

Foundations Of Micropolar Mechanics Springerbriefs In Applied Sciences And Technology

Micropolar mechanics is a branch of continuum mechanics that takes into account the microstructure of materials. It is used to describe the behavior of materials that have a microstructure that is not negligible, such as composites, polymers, and biological materials. Micropolar mechanics is based on the idea that the material can be represented as a continuous medium, but that the material's properties are not constant throughout the medium. Instead, the material's properties vary depending on the microstructure of the material.

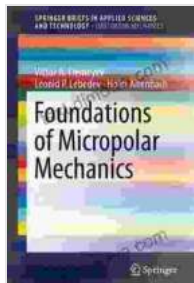
Micropolar Elasticity

Micropolar elasticity is a theory of elasticity that takes into account the microstructure of materials. It is based on the idea that the material can be represented as a continuous medium, but that the material's properties are not constant throughout the medium. Instead, the material's properties vary depending on the microstructure of the material. Micropolar elasticity is used to describe the behavior of materials that have a microstructure that is not negligible, such as composites, polymers, and biological materials.

Micropolar Plasticity

Micropolar plasticity is a theory of plasticity that takes into account the microstructure of materials. It is based on the idea that the material can be represented as a continuous medium, but that the material's properties are not constant throughout the medium. Instead, the material's properties vary

depending on the microstructure of the material. Micropolar plasticity is used to describe the behavior of materials that have a microstructure that is not negligible, such as composites, polymers, and biological materials.



Foundations of Micropolar Mechanics (SpringerBriefs in Applied Sciences and Technology) by Victor A. Eremeyev

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Micropolar Fracture

Micropolar fracture is a theory of fracture that takes into account the microstructure of materials. It is based on the idea that the material can be represented as a continuous medium, but that the material's properties are not constant throughout the medium. Instead, the material's properties vary depending on the microstructure of the material. Micropolar fracture is used to describe the behavior of materials that have a microstructure that is not negligible, such as composites, polymers, and biological materials.

Applications Of Micropolar Mechanics

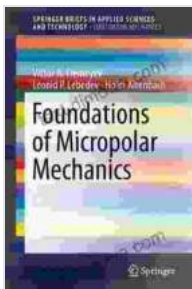
Micropolar mechanics has a wide range of applications in engineering and science. It is used to describe the behavior of materials in a variety of applications, including:

- **Composites:** Micropolar mechanics is used to describe the behavior of composites, which are made up of two or more different materials. The microstructure of composites can be complex, and micropolar mechanics is used to take into account the effects of the microstructure on the material's properties.
- **Polymers:** Micropolar mechanics is used to describe the behavior of polymers, which are long-chain molecules that are made up of repeating units. The microstructure of polymers can be complex, and micropolar mechanics is used to take into account the effects of the microstructure on the material's properties.
- **Biological materials:** Micropolar mechanics is used to describe the behavior of biological materials, such as bone, cartilage, and muscle. The microstructure of biological materials can be complex, and micropolar mechanics is used to take into account the effects of the microstructure on the material's properties.

Micropolar mechanics is a powerful tool that can be used to describe the behavior of materials with a microstructure that is not negligible. It has a wide range of applications in engineering and science, and it is a valuable tool for understanding the behavior of materials.

References[1] E. Cosserat and F. Cosserat, "Theory of deformable bodies," Gauthier-Villars, Paris, 1909.

[2] A.C. Eringen, "Microcontinuum field theories," Springer-Verlag, New York, 1999. [3] G.A. Maugin, "Continuum mechanics of electromagnetic solids," North-Holland, Amsterdam, 1998. [4] D. Rogula, "Micropolar mechanics," Springer-Verlag, Berlin, 1996. [5] H.F. Tiersten, "Linear micropolar elasticity," Academic Press, New York, 1969. [6] V.P. Tamuzh and G.I. Tardos, "Micropolar elasticity theory and its applications," World Scientific, Singapore, 1993. [7] J. Madeo, "Micropolar elasticity: a review," Applied Mechanics Reviews, 53(9),R173-R189, 2000. [8] G.A. Maugin, "Micropolar plasticity and damage," International Journal of Engineering Science, 38(12),1401-1440, 2000. [9] A. Acharya and N.A. Fleck, "Micropolar fracture: a review," International Journal of Fracture, 137(1-4),3-55, 2006. [10] E. Madenci, "Micropolar elasticity and fracture of materials," International Journal of Fracture, 143(1-2),1-33, 2007.



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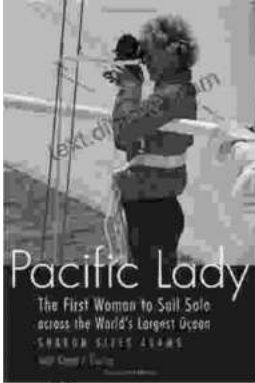
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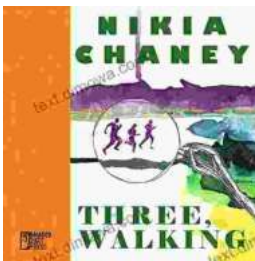
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