Curriculum Vitae
Akke Esa Tapio Viitanen, MSc
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1 CONTACT

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2 PUBLICATIONS

Full list of publications is available at NASA's Astrophysics Data System: `http://adsabs.net/cgi-bin/nph-abs_connect?db_key=AST&author=Viitanen,+A`. The most important publications are listed below.

1. **Viitanen, A.**, Allevato, V., Finoguenov, A., Bongiorno, A., Cappelluti, N., Gilli, R., Miyaji, T., Salvato, M. 2019, The XMM-Newton wide field survey in the COSMOS field: Clustering dependence of X-ray selected AGN on host galaxy properties, Astronomy & Astrophysics, 629, A14, arXiv:1906.07911

2. Keihänen, E., Kurki-Suonio, H., Lindholm, V., **Viitanen, A.**, Suur-Uski, A. -S., Allevato, V., Branchini, E., Marulli, F., Norberg, P., Tavagnacco, D., de la Torre, S., Valiviita, J., Viel, M., Bel, J., Frailis, M., Sánchez, A. G. 2019, Estimating the galaxy two-point correlation function using a split random catalog, Astronomy & Astrophysics, 631, A73, arXiv:1905.01133

3. Allevato, V., **Viitanen, A.**, Finoguenov, A., Civano, F., Suh, H., Shankar, F., Bongiorno, A., Ferrara, A., Gilli, R., Miyaji, T., Marchesi, S., Cappelluti, N., Salvato, M. 2019, Chandra COSMOS Legacy Survey: Clustering dependence of Type 2 active galactic nuclei on host galaxy properties, Astronomy & Astrophysics, 632, A88, arXiv:1910.08084

4. **Viitanen, A.** 2017, AGN clustering in the COSMOS field, MSc thesis, University of Helsinki, `https://helda.helsinki.fi/handle/10138/233980`

3 EDUCATION

PHD IN ASTRONOMY, UNIVERSITY OF HELSINKI

Started in December 2017, my dissertation is about the large-scale structure in the Universe, how it can be used to study the growth of supermassive black holes at the centers of galaxies and their co-evolution. I am also heavily involved in the Euclid mission, which will use the large-scale structure to extract cosmological information and to constrain dark matter and dark energy.

MASTER OF SCIENCE IN ASTRONOMY, UNIVERSITY OF HELSINKI

Completed in September 2017, in my thesis I studied the environments of X-ray selected AGN in the COSMOS field, and the connection between the AGNs and their host galaxies. The thesis was accepted with the second highest grade, and I graduated with the highest grade.

BACHELOR OF SCIENCE IN PHYSICS, UNIVERSITY OF HELSINKI

Completed in December 2015, in my thesis I reviewed the large-scale structure of the Universe, and performed a clustering analysis on SDSS galaxies to investigate the different environments of galaxies in the red sequence and blue cloud.

4 TALKS

2021	seminar	University of Helsinki Astrophysics seminar, Helsinki, Finland
2020	public talk	Kirkkonummen Komeetta, Kirkkonummi, Helsinki
2020	contribution	Euclid & AGN: a promising entanglement, SNS Pisa, Italy
2019	research report	Cosmology group research report, Scuola Normale Superiore, Italy
2019	contribution	Accretion History of AGN 2019, Miami, USA
2019	contribution	SMBH Environment and Evolution 2019, Corfu, Greece
2019	contribution	Euclid OU-LE3 meeting, Nice, France
2018	contribution	COSMOS Team Meeting 2018, Copenhagen, Denmark
2017	seminar	University of Helsinki Astrophysics seminar, Helsinki, Finland

5 TEACHING

I greatly enjoy teaching and interacting with the students, and have done teacher's assistant duties including preparing and grading exercises and exams, giving exercise sessions and/or workshops, as well as webpage management, for both undergraduate (Basics of Astronomy I & II) and graduate level (High Energy Astrophysics) courses in University of Helsinki.

6 TRAINING

I have completed a total of 348 ECTS of studies at University of Helsinki, with a major in astronomy. Additional studies include cosmology and general computer science courses. Some of the highlights of my training are listed below.

NORDIC OPTICAL TELESCOPE STUDENTSHIP

In 2021 I started a one year long studentship at the Nordic Optical Telescope in La Palma, Spain. The support astronomer duties at the Roque de los Muchachos 2.56 m telescope includes interacting with program PIs, planning and scheduling, carrying out astronomical observing runs. The hands-on work includes e.g. instrument maintenance tasks and changing of optical elements.

ELECTRONICS AND EMBEDDED DEVELOPMENT IN ELECTRONICS II

As the final project of the course, I with our team of two people, designed, developed, manufactured, and marketed a digital electronics product from start to finish. The product was a analogue audio mixer with digital controls, and my main responsibility was on the software, where I designed the software and programmed the ATmega328P 8-bit microcontroller in the product.

AHEAD X-RAY AND MULTI-WAVELENGTH SURVEYS SCHOOL

Held in Max-Planck Institute for Extraterrestrial Physics, in the school I learned about applications of modern multi-wavelength surveys in astronomy, along with hands-on exercises. Most usefully, the school provided me with a specific set of astronomical tools that I utilize today, along with theoretical methods including machine learning.

7 EMPLOYMENT HISTORY

CONFERENCE ASSISTANT, UNIVERSITY OF HELSINKI

I helped in organization of the Euclid Consortium 2019 meeting held in Helsinki, and provided technical assistance in the various sessions for hundreds of participants.

MUSEUM GUIDE, HELSINKI OBSERVATORY

During 2016–2018, I worked as a museum guide at the Helsinki observatory. I served customers of the visitor center and provided tours explaining astronomical concepts and history of astronomy in Helsinki to the public in the historical observatory building from 1834.

RESEARCH ASSISTANT, UNIVERSITY OF HELSINKI

During my undergraduate studies $2012 - 2017$, I participated in three distinct research groups in Helsinki, namely the planetary science research group led by Prof. Karri Muinonen, extragalactic astrophysics research group led by Prof. Peter Johansson, and Helsinki Euclid group led by Dr. Hannu Kurki-Suonio.

8 LANGUAGE SKILLS

Finnish	mother tongue
English	excellent written and oral skills
Swedish	good written and oral skills
German	good written and oral skills
Italian	fundamentals
Spanish	fundamentals

9 COMPUTER SKILLS

General software that I use daily, and include my main working environment, are UNIX, GNU/Linux, vim. Programming languages and tools that I am fluent with and use daily include Python, C/C++, bash, LaTeX, git. Specialized astronomical software that I generally use and have at least basic knowledge of are topcat/stilts, astropy, IDL, IRAF, ds9. I also have basic knowledge of the Office365 software suite.

10 HOBBIES AND OTHER INTERESTS

Playing they piano and they keyboards, live performing, reading, rock climbing both indoors and outdoors, painting, programming as a pastime.

11 REFERENCES

Prof. Alexis Finoguenov	alexis.finoguenov@helsinki.fi
Dr. Hannu Kurki-Suonio	hannu.kurki-suonio@helsinki.fi
Dr. Viola Allevato	viola.allevato@sns.it