Redactarea secţiunii „Discuţii” a unei lucrări ştiinţifice. Cooperare cu recenzorii

Prof. Dr. Ing. Liviu MARSAVINA*

Departamentul MECANICĂ și REZISTENȚA MATERIALELOR

Universitatea POLITEHNICA Timisoara

* E-Mail: liviu.marsavina@upt.ro

Unde publicăm?

- Articole în reviste vs. articole în volume conferințe
  - Loughborough University, UK, Sep. 1998 (Euromech Colloquim)
  - Loughborough University, UK, Feb. – Aug. 2000 (Postdoctoral Researcher)
  - The University of Sheffield, UK Iul. 2001 – Iul. 2002 (Reseach Associate)
  - Gent University, BELGIA, Feb., Aug. – Oct. 2006 (Experienced Reseacher)
  - Lublin University of Technology, POLONIA, Ian. 2007 – Iul. 2008 (More Experienced Researcher in Marie Curie ToK project)

Obiective/ţeluri

- Anii ’80 – să ajung cadru didactic la Universitate ⇒ **1990**

- Anii ‘90
  - să finalizez teza de doctorat ⇒ **1998**
  - să vizitez Cambridge – Oxford ⇒ **2000**
- Anii 2000

  - să mă perfecționez în laboartoare internaționale: Loughborough, Sheffiled, Gent, Lublin

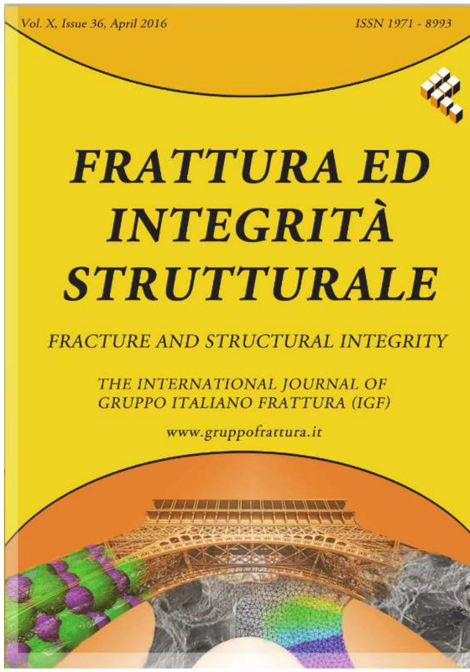
  - să obțin titlul de Prof. Universitar ⇒ **2006**
- Anii 2010

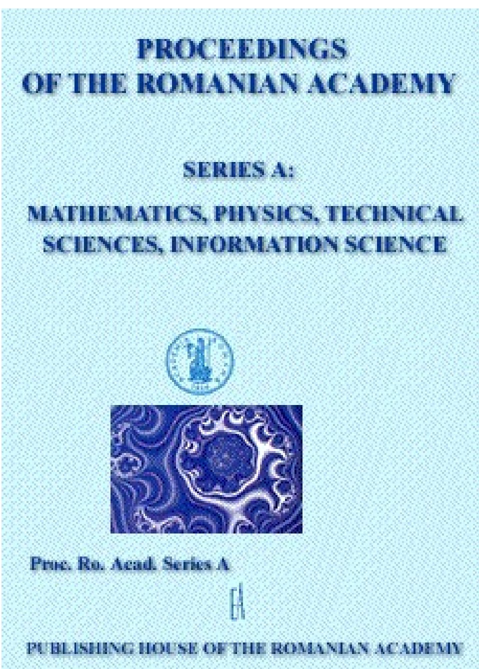
  -să public în toate jurnalele care au în titlu “Fracture/Failure/Integrity” ⇒ **2015**

  - să creez un grup de cecetare competitiv în domeniul caracterizării mecanice a materialelor ⇒ **2011 - 2016**

  ✓ Consecință – membru corespondent al Academiei Române ⇒ **2018**

Membru comitet editorial





Unde publicăm?

