CURRICULUM VITAE

Nome: **Vladimir Kulikovskiy**

Data e luogo di nascita: [redacted]

Cittadinanza:

Formazione:

2002-2008: Lomonosov Moscow State University, Physics Faculty.
Masters degree in nuclear and particle physics, *"Summa Cum Laude"*.
Nome della tesi: "Optimization of the deep underwater neutrino telescope NEMO".

2011-2013: Università di Genova / Université Paris Diderot (Paris 7).
Dottorato in fisica della materia, particelle e nuclei, "*mention très honorable avec félicitations"*.
Nome della tesi: "Neutrino astrophysics with the ANTARES telescope".

Attività lavorativa:

2008: Scuola secondaria #7 Odintsovo, Russia, insegnante.
Insegnamento: Informatica.

2008-2016: Scobeltsyn Institute of Nuclear Physics, Moscow State University, ricercatore.
Ricerca: Il rivelatore sottomarino di neutrini NEMO.
Insegnamento: Fisica di neutrini.

2009-2011: borsa per gli stranieri, INFN Sezione di Genova.
Ricerca: Il rivelatore sottomarino di neutrini ANTARES.

2011-2013: Dipartimento di Fisica, Università di Genova, Italy. PhD,
IDAPP European doctorate program, co-doctorate at APC, Paris VII.
Ricerca: Il rivelatore sottomarino di neutrini ANTARES.

2014-2015: borsa postdoc per gli stranieri, LNS Catania.
Ricerca: Il rivelatore sottomarino di neutrini KM3NeT: programmazione schede presa dati per i moduli ottici, setup per la calibrazione PMT (DarkBox), calibrazione tilt&compass, calibrazione delle prime stringhe prima della posa in acqua.

2016-2017: ASTERICS postdoc, C.P.P.M./CNRS Marsiglia.
Ricerca: Il rivelatore sottomarino di neutrini KM3NeT: programmi multi-messaggeri, rivelazione delle supernove, simulazione Geant4.

2016-: ricercatore livello III, INFN Sezione di Genova.
Ricerca: Il rivelatore sottomarino di neutrini KM3NeT: programmi multi-messaggeri, rivelazione delle supernove, simulazione, coordinamento della integrazione delle stringhe a Genova. Analisi di dati acustici per gli studi dei cetacei.

Genova, 10/05/2023

[redacted]

Publications

Vladimir Kulikovskiy

h-index: >40 (Google Scholar)

1. "Results from the search for dark matter in the Milky Way with 9 years of data of the ANTARES neutrino telescope", Phys. Let. B 769 (2017) 249, doi:10.1016/j.physletb.2017.03.063
2. "Search for high-energy neutrinos from bright GRBs with ANTARES", MNRAS 469, 906915 (2017), 10.1093/mnras/stx902
3. "Time-dependent search for neutrino emission from x-ray binaries with the ANTARES telescope", JCAP04(2017)019, doi:10.1088/1475-7516/2017/04/019
4. "Search for Dark Matter Annihilation in the Earth using the ANTARES Neutrino Telescope", Physics of the Dark Universe 16 (2017) 4148, doi:10.1016/j.dark.2017.04.005
5. "Intrinsic limits on resolutions in muon- and electron-neutrino charged-current events in the KM3NeT/ORCA detector", J. High Energ. Phys. (2017) 2017: 8, doi:10.1007/JHEP05(2017)008
6. "A polarized fast radio burst at low Galactic latitude", MNRAS (2017) 469 (4): 4465-4482, doi:10.1093/mnras/stx109
7. "Search for High-energy Neutrinos from Gravitational Wave Event GW151226 and Candidate LVT151012 with ANTARES and IceCube", Phys. Rev. D 96 (2017) 022005, doi:10.1103/PhysRevD.96.022005
8. "An algorithm for the reconstruction of high-energy neutrino-induced particle showers and its application to the ANTARES neutrino telescope", Eur. Phys. J. C 77 (2017) 419, doi:10.1140/epjc/s10052-017-4979-2
9. "Search for relativistic magnetic monopoles with five years of the ANTARES detector data", JHEP 07 (2017) 54, doi:10.1007/JHEP07(2017)054
10. "New constraints on all flavor Galactic diffuse neutrino emission with the ANTARES telescope", Phys. Rev. D 96, 062001 (2017), doi:10.1103/PhysRevD.96.062001
11. "First all-flavor neutrino pointlike source search with the ANTARES neutrino telescope", Phys. Rev. D 96, 082001 (2017), doi:10.1103/PhysRevD.96.082001
12. "An Algorithm for the Reconstruction of Neutrino-induced Showers in the ANTARES Neutrino Telescope", Astron. J. 154, 275 (2017), doi:10.3847/1538-3881/aa9709
13. "Multi-messenger Observations of a Binary Neutron Star Merger", ApJL 848 L12 (2017), doi:0.3847/2041-8213/aa91c9
14. "Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory", ApJL 850 L35 (2017), doi:10.3847/2041-8213/aa9aed
15. "The SUrvey for Pulsars and Extragalactic Radio Bursts II: New FRB discoveries and their follow-up", MNRAS 475, 14271446 (2018), doi:10.1093/mnras/stx3074
16. " All-sky search for high-energy neutrinos from gravitational wave event GW170104 with the Antares neutrino telescope", Eur. Phys. J. C 77, 911 (2017), doi:10.1140/epjc/s10052-017-5451-z
17. " All-flavor Search for a Diffuse Flux of Cosmic Neutrinos with Nine Years of ANTARES Data", ApJL 853, L7 (2018), doi:10.3847/2041-8213/aaa4f6
18. "Characterisation of the Hamamatsu photomultipliers for the KM3NeT Neutrino Telescope", Journal of Instrumentation 13 (2018) P05035, doi:10.1088/1748-0221/13/05/P05035
19. "The Search for Neutrinos from TXS 0506+056 with the ANTARES Telescope", ApJL 863, L30 (2018), doi:10.3847/2041-8213/aad8c0
20. "Long-term monitoring of the ANTARES optical module efficiencies using 40K decays in sea water", Eur. Phys. J. C (2018) 78:669, doi:10.1140/epjc/s10052-018-6132-2.
21. "Joint Constraints on Galactic Diffuse Neutrino Emission from the ANTARES and IceCube Neutrino Telescopes ", Astrophys. J (2018) 868:L20, doi:10.3847/2041-8213/aaeecf.

