A close-up of a person

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**PERSONAL**

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| **Date of Birth** | March 1987 |
| **Place of Birth** | Çorum, Turkey |

**EDUCATION**

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| **2013 - 2017** | Groningen University, Van Swinderen Institute for Particle Physics and Gravity, Ph.D. |
| **2009 - 2012** | Middle East Technical University, Department of Physics, M.S. |
| **2004 - 2009** | Middle East Technical University, Department of Mechanical Engineering, B.S. |

**ACADEMIC POSITIONS**

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| --- | --- |
| **2024 - present** | Assistant Professor, Department of Aerospace Engineering,  Atılım University, Turkey |
| **2023 - 2024** | Postdoctoral researcher, Department of Physics Engineering,  İstanbul Technical University, Turkey |
| **2022 - 2023** | Lecturer, Department of Civil Engineering,  Kunming University of Science and Technology, China |
| **2019 - 2022** | Assistant Professor, Department of Physics Engineering,  Hacettepe University, Turkey |
| **2018 - 2019** | Assistant Professor, Department of Electrical and Electronics Engineering, Middle East Technical University Northern Cyprus Campus, Northern Cyprus |
| **2017 - 2018** | Postdoctoral Researcher, Department of Physics,  Middle East Technical University, Turkey |
| **2013 - 2017** | Research Assistant, Van Swinderen Institute for Particle Physics and Gravity, Groningen University, Netherlands |
| **2009 - 2013** | Research Assistant, Department of Physics,  Middle East Technical University, Turkey |

**RESEARCH INTERESTS**

|  |  |
| --- | --- |
| **1** | Modified theories of gravity |
| **2** | Black holes |
| **3** | AdS/CFT correspondence |
| **4** | Classical double copy |

**PUBLICATIONS**

|  |  |
| --- | --- |
| **1** | G. Alkac, M. K. Gumus, O. Kasikci, M. A. Olpak and M. Tek, “Regularized Weyl double copy,” Phys. Rev. D 109, no.8, 084047 (2024) |
| **2** | G. Alkac ̧, G. D. Ozen, H. Ozsahin, G. Suer and M. Tek, “Scaling symmetry, Smarr relation, and the extended first law in lower-dimensional Lovelock gravity,” Nucl. Phys. B 1002, 116535 (2024) |
| **3** | G. Alkac and G. Suer, “3D Lovelock gravity and the holographic c-theorem,” Phys. Rev. D 107, no.4, 046014 (2023) |
| **4** | G. Alkac, M. K. Gumus and M. A. Olpak, “Generalized black holes in 3D Kerr-Schild double copy,” Phys. Rev. D 106, no.2, 026013 (2022) |
| **5** | G. Alkac, G. D. Ozen and G. Suer, “Lower-dimensional limits of cubic Lovelock gravity,” Nucl. Phys. B 985, 116027 (2022) |
| **6** | G. Alkac and D. O. Devecioglu, “Brief note on Thurston geometries in 3D quadratic curvature theories,” Phys. Rev. D 105, no.6, 064023 (2022) |
| **7** | G. Alkac, M. K. Gumus and M. A. Olpak, “Kerr-Schild double copy of the Coulomb solution in three dimensions,” Phys. Rev. D 104, no.4, 044034 (2021) |
| **8** | G. Alkac, M. K. Gumus and M. Tek, “The Kerr-Schild Double Copy in Lifshitz Spacetime,” JHEP 05, 214 (2021) |
| **9** | M. K. Gumus and G. Alkac, “More on the classical double copy in three spacetime dimensions,” Phys. Rev. D 102, no.2, 024074 (2020) |
| **10** | G. Alkac ̧ and D. O. Devecio ̆glu, “Three dimensional modified gravities as holographic limits of Lancsoz-Lovelock theories,” Phys. Lett. B 807, 135597 (2020) |
| **11** | G. Alkac ̧, M. Tek and B. Tekin, “Bachian Gravity in Three Dimensions,” Phys. Rev. D 98, no.10, 104021 (2018) |
| **12** | G. Alkac ̧ and B. Tekin, “Holographic c-theorem and Born-Infeld Gravity Theories,” Phys. Rev. D 98, no.4, 046013 (2018) |
| **13** | G. Alkac, L. Basanisi, E. Kilicarslan and B. Tekin, “Unitarity Problems in 3D Gravity Theories,” Phys. Rev. D 96, no. 2, 024010 (2017) |
| **14** | G. Alkac, S. Chakrabortty and P. Chaturvedi, “Holographic P-wave Superconductors in 1+1 Dimensions,” Phys. Rev. D 96, no. 8, 086001 (2017) |
| **15** | G. Alkac, E. Kilicarslan and B. Tekin, “Asymptotically flat black holes in 2+1 dimensions,” Phys. Rev. D 93, no. 8, 084003 (2016) |
| **16** | G. Alkac, L. Basanisi, E. A. Bergshoeff, D. O. Devecioglu and M. Ozkan, “Supersymmetric backgrounds and black holes in N = (1, 1) cosmological new massive supergravity,” JHEP 1510, 141 (2015) |
| **17** | G. Alkac, L. Basanisi, E. A. Bergshoeff, M. Ozkan and E. Sezgin, “Massive N = 2 supergravity in three dimensions,” JHEP 1502, 125 (2015) |
| **18** | G. Alkac and D. O. Devecioglu, “Covariant Symplectic Structure and Conserved Charges of New Massive Gravity,” Phys. Rev. D 85, 064048 (2012) |

**PROJECTS**

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| **1** | Weyl Double Copy in Lifshitz Spacetime, Tübitak 3501 - 124F058,  05.07.2024 – 05.06.2025, Principle Investigator |

**CONFERENCE PRESENTATIONS**

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| --- | --- |
| **1** | 9th Internatinal Congress on Innovative Scientific Approaches, May 17-19, 2023, “Cubic Lovelock Gravity in Lower Dimensions”, (online) |
| **2** | Turkish Physical Society 38th International Physics Congress, August 31 – September 4 2022, “Cubic Lovelock Gravity in Lower Dimensions”, (online) |

**COURSES GIVEN**

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| --- | --- |
| **1** | General Physics I-II for Engineering Students |
| **2** | Calculus I for Engineering Students |
| **3** | Mathematical Methods in Physical Sciences |
| **4** | General Relativity |
| **5** | Conformal Field Theory |
| **6** | Fluid Mechanics |
| **7** | Introduction to Boundary Layer Theory |
| **7** | Advanced Mathematics for Engineers |