

## LISTĂ DE LUCRĂRI

### *Lista unor lucrări considerate relevante pentru realizările profesionale proprii*

1. R.J. Martin, I.D. Ghiba, P. Neff. Rank-one convexity implies polyconvexity for isotropic, objective and isochoric elastic energies in the two-dimensional case, *Proceedings of the Royal Society of Edinburgh, Section: A Mathematics* 147 (3), pp. 571-597, 2017. (SRI 2016: 1.616, IF 2016: 1.158)
2. I.D. Ghiba, P. Neff, R.J. Martin. An ellipticity domain for the distortional Hencky-logarithmic strain energy, *Proceedings of the Royal Society A* 471, doi: 10.1098/rspa.2015.0510, 2016. (SRI 2016: 2.223, IF 2016: 2.146)
3. P. Neff, J. Lankeit, I.D. Ghiba, R. Martin, D. Steigmann. The exponentiated Hencky-logarithmic strain energy. Part II: Coercivity, planar polyconvexity and existence of minimizers, *ZAMP*, 66, pp. 1671-1693, 2015. (SRI 2016: 1.213, IF 2016: 1.687)
4. G. Barbagallo, M.V. D'Agostino, R. Abreu, I.D. Ghiba, A. Madeo, P. Neff. Transparent anisotropy for the relaxed micromorphic model: macroscopic consistency conditions and long wave length asymptotics, *International Journal of Solids and Structures*, 120, pp. 7-30, 2017. (SRI 2016: 1.915, IF 2016: 2.76)
5. A. Madeo, P. Neff, I.D. Ghiba, L. Placidi, G. Rosi. Band gaps in the relaxed linear micromorphic continuum, *ZAMM*, 95, pp. 880-887, 2015. (SRI 2016: 1.207, IF 2016: 1.332)
6. I.D. Ghiba, P. Neff, A. Madeo, L. Placidi, G. Rosi. The relaxed linear micromorphic continuum: existence, uniqueness and continuous dependence in dynamics, *Mathematics and Mechanics of Solids*, 68, pp. 53-84, 2015. (SRI 2016: 1.328, IF 2016: 2.953)
7. P. Neff, I.D. Ghiba, A. Madeo, L. Placidi, G. Rosi. A unifying perspective: the relaxed linear micromorphic continuum, *Continuum Mechanics and Thermodynamics*, 26, pp. 639-681, 2014. (marcat drept "highly cited paper on Web of Science") (SRI 2016: 1.808, IF 2016: 2.529)
8. I.D. Ghiba. On the spatial behaviour in bending theory of porous thermoelastic plates. *Journal of Mathematical Analysis and Applications*, 403, pp. 129-142, 2013. (SRI 2016: 1.125, IF 2016: 1.064)
9. S. Chiriță, I.D. Ghiba. Rayleigh waves in Cosserat elastic materials, *International Journal of Engineering Science*, 51, pp. 117-127, 2012. (SRI 2016: 2.646, IF 2016: 4.261)

### *Teza de doctorat*

- Studiul unor modele generalizate în mecanica mediilor continue; susținută public în data de 14 Octombrie 2010 la Facultatea de Matematică a Universității Alexandru Ioan Cuza din Iași; comisia formată din Prof. Dr. Ovidiu Cârjă (președinte), Prof. Dr. Stan Chiriță (coordinator), Prof. Dr. Sanda Țigoiu (membru), CS I Dr. Cristian Făciu (membru), Prof. Dr. Mirela Kohr (membru).