22. “The cosmic ray shadow of the Moon observed with the ANTARES neutrino telescope” , Eur. Phys. J. C 78:1006, (2018), doi:10.1140/epjc/s10052-018-6451-3

23. “The search for high-energy neutrinos coincident with fast radio bursts with the ANTARES neutrino telescope”, MNRAS 482, 184-193 (2019), doi:10.1093/mnras/sty2621.

24. “Search for Multi-messenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during its first Observing Run, ANTARES and IceCube”, ApJ 870:134 (2019), doi:10.3847/1538-4357/aaf21d.

25. The ANTARES Collaboration (including myself), “Measuring the Atmospheric Neutrino oscillation parameters and constraining the 3+1 neutrino model with ten years of ANTARES data”, J. High Energ. Phys. 113 (2019), doi:10.1007/JHEP06(2019)113.

26. The ANTARES Collaboration (including myself), “ANTARES neutrino search for Time and Space correlations with IceCube High-Energy neutrino events”, The Astrophysical Journal, 879:108 (2019), doi:10.3847/1538-4357/ab253c.

27. The ANTARES Collaboration (including myself), “A Search for Cosmic Neutrino and Gamma-Ray Emitting Transients in 7.3 yr of ANTARES and Fermi LAT Data”, Astrophys. J, 886:98 (2019), doi:10.3847/1538-4357/ab4a74

28. “Sensitivity of the KM3NeT/ARCA neutrino telescope to point-like neutrino sources”, Astroparticle Physics 111 (2019) 100, doi:10.1016/j.astropartphys.2019.04.002

29. “KM3NeT front-end and readout electronics system: hardware, firmware and software”, J. Astron. Telesc. Instrum. Syst. 5(4), 046001 (2019), doi:10.1117/1.JATIS.5.4.046001

30. “Model-independent search for neutrino sources with the ANTARES neutrino telescope“, Astroparticle Physics, 2020, 114, pp. 3547

31. “Dependence of atmospheric muon flux on seawater depth measured with the first KM3NeT detection units“, European Physical Journal C, 2020, 80(2), 99

32. “ANTARES and IceCube Combined Search for Neutrino Point-like and Extended Sources in the Southern Sky“, Astrophysical Journal, 2020, 892(2), 92

33. “Search for neutrino counterparts of gravitational-wave events detected by LIGO and Virgo during run O2 with the ANTARES telescope“, European Physical Journal C, 2020, 80(5), 487

34. “Search for dark matter towards the Galactic Centre with 11 years of ANTARES data”, Phys. Lett. B, 2020, 805, 135439

35. “Combining neutrino experimental light-curves for pointing to the next galactic core-collapse supernova”, European Physical Journal C, 2020, 80(9), 856

36. “Event reconstruction for KM3NeT/ORCA using convolutional neural networks”, Journal of Instrumentation, 2020, 15(10), P10005

