

Ing. Jakub Kákona

about

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Czech Republic

Nationality:
Czech

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languages

Czech
English
Russian

programming

Gnuradio
iPython, C

interests

Radioastronomy, (Opto)electronics, Astronomy, Physics

education

- | | | |
|------------|---|---|
| since 2014 | Ph.D. Air Traffic Control
Faculty of Electrical Engineering - CTU Prague | <i>Radio position determination of flying objects</i> |
| 2012–2014 | Ing. Aircraft and space systems
Faculty of Electrical Engineering - CTU, Prague | Department of Measurement |
| 2008–2012 | Bc. Laser Technology and Optoelectronics
Faculty of Nuclear Sciences and Physical Engineering CTU, Prague | Department of Physical Electronics |
| 2004–2008 | Electronic Control Systems
High school of Machines and Electrical Engineering in České Budějovice | |

experience

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|-------------|--|-----------------|
| 2014 | ESA Summer of Code in Space
<i>Station maintenance software; Cubesat automatic reception station</i> | Projects mentor |
| 2013 | ESA Summer of Code in Space
<i>General purpose radio-astronomy station software</i> | Project mentor |
| 2007 - 2013 | Robozor robotics club - České Budějovice | Supervisor |
| Since 2010 | Summer school of Astronomy - Radioastronomy group supervisor | Summer job |

applications

- | | | |
|------------|--|--------------|
| since 2011 | Bolidozor - Radio meteor detection network
Software defined receiver design | bolidozor.cz |
| since 2004 | MLAB - Opensource Hardware modular electronic prototyping system
Design of electronic modules and system engineering | mlab.cz |

publications

article in peer-reviewed journal

Latitudinal effect on the position of Regener–Pfotzer maximum investigated by balloon flight HEMERA 2019 in Sweden and balloon flights FIK in Czechia
Ambrožová, I., M. Kákona, R. Dvořák, J. Kákona, M. Lužová, M. Povišer, M. Sommer, O. Velychko, and O. Ploc
Radiation Protection Dosimetry 199.15-16 (Oct. 2023). 2023

In situ ground-based mobile measurement of lightning events above central Europe
Kákona, J., J. Mikeš, I. Ambrozova, and O. Ploc
Atmospheric Measurement Techniques 16.2 (2023). 2023

MEASUREMENT OF THE REGENER-PFOTZER MAXIMUM USING DIFFERENT TYPES OF
IONISING RADIATION DETECTORS AND A NEW TELEMETRY SYSTEM TF-ATMON
Kákona, J., M. Luzova, M. Kakona, and M. Sommer
Radiation Protection Dosimetry 198.9-11 (2022). 2022

AIRDOS - open-source PIN diode airborne dosimeter
Kákona, M., J. Šlegl, D. Kyselová, M. Sommer, J. Kákona, M. Lužová, and D. John
Journal of Instrumentation 16.3 (Mar. 2021). 2021

3D printing materials for generators of active particles based on electrical discharges
Mikeš, J., S. Pekárek, O. Babčenko, O. Hanuš, J. Kákona, and P. Štenclová
Plasma Processes and Polymers 17.1 (Jan. 2020). 2020

international and local peer-reviewed conferences/proceedings

Measurements of Ionizing Radiation Generated in Thunderstorms
Sihver, A., O. Ploc, K. Turek, M. Kákona, J. Kákona, J. Šlegl, I. Ambrožová, M. Lužová,
O. Velychko, M. Sommer, and R. Langer
2023 IEEE Aerospace Conference, 2023, Los Alamitos, US

Autonomous Groundwater Monitoring Station with Wireless Communication
Hanuš, O., J. Mikeš, and J. Kákona
23rd IMEKO TC4 Symposium Electrical & Electronic Measurement, 2019, Budapest, HU

Piezoelectric Lightning Current Detection
Mikeš, J., O. Hanuš, and J. Kákona
4th International Lightning Protection Symposium, 2018, Paříž, FR

Telemetry system for research stratospheric balloon
Puričar, P., P. Kovář, J. Mikeš, and J. Kákona
22nd 2017 International Conference on Applied Electronics, 2017, Pilsen, CZ

Methodology for Monitoring Lightning Stroke of an Object by Means of a Smart Sensoric
Mikeš, J., O. Hanuš, and J. Kákona
Proceedings of the International Conference on Lightning & Static Electricity (ICOLSE 2017), 2017, Tokyo, JP

Vývoj open source polovodičového detektoru CANDY
Kákona, M., P. Krist, V. Štěpán, D. Kyselová, V. Havránek, B. Sopko, P. Přidal, J. Kákona,
J. Chroust, and O. Ploc
XXXVIII. Dny radiační ochrany, 2016, Praha, CZ

LET FÍK: Stratosférický balón jako nástroj pro dozimetrii a popularizaci vědy
Štěpán, V., M. Kákona, P. Krist, P. Kovář, J. Kákona, J. Chroust, N. Lipenská, K. Dostálková,
J. Hovorka, K. Pachnerová Brabcová, L. Thinová, O. Ploc, J.-L. Picard, and F. pes Fík
XXXVIII. Dny radiační ochrany, 2016, Praha, CZ

Meteor trajectory estimation from radio meteor observations
Kákona, J.
Proceedings of the International Meteor Conference 2016, 2016, Mechelen, BE

Hemispherical radiating pattern antenna design for radio meteor observation
Kákona, J.
Proceedings of the International Meteor Conference 2016, 2016, Mechelen, BE

Big data era in meteor science
Vinkovic, D., M. Gritsevich, V. Sreckovic, B. Pecnik, G. Szabo, V. Debattista, P. Skoda, A.
Mahabal, J. Peltoniemi, S. Monkola, A. Mickaelian, E. Turunen, J. Kákona, J. Koskinen,
and V. Grokhovsky
Proceedings of the International Meteor Conference 2016, 2016, Mechelen, BE

Bolidozor radio meteor detection network

Kákona, J., M. Kákona, M. Povišer, J. Milík, R. Dvořák, J. Štrobl, P. Kovář, J. Szylar, P. Bednář, L. Křivský, and J. Chroust

Proceedings of the International Meteor Conference 2015, 2015, Mechelen, BE

Radio meteor scattering with Software Defined Radio based on Open Hardware

Pintér, T., J. Kákona, M. Kákona, and L. Křivský

Proceedings of the International Meteor Conference 2012, 2012, Mechelen, BE