### *Listă completă de lucrări*

#### *Articole în jurnale indexate ISI:*

- [L1] I.D. Ghiba, R.J. Martin, P. Neff. Rank-one convexity implies polyconvexity in isotropic planar incompressible elasticity, *Journal de Mathématiques Pures et Appliquées*, sub tipar, 2017. (SRI 2016: 3.117, IF 2016: 1.802)
- [L2] R.J. Martin, I.D. Ghiba, P. Neff. Rank-one convexity implies polyconvexity for isotropic, objective and isochoric elastic energies in the two-dimensional case, *Proceedings of the Royal Society of Edinburgh, Section: A Mathematics* 147 (3), pp. 571-597, 2017. (SRI 2016: 1.616, IF 2016: 1.158)
- [L3] G. Barbagallo, M.V. D'Agostino, R. Abreu, I.D. Ghiba, A. Madeo, P. Neff. Transparent anisotropy for the relaxed micromorphic model: macroscopic consistency conditions and long wave length asymptotics, *International Journal of Solids and Structures*, 120, pp. 7-30, 2017. (SRI 2016: 1.915, IF 2016: 2.76)
- [L4] I.D. Ghiba, P. Neff, A. Madeo, I. Münch. A variant of the linear isotropic indeterminate couple stress model with symmetric local force-stress, symmetric nonlocal force-stress, symmetric couple-stresses and complete traction boundary conditions, *Mathematics and Mechanics of Solids* 22, pp. 1221-1266, 2017. (SRI 2016: 1.328, IF 2016: 2.953)
- [L5] I. Münch, P. Neff, A. Madeo, I.D. Ghiba. The modified indeterminate couple stress model: Why Yang et al.'s arguments motivating a symmetric couple stress tensor contain a gap and why the couple stress tensor may be chosen symmetric nevertheless, *ZAMM*, 97, pp. 1524-1554, 2017. (SRI 2016: 1.207, IF 2016: 1.332)
- [L6] M. V. d'Agostino, G. Barbagallo, I.D. Ghiba, A. Madeo, P. Neff. A panorama of dispersion curves for the weighted isotropic relaxed micromorphic model, *ZAMM*, 97, pp. 1436-1481, 2017. (SRI 2016: 1.207, IF 2016: 1.332)

- [L7] P. Neff, A. Madeo, G. Barbagallo, M.V. D'Agostino, R. Abreu, I.D. Ghiba. Real wave propagation in the isotropic-relaxed micromorphic model, *Proceedings of the Royal Society A* 473, doi: 10.1098/rspa.2016.0790, 2017. (SRI 2016: 2.223, IF 2016: 2.146)
- [L8] A. Madeo, P. Neff, I.D. Ghiba, G. Rosi. Reflection and transmission of elastic waves at interfaces embedded in non-local band-gap metamaterials: a comprehensive study via the relaxed micromorphic model, *Journal of the Mechanics and Physics of Solids*, 95, pp. 441-479, 2016. (SRI 2016: 4.399, IF 2016: 4.255)
- [L9] A. Madeo, I.D. Ghiba, P. Neff, I. Münch. A new view on boundary conditions in the Grioli-Koiter-Mindlin-Toupin indeterminate couple stress model, *European Journal of Mechanics A/Solids*, 59, pp. 294-322, 2016. (SRI 2016: 1.704, IF 2016: 2.846)
- [L10] P. Neff, I. Münch, I.D. Ghiba, A. Madeo. On some fundamental misunderstandings in the indeterminate couple stress model. A comment on recent papers of A.R. Hadjesfandiari and G.F. Dargush, *International Journal of Solids and Structures* 81, pp. 233-243, 2016. (SRI 2016: 1.915, IF 2016: 2.76)
- [L11] P. Neff, I.D. Ghiba. Loss of ellipticity in additive logarithmic finite strain plasticity, *International Journal of Non-Linear Mechanics*, 81, pp. 122-128, 2016. (SRI 2016: 1.364, IF 2016: 2.074)
- [L12] P. Neff, I.D. Ghiba. The exponentiated Hencky-logarithmic strain energy. Part III: Coupling with idealized multiplicative isotropic finite strain plasticity, *Continuum Mechanics and Thermodynamics*, 28, pp. 477-487, 2016. (SRI 2016: 1.808, IF 2016: 2.529)
- [L13] I.D. Ghiba, P. Neff, R.J. Martin. An ellipticity domain for the distortional Hencky-logarithmic strain energy, *Proceedings of the Royal Society A* 471, doi: 10.1098/rspa.2015.0510, 2016. (SRI 2016: 2.223, IF 2016: 2.146)
- [L14] I.D. Ghiba, P. Neff, M. Silhavy. The exponentiated Hencky-logarithmic strain energy. Improvement of the proof of planar polyconvexity, *International Journal of Non-Linear Mechanics*, 71, pp. 48-51, 2015. (SRI 2016: 1.364, IF 2016: 2.074)
- [L15] P. Neff, J. Lankeit, I.D. Ghiba, R. Martin, D. Steigmann. The exponentiated Hencky-logarithmic strain energy. Part II: Coercivity, planar polyconvexity and existence of minimizers, *ZAMP*, 66, pp. 1671-1693, 2015. (SRI 2016: 1.213, IF 2016: 1.687)
- [L16] P. Neff, I.D. Ghiba, J. Lankeit. The exponentiated Hencky-logarithmic strain energy. Part I: Constitutive issues and rank-one convexity, *Journal of Elasticity*, 121, pp. 143-234, 2015. (SRI 2016: 2.044, IF 2016: 1.909)