37. “Combined search for neutrinos from dark matter self-annihilation in the galactic center with ANTARES and Icecube”, Phys. Rev. D, 2020, 102(8), 082002

38. “The Control Unit of the KM3NeT Data Acquisition System”, Computer Physics Communications, 2020, 256, 107433

39. “gSeaGen: The KM3NeT GENIE-based code for neutrino telescopes”, Computer Physics Communications, 2020, 256, 107477

40. “Deep-sea deployment of the KM3NeT neutrino telescope detection units by self-unrolling”, Journal of Instrumentation, 2020, 15(11), P11027

41. “Observation of the cosmic ray shadow of the Sun with the ANTARES neutrino telescope”, Phys. Rev. D, 2020, 102(12), 122007

42. “Monte Carlo simulations for the ANTARES underwater neutrino telescope”, Journal of Cosmology and Astroparticle Physics, 2021, 2021(1), A10

43. “Architecture and performance of the KM3NeT front-end firmware”, Journal of Astronomical Telescopes, Instruments, and Systems, 2021, 7(1), 016001

44. "Constraining the contribution of Gamma-Ray Bursts to the high-energy diffuse neutrino flux with 10 yr of ANTARES data", Monthly Notices of the Royal Astronomical Society, 2021, 500(4), pp. 56145628

45. "SNEWS 2.0: A next-generation supernova early warning system for multi-messenger astronomy", New Journal of Physics, 2021, 23(3), 031201

46. "ANTARES upper limits on the multi-TeV neutrino emission from the GRBs detected by IACTs", Journal of Cosmology and Astroparticle Physics, 2021, 2021(3), 092

47. "ANTARES Search for Point Sources of Neutrinos Using Astrophysical Catalogs: A Likelihood Analysis", Astrophysical Journal, 2021, 911(1), 48

48. "The KM3NeT potential for the next core-collapse supernova observation with neutrinos", European Physical Journal C, 2021, 81(5), 445

49. "Measurement of the atmospheric e and energy spectra with the ANTARES neutrino telescope", Phys. Lett. B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 816, 136228

50. "Sensitivity estimates for diffuse, point-like, and extended neutrino sources with KM3NeT/ARCA", Journal of Instrumentation, 2021, 16(9), C09030

51. "Sensitivity to light sterile neutrino mixing parameters with KM3NeT/ORCA", Journal of High Energy Physics, 2021, 2021(10), 180

52. "Search for Neutrinos from the Tidal Disruption Events AT2019dsg and AT2019fdr with the ANTARES Telescope", Astrophysical Journal, 2021, 920(1), 50

53. "Real-time continuous acoustic monitoring of marine mammals in the mediterranean sea", Journal of Marine Science and Engineering, 2021, 9(12), 1389

54. "KM3NeT/ARCA expectations in view of a novel multimessenger study of starburst galaxies", Journal of Instrumentation, 2021, 16(12), C12016

55. "Determining the neutrino mass ordering and oscillation parameters with KM3NeT/ORCA", European Physical Journal C, 2022, 82(1), 26

56. "Towards automatic detection and classification of orca (Orcinus orca) calls using cross-correlation methods", Marine Mammal Science, 2022

57. "Combined sensitivity of JUNO and KM3NeT/ORCA to the neutrino mass ordering", Journal of High Energy Physics, 2022, 2022(3), 55

58. "Implementation and first results of the KM3NeT real-time core-collapse supernova neutrino search", European Physical Journal C, 2022, 82(4), 317

59. "Search for secluded dark matter towards the Galactic Centre with the ANTARES neutrino telescope" Journal of Cosmology and Astroparticle Physics, 2022, 2022(6), 028

60. "Search for solar atmospheric neutrinos with the ANTARES neutrino telescope", Journal of Cosmology and Astroparticle Physics, 2022, 2022(6), 018

61. "Search for non-standard neutrino interactions with 10 years of ANTARES data", JHEP, 2022, 2022(7), 48

62. "Search for Spatial Correlations of Neutrinos with Ultra-high-energy Cosmic Rays", Astrophysical Journal, 2022, 934(2), 164

63. "Nanobeacon: A time calibration device for the KM3NeT neutrino telescope", NIM A, 2022, 1040, 167132

64. "Limits on the nuclearite flux using the ANTARES neutrino telescope", JCAP 2023, 2023(1), 012

65. "Search for Gamma-Ray and Neutrino Coincidences Using HAWC and ANTARES Data", Astrophysical Journal, 2023, 944(2), 166

66. "KM3NeT broadcast optical data transport system", Journal of Instrumentation, 2023, 18(2), T02001

67. "Search for neutrino counterparts to the gravitational wave sources from LIGO/Virgo O3 run with the ANTARES detector", JCAP 2023, 2023(4), 004