

## PERSONAL INFORMATION

### Dr. Alexander Vikman

Date of birth: 26.04.1978

Nationality: Germany and Ukraine

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Google Scholar: h-index: **25**, citations: **5219**

INSPIRE: h-index: **25**, citations: **4732**

## • EDUCATION

- 2003 – 2007     PhD - “**Dr. rer. nat.**” with “**Summa Cum Laude**”  
Arnold Sommerfeld Center for Theoretical Physics (ASC),  
Ludwig Maximilian University of Munich (LMU), Germany  
Advisor: **Prof. Dr. Viatcheslav Mukhanov**
- 2001 – 2003     Master - “**Dipl.-Phys. Univ. mit Auszeichnung**”, Physics Department,  
Ludwig Maximilian University of Munich (LMU), Germany
- 1995 – 1999     Bachelor- “**BSc. with distinction**”, Moscow Institute of Physics and Technology,  
Russia

## • CURRENT POSITION

- 2015 –             Senior Scientist  
(permanent staff, highest rank in the Czech Academy of Sciences – V6)  
CEICO-Central European Institute for Cosmology and Fundamental Physics,  
Institute of Physics of the Czech Academy of Sciences (FZU), Prague, Czech Republic

## • PREVIOUS POSITIONS

- 2014 – 2015     Senior Research Assistant, (Akademischer Rat auf Zeit),  
ASC for Theoretical Physics, Ludwig Maximilian University of Munich, Germany
- 2010 – 2013     CERN-Fellow, Theory Division,  
CERN-The European Organization for Nuclear Research, Switzerland
- 2012 – 2013     Long-term visitor, Department of Physics, Stanford University, USA
- 2007 – 2010     James Arthur Postdoctoral Fellowship  
Center for Cosmology and Particle Physics (CCPP), New York University, USA

## • FELLOWSHIPS AND AWARDS

- 2022             MSCA-CZ (MEYS, Czech Republic), as supervisor
- 2019             Japan Society for the Promotion of Science (JSPS)  
Invitational Fellowships for Research in Japan
- 2019             The Hebrew University of Jerusalem, Short International Teaching Visit Award  
(20 hours lecture course 78005 "From Quantum Origins of the Universe to Black Hole  
Radiation" took place only in May 2022 due to the COVID pandemic))

- 2015 – 2016    Advanced Future Studies Visiting Fellow,  
Yukawa Institute for Theoretical Physics, Kyoto University, Japan
- 2015 – 2020    J. E. Purkyně Fellowship of the Czech Academy of Sciences, Czech Republic
- 2007            Arnold Sommerfeld PhD Prize, ASC, LMU Munich, Germany

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

**Postdocs:** Sabir Ramazanov, Dražen Glavan, Leonardo G. Trombetta, Tom Złosnik - all at FZU

**2 PhD students:** Pavel Jiroušek (FZU, defended Feb 22, 2022, now postdoc at U. of Cape Town),  
Katrín Hammer (LMU);

**4 Master Students** from LMU: Raoul Letschka (PhD in physics at IFT Madrid), Leila Mirzagholi  
(PhD in physics at MPI, Garching, now at ETH Zurich), Max Warkentin (PhD in physics at LMU);  
Katrín Hammer (LMU);

**1 Bachelor Student:** Florian Graf (LMU)

- **GRANTS**

**Principal Investigator** in “Strong Gravity as a Microscope for the Dark Universe”, Project 20-28525S of the Grant Agency of the Czech Republic (GAČR), **13 125 000 CZK** or approximately in current exchange rate **559 000 EUR**, for 2020-2022

**Principal Investigator** in “Dark sector stability and energy positivity in modified gravity”, Bilateral Mobility Plus Project (JSPS 21-12) between the Czech Academy of Sciences (CAS) and Japan Society for the Promotion of Science (JSPS), with Tokyo Institute of Technology (PI Prof. M. Yamaguchi), **1 000 000 CZK** or approximately in current exchange rate **42 000 EUR**, for 2021-2022

Research Program Leader (Research Package 4: Early Universe) in Project CoGraDS - CZ.02.1.01/0.0/0.0/15\_003/0000437 of the European Regional Development Fund and Czech Ministry of Education, Youth and Sports, for 2016-2022

Mobility grants: 2011-2012 FQXi-MGB-1016; 2011-2013 FQXi-MGB-1118; 2013-2014 FQXi-MGA-1312; 2017-2018 FQXi-MGB-1636 from the Foundational Questions Institute (FQXi), USA

