., Tsujimoto, T., Urbaneja, M., Valenti, E., and Zoccali, M.
Mem.S.A.It., 87, 358 (2016)
<http://sait.oat.ts.astro.it/MmSAI/87/PDF/358.pdf>

Student: **Miika Pursiainen** (AstroMundus Edition 5)

- “The shape of relativistically broadened Fe K α line in type 1 AGN”
Authors: **Pursiainen, M.**, Jovanović, P., Popović, L.Č.
Poster paper and short presentation on Master thesis results at the X Serbian-Bulgarian astronomical conference, May 30th - June 3rd, 2016, Belgrade, Serbia
http://www.wfpdb.org/ftp/10_SBAC/presentations/53.pdf