

Ayşe Hümeýra BİLGE

List of Publications

Articles listed in SCI

1. Bilge A.H. and M. Gürses,
"Adding a λ -term top p-wave solutions of Einstein's field equations",
Lecture Notes in Physics, 180:256-257 (1983)
WOS:A1983QU56300032
(Published originally as refereed conference paper: *XIth International Colloquium on Group Theoretical Methods in Physics*, Ed. M. Serdarođlu and E. İnönü Springer, Berlin, 1982).
2. Bilge, A.H. and M. Gürses,
"Generalized Kerr-Schild Transformation",
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(Published originally as refereed conference paper: *XIth International Colloquium on Group Theoretical Methods in Physics*, Ed. M. Serdarođlu and E. İnönü Springer, Berlin, 1982).
3. Bilge, A.H. and Gürses
"Cartan ideal, prolongation and Backlund transformations for Einstein's equations",
Journal of Mathematical Physics, vol. 27 (7): 1819-1833 (1986).
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4. Kupeli, A.H.,
"Vacuum solutions admitting a geodesic null congruence with shear proportional to expansion",
Journal of Mathematical Physics, vol. 29 (2): 440-442 (1988).
5. Kupeli, A.H.,
"Generalized Kerr-Schild transformation from vacuum backgrounds to Einstein-Maxwell spacetimes",
Classical and Quantum Gravity, vol. 5 (3): 401-408 (1988).
6. Bilge, A.H.,
"Non-twisting vacuum metrics with $D(\sigma / \rho) = 0$ ",
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7. Bilge, A.H.,
"An asymptotically flat vacuum solution",
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8. Bilge, A.H.,
"Integration of radial NP equations in terms of ρ , σ and ξ^k ",
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9. Bilge, A.H.,
"Integrability of 7th order KdV-like evolution equations using formal symmetries and perturbations of conserved densities",
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- 10.** Bilge, A.H.,
"A REDUCE program for the integration of differential polynomials",
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WOS:A1992JR79000005
- 11.** Bilge, A.H.,
"On the equivalence of linearization and formal symmetries as integrability tests for evolution equations",
Journal of Physics A: Mathematical and General, vol 26 (24): 7511-7519 (1993).
WOS:A1993MQ33300024
- 12.** Bilge, A.H., T. Dereli and Ş. Koçak,
"Self-dual Yang-Mills fields in eight dimensions",
Letters in Mathematical Physics, vol. 36 (3): 301-309 (1996).
WOS:A1996TY84900008
- 13.** Bilge A.H., M.Hortaçsu and N.Özdemir,
"Particle creation if a cosmic string snaps",
General Relativity and Gravitation, vol. 28 (5): 511-525, (1996).
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- 14.** Bilge, A.H.,
"Singular traveling wave solutions of the fifth order KdV, Sawada-Kotera and Kaup equations",
Journal of Physics A: Mathematical and General, vol. 29(16): 4967-4975, (1996).
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- 15.** Bilge, A.H.,
"Solution and ellipticity properties of self-duality equations of Corrigan et al in eight dimensions",
International Journal of Theoretical Physics, vol. 35 (12): 2507-2515, (1996).
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- 16.** Bilge, A.H., T. Dereli and Ş. Koçak,
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- 17.** Bilge, A.H., M.Hortaçsu and N.Özdemir,
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- 18.** Bilge, A.H., T. Dereli and Ş.Koçak,
"Monopole equations on 8-manifolds with Spin(7) holonomy",
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- 19.** Bilge, A.H., and Y.K. Tulunay,
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Geophysical Research Letters, vol. 27 (9): 1383-1386, (2000).
WOS:000086748600037
- 20.** Bilge, A.H., T.Dereli, Ş.Koçak,
"Seiberg-Witten type monopole equations on 8-manifolds with spin(7) holonomy, as minimizers of a quadratic action",