După extensie articolele se clasifică în:

- articole științifice tip “note” sau “letters”. Există jurnale care publică numai articole având extensia de 2 - 6 pagini cele mai celebre fiind Nature sau Science, dar și Scripta Materialia (Elsevier), Mechanical Research Communication (Elsevier). Pe de altă parte alte jurnale publică pe lângă articole originale și anumite lucrări tip “note” cu extensie limitată.
- articole științifice originale (original papers), având extensii de la 10 până la 30-40 de pagini fiind cele mai frecvente, respectiv cele mai multe jurnale publică astfel de lucrări.
- articole științifice de sinteză (review papers).
- articole științifice în volumele unor conferințe (lucrări cu număr limitat de pagini 4 – 8), care trebuie să se încadreze în domeniul conferinței și la redactarea cărora trebuie respectat un anumit format (“template”) pus le dispoziție de către organizatori.

Unde publicăm?

- **după conţinut** (Castellanos Abella, 2005):

- articole ştiinţifice de sinteză. Articolele de sinteză în general nu prezintă rezultate originale. Articolele ştiinţifice de sinteză se pot clasifica la rândul lor în:

- articole de sinteză metodologice şi conceptuale, în care se compară, analizează, clasifică sau critică diferite modele, metode sau concepte. Există jurnale orientate spre publicarea unor astfel de articole: *Earth-Science Review* (Elsevier), *Applied Mechanics Review* (ASME);
- articole de sinteză bibliografică, care de obicei citează un număr mare de alte articole, fiind utile pentru cei care încep o cercetare într-un domeniu nou;
- articole care prezintă recenzia unei cărţi, publicaţii sau a unei manifestări ştiinţifice; de obicei aceste articole sunt scurte, ele descriu cartea (manifestarea) prezintând: autorii, scopul cărții, punctele importante tari, eventual cele slabe și precizează cui poate fi folositoare cartea;

Unde publicăm?

- articole ştiinţifice cu caracter teoretic, metodologic şi/sau fenomenologic, care pot:

  - prezinta o metodă nouă;
  - testează o metodă existentă prin modificarea anumitor parametrii sau a datelor inițiale;
  - compara diferite metode utilizând același set de date;

Dintre jurnalele orientate spre publicarea articolelor metodologice pot fi amintite: *Methods in Ecology and Evolution (publicat de Wiley-Blackwell), Journal of Neuroscience Methods (Elsevier), Analytical Methods (RSC Publishing).*

Unde publicăm?

- articole ştiinţifice cu caracter aplicativ, care au ca rezultat publicarea unor cunoștințe/informații noi într-un anumit domeniu. Deobicei ele se bazează pe rezultatele experimente şi/sau pe cele obţinute pe baza unor simulări numerice.

Exemple de jurnale specializate în publicarea unor rezultate experimentale sunt: *Experimental Mechanics* (Springer), *Polymer Testing* (Elsevier), *The Journal of Experimental Medicine* (The Rockefeller University Press) și *Journal of Experimental Biology* (The Company of Biologists), iar pentru cele bazate pe simulări amintim: *Computational Materials Science* (Elsevier), *Journal of Computational Physics* (Elsevier), *Journal of Computational and Applied Mathematics* (Elsevier) și *International Journal for Computational Methods in Engineering Science and Mechanics* (Taylor and Francis).