- [L17] A. Madeo, P. Neff, I.D. Ghiba, L. Placidi, G. Rosi. Band gaps in the relaxed linear micromorphic continuum, *ZAMM*, 95, pp. 880-887, 2015. (SRI 2016: 1.207, IF 2016: 1.332)
- [L18] I.D. Ghiba, P. Neff, A. Madeo, L. Placidi, G. Rosi. The relaxed linear micromorphic continuum: existence, uniqueness and continuous dependence in dynamics, *Mathematics and Mechanics of Solids*, 68, pp. 53-84, 2015. (SRI 2016: 1.328, IF 2016: 2.953)
- [L19] A. Madeo, P. Neff, I.D. Ghiba, L. Placidi, G. Rosi. Wave propagation in relaxed micromorphic continua: modelling metamaterials with frequency band-gaps, *Continuum Mechanics and Thermodynamics*, 27, pp. 551-570, 2015. (SRI 2016: 1.808, IF 2016: 2.529)
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- [L22] P. Neff, I.D. Ghiba, A. Madeo, L. Placidi, G. Rosi. A unifying perspective: the relaxed linear micromorphic continuum, *Continuum Mechanics and Thermodynamics*, 26, pp. 639-681, 2014. (marcat drept "highly cited paper on Web of Science") (SRI 2016: 1.808, IF 2016: 2.529)
- [L23] E. Bulgariu, I.D. Ghiba. On the thermal stresses in anisotropic porous cylinders, *Discrete and Continuous Dynamical Systems - Series S*, 6, December, pp. 1539-1550, 2013. (SRI 2016: necalculat, IF 2016: 0.781)
- [L24] I.D. Ghiba. On the spatial behaviour in bending theory of porous thermoelastic plates. *Journal of Mathematical Analysis and Applications*, 403, pp. 129-142, 2013. (SRI 2016: 1.125, IF 2016: 1.064)
- [L25] I.D. Ghiba, C. Gales. Some qualitative results in the linear theory of micropolar solid-solid mixtures, *Journal of Thermal Stresses*, 36, pp. 426-445, 2013. (SRI 2016: 1.000, IF 2016: 1.493)
- [L26] I.D. Ghiba. On the temporal behaviour in the bending theory of porous thermoelastic plates, *ZAMM*, 93, pp. 284-296, 2013. (SRI 2016: 1.207, IF 2016: 1.332)
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- [L29] C. Galeș, I.D. Ghiba, I. Ignătescu. Asymptotic partition of energy in micromorphic thermopiezoelectricity, *Journal of Thermal Stresses*, 34, pp. 1241-1249, 2011. (SRI 2016: 1.000, IF 2016: 1.493)
- [L30] I.D. Ghiba. On the steady vibrations problem in linear theory of micropolar solid-fluid mixture, *European Journal of Mechanics A/Solids*, 30, pp. 584-593, 2011. (SRI 2016: 1.704, IF 2016: 2.846)
- [L31] I.D. Ghiba. On the thermal theory of micropolar solid-fluid mixture, *Journal of Thermal Stresses*, 34, pp. 1-17, 2011. (SRI 2016: 1.000, IF 2016: 1.493)
- [L32] C. Galeș, I.D. Ghiba. On uniqueness and continuous dependence of solutions in viscoelastic mixtures, *Meccanica*, 45, pp. 901-909, 2011. (SRI 2016: 0.891, IF 2016: 2.196)
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- [L37] I.D. Ghiba. Some uniqueness and stability results in the theory of micropolar solid-fluid mixture, *Journal of Mathematical Analysis and Applications*, 335, pp. 385-396, 2009. (SRI 2016: 1.125, IF 2016: 1.064)
- [L38] S. Chiriță, C. Galeș, I.D. Ghiba. On spatial behavior of the harmonic vibrations in Kelvin-Voigt materials, *Journal of Elasticity*, 93, pp. 81-92, 2008. (SRI 2016: 2.044, IF 2016: 1.909)
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- [L40] I.D. Ghiba. Asymptotic partition of energy in micropolar mixture theory of porous media, *Meccanica*, 43, pp. 639-649, 2008. (SRI 2016: 0.891, IF 2016: 2.196)

