Matematici Aplicate

An înființare: 2019

Coordonatorul grupului: Prof. dr. Marin Marin

Membrii grupului:

- Prof. dr. Dorina Răducanu
- Conf. dr. Olivia Florea
- Asist. dr. Andreea Nistor Șerban
- Asist. dr. Adina Chirilă

Direcții de cercetare:

1. Comportari ale soluțiilor problemelor mixte pentru medii generalizate
2. Implicații ale porilor în abordarea de probleme concrete: comportarea oaselor, structura rocilor, etc.
3. Studiul proprietaților modelelor matematice care apar în mecanica mediilor continue generalizate (existența și unicitatea soluției, dependența continua a soluției de date, comportarea spațiala a soluției, etc.)
4. Simularea numerică a undelor în medii elastic
5. Studiul termoelasticitatii corpurilor cu porozitati multiple
6. Studiul curgerii sângelui prin arterele elastic
7. Studiul microdeplasărilor şi al microrotațiilor în fracturile de şold şi umăr
8. Studiul proprietăților claselor de funcții analitice
9. Aplicații ale metodei subordonărilor și superordonărilor diferențiale
10. Aplicații ale funcțiilor speciale în teoria geometrică a funcțiilor analitice.

Articole semnificative (selecție):

1. M. Marin, et al., A semigroup of contractions in elasticity of porous bodies, Cont. Mech. Thermodyn. Published online. Early Access: MAR 2021.
2. A. Chirilă, M. Marin, Wave propagation in diffusive microstretch thermoelasticity, Mathematics and Computers in Simulation, 2021(in press).
3. D. Sova, L. Gurau, M. Porojan, O. Florea, V. Sandu, M. Purcaru, Indirect evaluation of the porosity of waste wood briquettes by measuring the surface roughness, Waste and Biomass Valorization, 2021 (in press).
4. A. Chirilă, M. Marin, Numerical algorithms in mechanics of generalized continua, in Š. Hošková Mayerová, C. Flaut, F. Maturo (eds.) Algorithms as a Basis of Modern

Applied Mathematics. Studies in Fuzziness and Soft Computing, 404:177-188, 2021 (Springer Cham)

5. O. Florea, A. Bobe, Moore-Gibson-Thompson thermoelasticity in the context of double porous materials, Continuum Mechanics and Thermodynamics, May 2021, DOI: 10.1007/s00161-021-01025-z.
6. H. Orhan, D. Răducanu, The Fekete-Szego functional for generalized starlike and convex functions of complex order, Asian-Europian J. Math., 14,3(2021), DOI: 10.1142/S1793557121500364.
7. M. Marin, et al., On a thermoelastic material having a dipolar structure and microtemperatures, Applied Mathematical Modelling , 80, 827-839, 2020.
8. M. Marin, On the boundary value problem in the nonlinear theory of dipolar elastic materials , Mech. Adv. Mat. Struct., 27(18), 1619-1625, 2020.
9. M. Marin, et al., Some results in Moore-Gibson-Thompson thermoelasticity of dipolar bodies , ZAMM, 100(12), Art. No: e202000090, 2020.
10. M. Marin, V. Radulescu, On Some Non-existence Results in a Semilinear Theory of the Dipolar Thermoelastic Bodies, Applied Mathematics and Optimization, Published online. Early Access: JUL 2020.
11. A. Chirilă, M. Marin, Spatial behaviour of thermoelasticity with microtemperatures and microconcentrations, ITM Web of Conferences, International Conference on Applied Mathematics and Numerical Methods - third edition (ICAMNM 2020), 34, 02001, 2020.
12. M. Marin, A. Chirilă, L. Codarcea-Munteanu, On a thermoelastic material having a dipolar structure and microtemperatures, Applied Mathematical Modelling, 80:827-839, 2020.
13. A. Emin, O. Florea, E. Crăciun, Some uniqueness results for thermoelastic materials with double porosity structure, Continuum Mechanics and Thermodynamics, 1-24, 2020.
14. D. Răducanu, Coefficient estimates for a subclass of starlike functions, Mathematics, 2020, 8,1646, DOI: 10.3390/math8101646.
15. I. Aktaş, H. Orhan, D. Răducanu, On some properties of generalized Struve functions, Commun. Fac. Sci. Univ. Ankara. Ser. A1 Math. Stat.,69(1) (2020), 347-353, DOI: 10.31801/cfsuasmas.595570.
16. A. Chirilă, M. Marin, A. Montanaro, On adaptive thermo-electro-elasticity within a Green-Naghdi type II or III theory, Continuum Mechanics and Thermodynamics, 31(5):1453-1475, 2019.
17. O. Florea, Harmonic vibrations in thermoelastic dynamics with double porosity structure, Mathematics and Mechanics of Solids 24 (8), 2410-2424, 2019.

18. D. Răducanu, Differential subordination associated with generalized Mittag-Leffler function, RACSAM, 113(2) (2019), 435-452, DOI: 10.1007/s13398-017-0487-3.
19. A.E. Nistor-Șerban, Hankel determinant for a certain subclass of analytic functions, Bulletin of the Transilvania University of Brașov, Mathematics, Informatics, Physics, Series III, 12(61)(2019), 393-400.
20. O. Florea, Spatial behavior in thermoelastodynamics with double porosity structure, International Journal of Applied Mechanics, 9(7), 2017.
21. D. Răducanu , Third-order differential subordinations for analytic functions associated with generalized Mittag-Leffler functions, Mediterr. J. Math., 14:167 (2017), 1-18, DOI 10.1007/s00009-017-0969-8.
22. D. Răducanu, P. Zaprawa, Second Hankel determinant for close-to-convex functions, C. R. Acad. Sci. Paris, Ser. I, 355 (2017), 1063-1071, ISSN 1631-073X.
23. A.E. Tudor, On a subclass of analytic functions involving Salagean integral operator, Mathematica Slovaca 66(2016),823-828.
24. S. Kanas and A. E. Tudor Differential subordinations and harmonic means, Bulletin of the Malaysian Mathematical Science Society, 38(2015), 1243-1253.
25. A.E. Tudor and D. Raducanu On a subclass of analytic functions involving harmonic means, Analele Stiintifice ale Universitatii Ovidius Constanta, 23(1)(2015), 267-275.