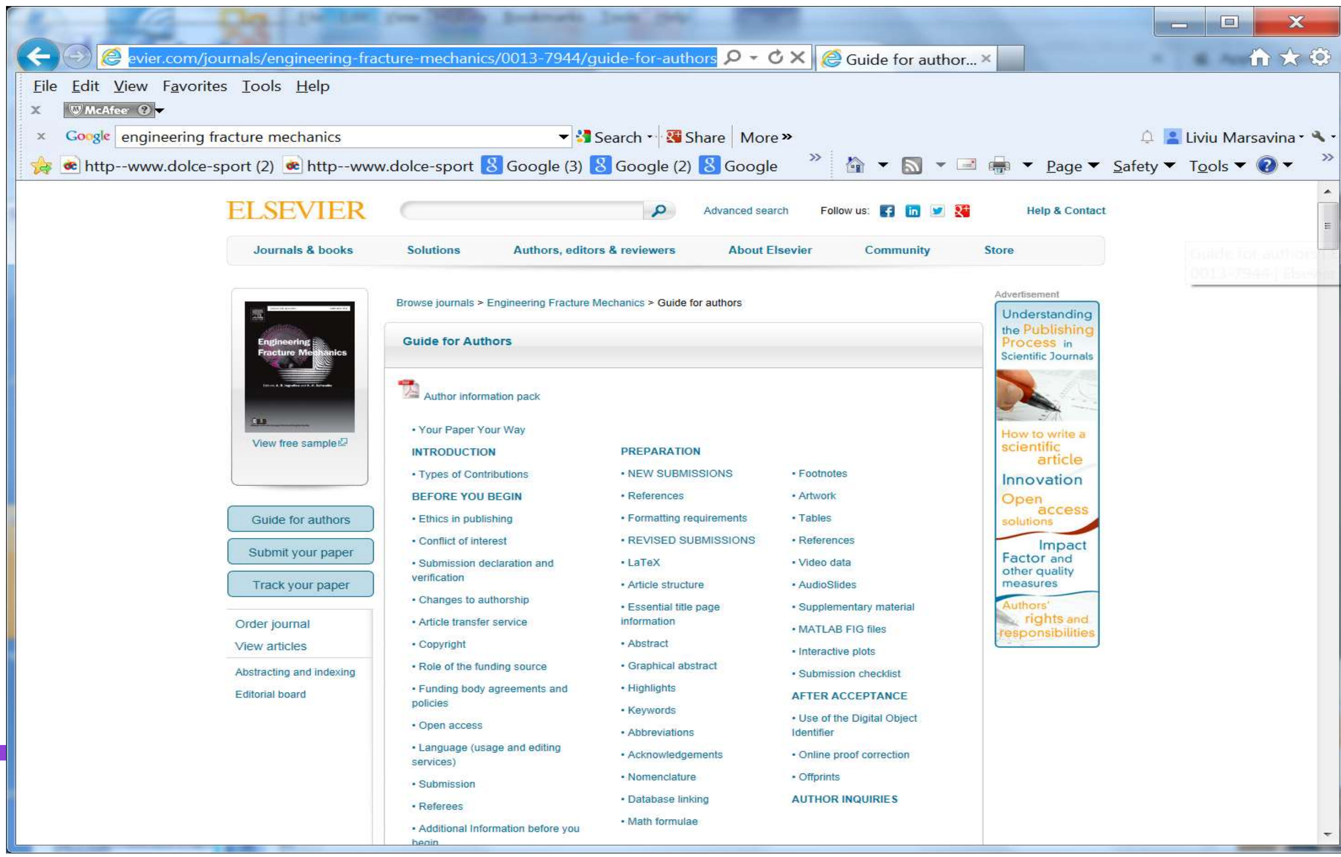
Unde publicăm?

- **după nivelul de aprofundare** (Little, 2002) :
  - articole ştiinţifice descriptive, sunt caracteristice stadiilor de început al cercetării şi orientate spre descrierea unor fenomene, sisteme supuse investigării, se pot formula diferite ipoteze sau interconexiuni.
  - articole ştiinţifice cu caracter comparativ, la care rezultatele obţinute sunt comparate şi ierarhizate faţă de alte rezultate publicate în literatură.
  - articole ştiinţifice cu caracter analitic, la care se argumentează una sau mai multe ipoteze despre funcţionarea unui sistem, interconexiunile părţilor şi legăturile de cauzalitate. Ipotezele formulate trebuiesc susținute, validate și raportate la stadiul actual al cunoașteii asupra sistemului.