21. Tulunay, E., E.T. Senalp, L. Cander, Y. Tulunay, A.H. Bilge, E. Mizrahi, S.S. Kouris, N. Jakowski,
“Development of algorithms and software for forecasting, nowcasting and variability of TEC”,
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22. Daghan, D and A.H. Bilge,
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“Canonical bases for real representations of Clifford algebras”,
Linear Algebra and its Applications, vol, 419, pp.417-439, (2006).
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25. Bilge, AH. and D. Daghan
“Scalar fields coupled to gravity in (3+1) dimensions: Static spherically symmetric stiff matter
solutions”
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26. E. Mizrahi and A.H. Bilge
"Towards the classification of scalar non-polynomial evolution equations: polynomiality in top three
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27. A.H. Bilge, T. Dereli and S. Kocak
“Maximal linear subspaces of strong self-dual 2-forms and the Bonan 4-form”, Linear Algebra and its
Applications, Vol. 434, No 5, pp.1200-1214, March 2011
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28. S. Uguz and A.H. Bilge
“(3+3+2) warped-like product manifolds with Spin(7) holonomy”, Journal of Geometry and Physics,
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29. Y. Kumbasar and A.H. Bilge
“Canonical forms for families of anti-commuting diagonalizable linear operators”, Linear Algebra and
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30. A.H. Bilge, O. Pekcan and M.V. Gurol
“Application of epidemic models to phase transitions”, Phase Transitions, Vol. 85, Issue 11, pp. 1009-
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31. G. Ozkum and A.H. Bilge

“On the classification of fifth order quasi-linear non-constant separant scalar evolution equations of the KdV type”, Journal of the Physical Society of Japan, Vol 81, Issue 5, Article Number 054001, (May 2012).

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32. E. Mizrahi, A.H. Bilge

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33. A.H. Bilge and O. Pekcan

“A mathematical description of the critical point in phase transitions”, International Journal of Modern Physics C, Vol. 24, Issue 10, Article Number 1350065 (October 2013).

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34. A.H. Bilge, F. Samanlioglu and O. Ergonul,

“On the uniqueness of epidemic models fitting a normalized curve of removed individuals”
Journal of Mathematical Biology, Vol 71, No 4, pp 767-794 (Oct 2015).

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35. F. Samanlioglu and A.H. Bilge,

“An Overview of the 2009 A(H1N1) Pandemic in Europe: Efficiency of the Vaccination and Healthcare Strategies”

Journal of Healthcare Engineering, Article Number:5965836 Published:2016.

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36. A.H. Bilge and E. Mizrahi, E,

“On the classification of scalar evolution equations with non-constant separant”

Journal of Physics A- Mathematical and Theoretical, Vol 50, Article Number 035202, (2017)

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37. E. Yukseltan, A. Yucekaya, A.H. Bilge

“Forecasting electricity demand for Turkey: Modeling periodic variations and demand segregation”
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38. A.H. Bilge, D. Celik, D, S. Kocak

“An equivalence class decomposition of finite metric spaces via Gromov products”

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“Determination of epidemic parameters from early phase of fatality data: A case study of 2009A(H1N1) pandemic in Europe”

International Journal of Biomathematics, Vol 11, Issue 2, Article Number 1850021, (February 2018)

40. A.S. Ogrenci, O Pekcan, S Kara, AH Bilge

“Mathematical characterization of thermo-reversible phase transitions of agarose gels”

Journal of Macromolecular Science Part B, Vol 57, No 5, pp364*376 (2018)

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1. Bilge, A.H.,
"A system with a recursion operator but one higher symmetry",
Lie Groups and their Applications, vol. 1, 132-139 (1994).
2. Bilge, A.H. and Y.K. Tulunay,
"Spectral analysis of geomagnetic data from Kandilli Observatory, Istanbul",
Annali di Geofisica, vol. 40, (6), 1591-1598 (1997).
3. F.Özdemir and A.H. Bilge,
"Self-duality in dimensions $2n > 4$: equivalence of various definitions and the derivations of the octonionic instant on solution",
ARI, vol. 51, 247-253, (1999).
4. E. Yukseltan, A. Yucekaya and A.H. Bilge
"Forecasting electricity demand for Turkey, using modulated Fourier Expansion"
American Scientific Journal for Engineering, Technology and Sciences, Vol 14, No. 3, pp.87-94 (2015)
5. A.H. Bilge, D. Celik and S. Kocak,
"Optimal embeddings of finite metric spaces into graphs"
Anadolu University Journal of Science and Technology B- Theoretical Science
Vol. 3, No 2, (2015)
6. Bilge AH, Y Ozdemir
"The critical point of a sigmoidal curve "
Studia Universitatis Babeş-Bolyai Mathematica (Yayına kabul edildi)