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- [L42] I.D. Ghiba. Some uniqueness and continuous dependence results in the micropolar mixture theory of porous media, *International Journal of Engineering Science*, 44, pp. 1269-1279, 2006. (SRI 2016: 2.646, IF 2016: 4.261)

*Articole în alte jurnale:*

- [L43] I.D. Ghiba, C. Galeş. A uniqueness result for the motion of micropolar solid-fluid mixtures in unbounded domain, *Ann. Univ. Ferrara*, 57, pp. 275-286, 2011.
- [L44] I.D. Ghiba. On the spatial behaviour of harmonic vibrations in an elastic cylinder, *An. şt. Univ. Iaşi, Sect. Matematică*, LII, f.1, pp. 75-86, 2006.

*Lucrări în volumele unor conferințe:*

- [L45] A. Madeo, P. Neff, G. Barbagallo, M.V. D'Agostino, I.D. Ghiba. A review on wave propagation modeling in band-gap metamaterials via enriched continuum models, In F. dell'Isola, M. Sofonea and D. Steigmann (eds), *Mathematical Modelling in Solid Mechanics*, Volume 69 of the series *Advanced Structured Materials*, pp. 89-105, Springer, 2017.
- [L46] P. Neff, I.D. Ghiba. Comparison of isotropic elasto-plastic models for the plastic metric tensor  $C_p = F_p^T F_p$ , In K. Weinberg and A. Pandolfi (eds), *Innovative Numerical Approaches for Multi-Field and Multi-Scale Problems*, Volume 81 of *Lecture Notes in Applied and Computational Mechanics*, pp. 161-195, Springer, 2016.
- [L47] I.D. Ghiba, P. Neff, R.J. Martin. Loss of ellipticity in additive logarithmic finite strain plasticity and related results on Hencky-type energies. *PAMM-Proc. Appl. Math. Mech.* 16, pp. 341-342, 2016.
- [L48] P. Neff, I.D. Ghiba, A. Madeo, I. Münch. Null-Lagrangians and the indeterminate couple stress model, *PAMM-Proc. Appl. Math. Mech.* 16, pp. 379-380, 2016.
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- [L51] I.D. Ghiba, P. Neff, A. Madeo. The relaxed micromorphic continuum model, *PAMM-Proc. Appl. Math. Mech.* 14, pp. 733-734, 2014.

- [L52] I.D. Ghiba. Existence and uniqueness results in the micropolar mixture theory of porous media. In O. Cârjă and I. Vrabie (eds), Applied analysis and differential equations, pp. 139-152. World Scientific, 2007.

*Capitole în cărți/enciclopedii:*

- [L53] I.D. Ghiba. Linear Thermoelastic Model. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, pp. 2785-2794, Springer, 2014.
- [L54] I.D. Ghiba. Boundary-Initial Value Problems of Thermoelastodynamics. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, pp. 468-474, Springer, 2014.
- [L55] I.D. Ghiba. Partition of Energy. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, pp. 3609-3616, Springer, 2014.
- [L56] I.D. Ghiba. Saint-Venant's Principle. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, pp. 4255-4264, Springer, 2014.
- [L57] I.D. Ghiba. Thermoelastic Waves. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, pp. 5785-5794, Springer, 2014.

*Volume editate:*

- [L58] O. Cârjă, I.D. Ghiba. Proceedings of the International Student Conference on Pure and Applied Mathematics, Editura Universității "Alexandru Ioan Cuza", 2011, ISBN 978-973-703-602-5.

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