Înainte de publicare

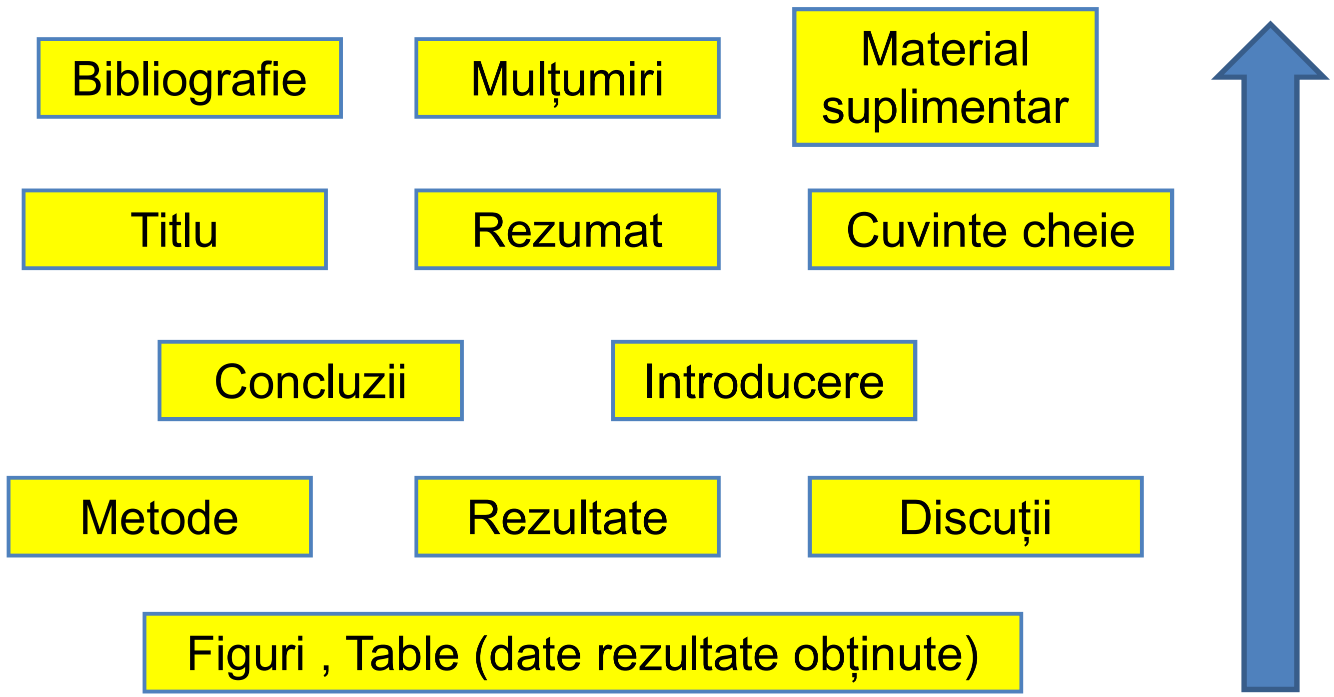
- **Alegerea jurnalului**
- **Consultarea instrucțiunilor pentru autori**

http://www.elsevier.com/journals/engineering-fracture-mechanics/0013-7944/guide-for-authors



Conceperea lucrărilor științifice

Procesul de redactare a unei lucrări



Conceperea lucrărilor științifice

Structura de principiu a unui articol ştiinţific

1. Introducere: Care este problema ce reprezintă obiectul cercetării - definiţie, motivaţie, obiective, resurse, modalităţi de abordare şi finalizare, rezultate originale?

2. Metode şi mijloace de investigaţie: Cum, prin ce metode, cu ce mijloace, prin ce proceduri şi în ce circumstanţe de timp şi spaţiu a fost rezolvată problema?

3. Rezultate: Ce rezultate relevante în raport cu obiectivele cercetării au fost obţinute?

4. Discuţii: Care este natura, sensul şi semnificaţia rezultatelor în raport cu ipotezele asumate şi cu rezultatele altor cercetători?