Proceedings papers listed in SCI

1. Mizrahi, E., A.H.Bilge, Y.Tulunay,
"Statistical properties of the deviations of f_oF2 from monthly medians",
Annals of Geophysics(Annali di Geofisica), vol. 45, (1), 131-143, (2002).
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2. Bilge, A.H., E.Mizrahi, Y.Tulunay,
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3. Daghan D, Bilge AH,
"Scalar field coupled to gravity in spherically symmetric background in (2+1) dimensions"
Century of Relativity Physics Book Series: AIP Conference Proceedings, vol. 841 pp:637-638 (2006)
(Conference Information: 28th Spanish Relativity Meeting, SEP 06-10, 2005 Oviedo, SPAIN)
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4. Bilge AH, Uguz S,
"A generalization of warped product manifolds with Spin(7) holonomy",
Geometry and Physics XVI International Fall Workshop Book Series:AIP Conference Proceedings, vol. 1023, pp:165-171 (2008)
(Conference Information: 16th International Fall Workshop on Geometry and Physics, SEP 05-08, 2007 Lisbon, PORTUGAL)
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5. Bilge, A.H. and D. Dağhan,
"Warped product metrics with rank-1 Ricci tensor"
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Tenerife, SPAIN)
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6. Bilge, A. H.; Pekcan, O.
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Conference: 3rd International Conference on Mathematical Modeling in Physical Sciences (IC-
MSQUARE) Location: Madrid, SPAIN Date: AUG 28-31, 2014
3RD INTERNATIONAL CONFERENCE ON MATHEMATICAL MODELING IN PHYSICAL
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Series Volume: 574 Article Number: 012005 Published: 2015
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7. Bilge, A.H.,
"On the uniqueness of the octonionic instanton solution on conformally flat 8-manifold".
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Systems and Quantum Symmetries (ISQS) Location: Prague, CZECH REPUBLIC Date: JUN 23-27,
2015
Sponsor(s): Czech Tech Univ, Fac Nucl Sci & Phys Engn
XXIII INTERNATIONAL CONFERENCE ON INTEGRABLE SYSTEMS AND QUANTUM
SYMMETRIES (ISQS-23) Book Series: Journal of Physics Conference Series Volume: 670 Article
Number: UNSP 012011 Published: 2016
WOS:000382083700011
8. Bilge, AH, Ozdemir, Y,
"Determining the Critical Point of a Sigmoidal Curve via its Fourier Transform"
Ed. Vagenas, EC, Vlachos, DS
5TH INTERNATIONAL CONFERENCE ON MATHEMATICAL MODELING IN PHYSICAL
SCIENCES (IC-MSQUARE 2016)
Journal of Physics Conference Series , 5th International Conference on Mathematical Modeling in
Physical Sciences (IC-MSquare) MAY 23-26, 2016, Athens, GREECE
Vol. 738, 10.1088/1742-6596/738/1/012062 (2016).
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9. Bilge, AH, Kirkil, G, Burak, S, Incegul, M,
"Modeling of Wind Effects on Stratified Flows in Open Channels: A Model for the Istanbul Strait
(Bosphorus)"
Ed. Vagenas, EC, Vlachos, DS
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23-26, 2016, Athens, GREECE, Vol 738, 10.1088/1742-6596/738/1/012069, (2016).
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Integrable Systems and Quantum Symmetries (ISQS), CY JUN 14-18, 2016, Prague, CZECH

Other Proceedings Papers

1. Gürses, M. And A.H. Bilge,
"The Cartan ideal, prolongation, and Painleve property of the Einstein field equations",
Proceedings of the Fourth Marcel Grossmann Meeting on General Relativity, Ed. R. Rufini (Elsevier, 1986).
2. Bilge, A.H., T. Dereli, Ş. Koçak,
"The geometry of self-dual gauge fields",
Proceedings of the 9th Max Born Symposium, Karpacz, Poland 25-27 September 1996,
"New Symmetries in the Fundamental Interactions Theory" Ed. J. Lukierski and A. Jadczyk, (PWN Polish Scientific Publishers, Warsaw, 1997).
3. Bilge, A.H., T. Dereli and Ş. Koçak,
"Seiberg-Witten equations on R^8 ",
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4. Bilge, A.H., T. Dereli and Ş. Koçak,
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Proceedings of the Barut Memorial Conference on Group Theory in Physics, Turkish Journal of Physics, vol. 21, 361-367 (1997).
5. Mizrahi, E. and A.H. Bilge,
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6. Bilge, A.H., T. Dereli, Ş. Koçak,
"Monopole equations on 8-manifolds with Spin(7) holonomy: An overview of the energy integral",
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7. S. Burak, A.H. Bilge, D. Dernek,
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