- **TALKS AND SEMINARS**

Since 2011 more than **180** invited seminars, talks at international conferences and lectures including recent 06.12.2022, plenary talk „Lower than freeze-in portal couplings can still generate DM and be measured via GW“ at the „16th International Workshop on the Dark Side of the Universe/2nd Gordon Godfrey Workshop on Astroparticle Physics“, 5-9 Dec 2022, the University of New South Wales (UNSW), Sydney, Australia

- **OUTREACH / MEDIA**

13.03.2007    *Botschaften aus einer verborgenen Welt* (in German), Berliner Zeitung

02.12.2011    *Speed of Light*, in news chat show “Today”, China Radio International

27.04.2017    *Časové krystaly: Existence nové formy hmoty potvrzena* (in Czech),  
EkonTech.cz online Magazine

23.11.2017    invited public lecture *Modern Cosmology: from the Big Bang to the Future*,  
Observatory and Planetarium, Brno, Czech Republic

07.10.2020    [Конец времени и тяжелое сердце галактики. Как черная дыра подтвердила правоту Эйнштейна. Комментарии экспертов](#) - *The end of time and the heavy hart of our galaxy. How the Black Hole confirmed the Einstein. Comments of experts.* My article (in Russian) on 2020 Physics Nobel Prize in one of the major Russian newspapers – *Novaya Gazeta*.

- **ORGANISATION OF SCIENTIFIC MEETINGS**

- 2008 Co-organiser, Workshop *Causality, Analyticity, and Superluminal Propagation*, Michigan Center for Theoretical Physics, U. of Michigan, Ann Arbor, USA (14 participants)
- 2009 Co-organiser, Workshop *Shining Light on Black Holes*, Michigan Center for Theoretical Physics, U. of Michigan, Ann Arbor, USA (25 participants)
- 2018 Co-organiser, Advanced School “GRAVITY@PRAGUE 2018”, Prague, Czech Republic (more than 90 participants)
- 2019 Co-organiser, Workshop “MULTIMESSENGERS@PRAGUE 2019”, Prague, Czech Republic (more than 40 participants)
- 2020 Co-organiser and member of Science Organising Committee, *Copernicus Webinar Series* <http://copernicuswebinar.com/>
- 2021 member of Local Organizing Committee, Workshop “LIGHTNESS @ PRAGUE, the unbearable lightness of the universe: the interface between dark matter and modified gravity in astrophysics and structure formation”
- 2021 member of Local Organizing Committee, "SYNERGIES@PRAGUE: Multimessengers and large scale structure" workshop
- 2021 member of the Scientific Organising Committee, "31st Texas Symposium on Relativistic Astrophysics", conference has been postponed to 2022 due to COVID

- **INSTITUTIONAL RESPONSIBILITIES**

- 2008 – 2009 Organizer of the HEP Seminar, CCPP, New York University, USA
- 2014 – 2015 Organizer of the Cosmology Seminar, LMU Munich, Germany
- 2017 – 2020 Member of the Postdoctoral hiring committee, CEICO, FZU, Czech Republic

- **REVIEWING ACTIVITIES**

- 2017 – **Member of the Editorial Board**  
Journal of Cosmology and Astroparticle Physics (JCAP)

**Reviewer of grant proposals for:**

- 2016/18/19 Estonian Research Council
- 2019 National Science Centre, Poland
- 2019/20/21 Foundation for the Advancement of Theoretical Physics and Mathematics "BASIS", Russia
- 2020 National Fund for Scientific and Technological Research (FONDECYT) of the National Research and Development Agency of the Science, Technology, Knowledge and Innovation Ministry, Chile

More than **250** reviews since 2003 for: Physical Review Letters (PRL), Physical Review D, Journal of Cosmology and Astroparticle Physics, Journal of High Energy Physics (JHEP), Physics Letters B (PLB), Classical and Quantum Gravity (CQG), Astroparticle Physics, General Relativity and Gravitation, Physics of the Dark Universe, Europhysics Letters, European Physical Journal C, Monthly Notices of the Royal Astronomical Society (MNRAS)

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

Foundational Questions Institute (FQXi), USA;  
Deutsche Physikalische Gesellschaft (DPG), Germany

- **MAJOR COLLABORATORS**

E. Babichev (IJCLab, Orsay), V. Mukhanov (LMU Munich), I. Sawicki (FZU, Prague), S. Ramazanov (FZU), D. Easson (Arizona State U., Tempe), C. Deffayet (Paris U. VI), G. Dvali, (LMU & MPI Munich),