5. Concluzii: Care sunt rezultatele originale şi importante pe plan ştiinţific şi tehnologic?

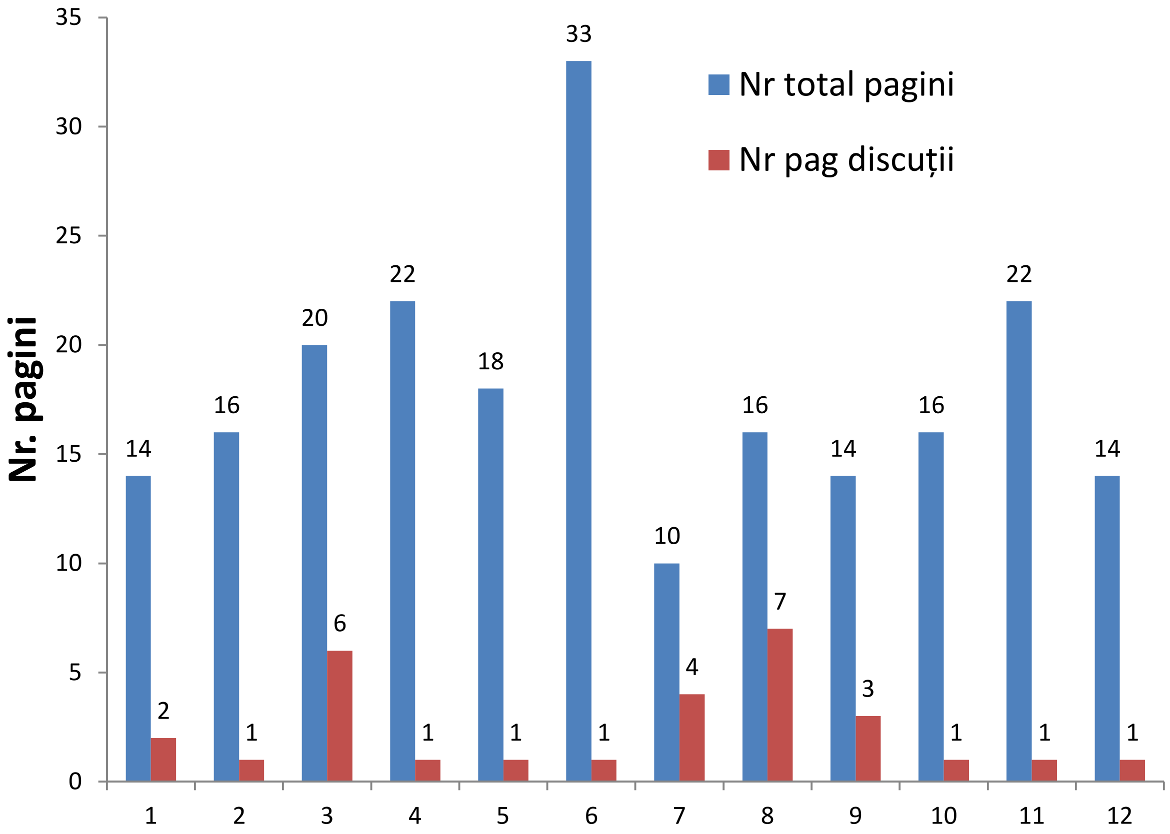
Discuții

după Nichici 2008

Elemente esențiale	Obiective, acțiuni, efecte
Funcție logică	• interpretează rezultatele relevante ale cercetării în raport cu obiectivele și ipotezele asumate, cu rezultatele altor cercetători și cu cerințele dezvoltării viitoare a domeniului investigat
Conținut	• trece în revistă, confruntă și corelează mulțimea ideilor și probelor prezentate în articol, • caută și propune explicații argumentate pentru concordanța, discordanța dintre idei și probele disponibile, • dezvoltă procese de interferență inductivă și deductivă asupra rezultatelor cercetării și estimează limitele de valabilitate a acestora, • identifică surse de erori sistematice și aleatoare care pot afecta precizia și credibilitatea rezultatelor prezentate, • evaluează importanța științifică și tehnologică , • evidențiază într-un mod onest și echilibrat semnificația și relevanța contribuțiilor personale ale autorilor în cercetarea realizată.
Extensie recomandată	• maximum 4 pagini tipărite
Observații	• este partea principală a articolului științific, dedicată interpretărilor și opiniilor proprii ale autorilor, • la baza discuțiilor trebuie așezate faptele, evidența în raport cu care speculațiile sunt inevitabil colaterale și periferice.

