
Scientific Publications of Dr. Imre Ferenc Barna:

last modified 12.07.2023

75. S. Varró, Sz. Hack, G. Parag, P. Földi, I. F. Barna and A. Czirják
"Diatomic molecule in a strong infrared laser field: level-shifts and bond-length change due to laser-dressed Morse potential"
[New. J. Phys. 11, \(2023\) 131](#)
IF 3.3
74. A. H, Askar, Á. Nagy, I.F. Barna and E. Kovács
"Analytical Solution and Numerical Simulation of Heat Transfer in Cylindrical- and Spherical-Shaped Bodies"
[Computation 11, \(2023\) 131](#)
IF 2.813
73. A, H, Askar, Á, Nagy, I. F. Barna and E. Kovács
"Analytical and Numerical Results for the Diffusion-Reaction Equation When the Reaction Coefficient Depends on Simultaneously the Space and Time Coordinates"
[Computation 11, \(2023\) 127](#)
IF 2.813
72. L. Mátyás and I.F. Barna
"Even and Odd Self-Similar Solutions of the Diffusion Equation for Infinite Horizon"
[Universe 9, \(2023\) 264](#)
IF 2.813
71. I.F. Barna, M.A. Pocsai and K. Tókési
"Ab Initio Double-Differential Ionization Cross-Section Calculations in Antiproton–Helium Collisions"
[Atoms 11, \(2023\) 74](#)
IF 1.8
- 70.M. Saleh, E. Kovács and I.F. Barna
"Analytical and Numerical Results for the Transient Diffusion Equation with Diffusion Coefficient Depending on Both Space and Time"
[Algorithms 16, \(2023\) 184](#)
IF 2.3
69. G. Biró, M. Pocsai, I.F. Barna, J.T. Moody and G. Demeter
"Machine learning methods for Schlieren imaging of a plasma channel in tenuous atomic vapor"
[Optics and Laser Technology 159, \(2023\) 108948](#)
IF 4.939
68. E. Kovács, M. Saleh, I.F. Barna and L. Mátyás
"New Analytical Results and Numerical Schemes for Irregular Diffusion Processes"
[Diffusion Fundamentals 35, \(2022\) 70](#)
or https://diffusion.uni-leipzig.de/contents_vol35.php
67. I.F. Barna, G. Bognár, L. Mátyás és K. Hriczó
"Self-similar analysis of the time-dependent compressible and incompressible boundary layers including heat conduction"
[Journal of Thermal Analysis and Calorimetry 147, \(2022\) 13625](#)
IF 4.626

66. I.F. Barna and L. Mátyás
"Lissajous curves with a finite sum of prime number frequencies"
[Annals of Mathematics and Physics 5\(2\), \(2022\) 137](#)
IF 0.16
65. Barna Imre Ferenc, Mátyás László és Hriczó Krisztián
"A fűtött határreéget leíró parciális differenciálegyenlet rendszer önhasonló megoldásai "
[Alkalmazott Matematikai Lapok 39, \(2022\) 1-15](#)
[a publication in Hungarian language, with an English abstract at the end](#)
64. I.F. Barna and L. Mátyás
"Advanced Analytic Self-Similar Solutions of Regular and Irregular Diffusion Equations"
[Mathematics 10, \(2022\) 3281](#)
IF 2.84
63. I.F. Barna, M.A. Pocsai and G. G. Barnaföld
"Self-similar solutions of a gravitating a dark fluid"
[Mathematics 10, \(2022\) 3220](#)
IF 2.84
62. M. Saleh, E. Kovács, I.F. Barna and L. Mátyás
"New Analytical Results and Comparison of 14 Numerical Schemes for the Diffusion Equation with Space-Dependent Diffusion Coefficient"
[Mathematics 10, \(2022\) 2813](#)
IF 2.84
61. I.F. Barna, M.A. Pocsai and L. Mátyás
"Time-dependent analytic solutions for water waves above sea of varying depth"
[Mathematics 10, \(2022\) 2311](#)
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60. I.F. Barna, G. Bognár, L. Mátyás and K. Hriczó
"Analytical investigation of the rotating and stratified hydrodynamical problem"
[AIP Conference Proceedings 2425, \(2022\) 290002](#)
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59. I.F. Barna, G. Bognár, L. Mátyás and K. Hriczó
"Analytical examination of the time-dependent incompressible boundary layer with heat conduction"
[AIP Conference Proceedings 2425, \(2022\) 290003](#)
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58. L. Mátyás and I.F. Barna
"General Self-Similar Solutions of Diffusion Equation and Related Constructions"
[Romanian Journal of Physics 67, \(2022\) 101](#)
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57. K. Gméling, T. Kocsis, J. Osán1, Z. Kis, M. A. Pocsai, K. Tőkési, I. F. Barna and Gy. Pádi
"Evaluation of major and trace elements present in extracted humic acid from bog peat"
[Asian Journal of Chemical Sciences 10, \(2021\) 47](#)
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56. I.F. Barna and L. Mátyás
"Analytic solutions of a two-fluid hydrodynamic model"
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55. Á. Nagy, I. Omle, H. Kareem, E. Kovács, I.F. Barna and G. Bognár
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54. I.F. Barna and L. Mátyás
"Analytic solutions of the rotating and stratified hydrodynamical equations"
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53. R.W. Assmann, M. Weikum.. et al.
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52. I.F. Barna, G. Bognár, L. Mátyás, M. Guedda, and K. Hriczó
"Analytic solutions of the two-dimensional Kardar-Parisi-Zhang growing equation"
[AIP Conference Proceedings 2293, \(2020\) 280002](#)
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51. I.F. Barna, G. Bognár, L. Mátyás, M. Guedda, and K. Hriczó
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[AIP Conference Proceedings 2293, \(2020\) 280005](#)
IF 0.4
50. H. Kisztián, G. Bognár and I.F. Barna
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49. G. Bognár, I.F. Barna, and K. Hriczó
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47. I.F. Barna, L. Mátyás and M.A. Pocsai
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46. M. K. Weikum et al.
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45. S.Varró, P. Földi and I.F. Barna
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44. M.A. Pocsai, I.F. Barna and K. Tókési
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21. I.F. Barna and Gy. Ézsöl

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Editors: Ben-Dor, Gabi; Igra, Ozer; Sadot, Oren

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