

Ing. Jakub Kákona

about

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Czech Republic

Nationality:
Czech

kjakub@gmail.com
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languages

Czech
English
Russian

programming

Linux
Gnuradio
iPython, C

interests

Radioastronomy, (Opto)electronics, Astronomy, Aeronautics and Physics

education

- | | | |
|------------|---|------------------------------------|
| since 2014 | Ph.D. candidate Air Traffic Control Faculty of Electrical Engineering - CTU Prague | Department of Radioelectronics |
| 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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|-------------|--|---|
| since 2017 | ThunderFly s.r.o. <i>Unmanned aerial vehicle development</i> | Systems architect |
| 2016 - 2023 | CTU Prague <i>Center of Cosmic Rays and Radiation Events in the Atmosphere (CRREAT)</i> | Researcher |
| 2016 - 2023 | Y Soft a.s. <i>3D printers development and construction</i> | Embedded System Engineer |
| 2015 - 2016 | be3D s.r.o. <i>Additive manufacturing technology</i> | Embedded System Engineer |
| 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 |
| since 2008 | Universal Scientific Technologies s.r.o. <i>Open-source scientific instrumentation</i> | Executive Manager and Systems architect |
| 2007 - 2013 | Robozor robotics club - České Budějovice <i>Mechatronics and Robotics</i> | Supervisor |
| 2010 - 2016 | Summer school of Astronomy <i>Radioastronomy</i> | group supervisor |

Courses and certificates

| | |
|------|--|
| 2017 | Glider pilot license |
| 2015 | General Radiotelephone Operator's Certificate of Aeronautical Mobile Service |
| 2008 | Open Water Diver license |

applications

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|------------|--|--------------|
| 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

Puričer, 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