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 Tomáš PLŠEK  
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## Scientific Education

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09/2019–06/2021	<b>MSc:</b> <i>The relation between the Bondi accretion rate and jet power in giant elliptical galaxies</i> , supervisor: Norbert WERNER Department of Theoretical Physics and Astrophysics, Faculty of Science, MUNI
09/2016–06/2019	<b>BSc:</b> <i>Dark matter modelling of galaxy clusters</i> , supervisor: Filip HROCH Department of Theoretical Physics and Astrophysics, Faculty of Science, MUNI

## Work Experience

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since 03/2021	<b>Researcher:</b> <i>Development of novel ML methods in Astrophysics, Data analysis</i> Department of Theoretical Physics and Astrophysics, Faculty of Science, MUNI
10/2019–12/2020	<b>Researcher:</b> <i>Plasma treatment of materials, Optical emission spectroscopy, Contact angle measurements, Data analysis</i> Department of Physical Electronics, Faculty of Science, MUNI
05/2018–09/2018	<b>Demonstrator:</b> <i>Public astronomical demonstrations</i>
05/2017–09/2017	Vyškov Observatory

## Programming Skills

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- **Python:** *Jupyter, Matplotlib, Numpy, Scipy, Astropy, Pandas*
- **Machine learning:** *Sklearn, Keras, Tensorflow*
- **Bayesian analysis:** *PyMC3*
- **Linux:** *Bash scripting, SSH, git*
- **Text editing:** *L<sup>A</sup>T<sub>E</sub>X, Markdown*
- **X-ray spectral fitting:** *Xspec, Spex, Sherpa*
- **Chandra data analysis:** *CIAO, SAOImageDS9*
- **N-body simulations:** *Gadget-2*

## 📖 Publications

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### In preparation:

**PLŠEK Tomáš**, WERNER Norbert, GROSSOVÁ Romana. *The relation between the Bondi accretion rate and jet power in giant elliptical galaxies.*

**PLŠEK Tomáš**, WERNER Norbert, TOPINKA Martin. *Search for X-ray cavities on Chandra images using CAvity DEtection Tool (CADET).*

**PLŠEK Tomáš**, WERNER Norbert, GROSSOVÁ Romana. *Comparing mechanical jet powers inferred from X-ray cavities and radio lobes.*

GROSSOVÁ Romana, WERNER Norbert, MASSARO Francesco, LAKHCHAURA Kiran, **PLŠEK Tomáš**, GABÁNYI Krizstyna, RAJPUROHIT Kamlesh, CANNING Rebecca E. A., NULSEN Paul, O'SULLIVAN Ewan, ALLEN W. Steven, and FABIAN Andrew. *Radio study of a sample of nearby X-ray and optically bright early-type galaxies.*

### Published:

PAZDERKA Michal, PŘIBYL Roman, ZEMÁNEK Miroslav, KELAR Jakub, **PLŠEK Tomáš**, TUČEKOVÁ Zlata and ČERNÁK Mirko. *Robust current peak detection method for dielectric barrier discharges.* Journal of Physics D: Applied Physics. Bristol: IOP Publishing, 2021, vol. 54, No 9, pp. ISSN 0022-3727. doi:10.1088/1361-6463/abc916.