Exemple

International Journal of Solids and Structures,
Vol. 1 (2009), IF 1,569



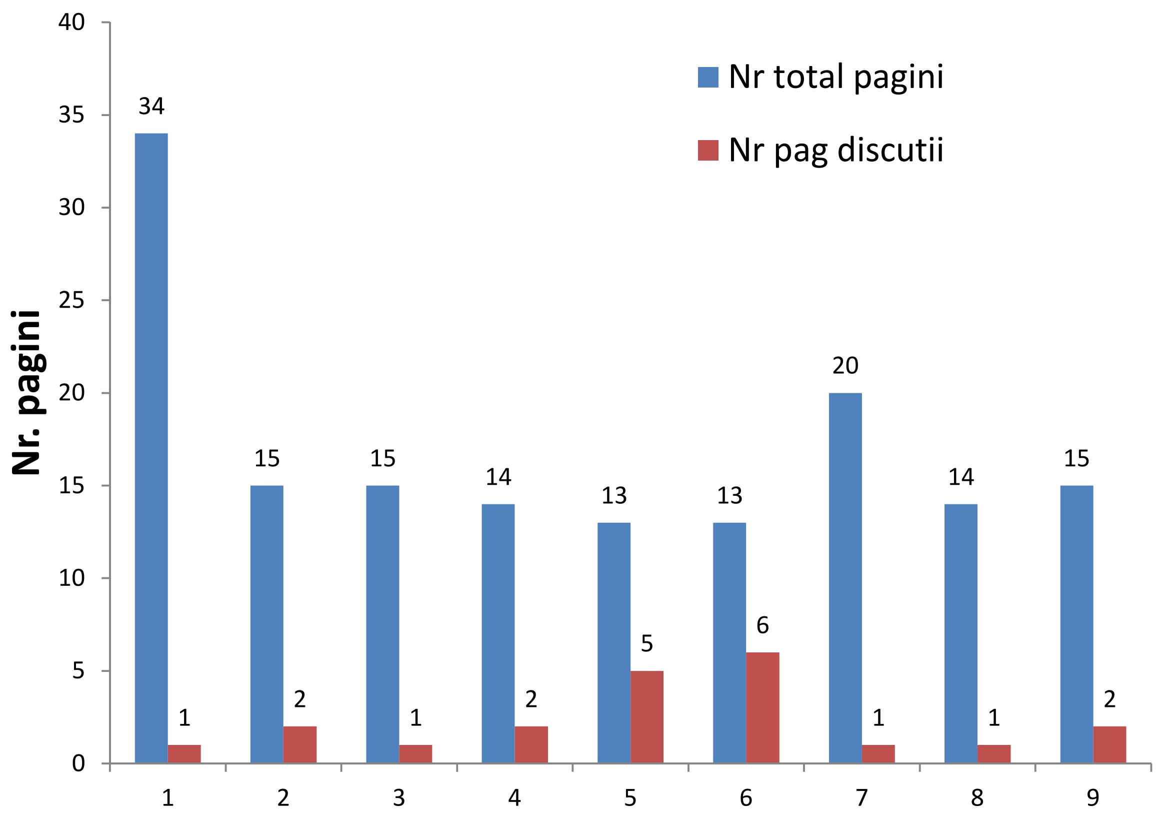
Medii

Nr total pagini: 18

Nr pagini discutii: 2.25

Exemple

Engineering Fracture Mechanics, Vol. 1 (2009), IF 1,227



Medii

Nr total pagini: 17

Nr pagini discutii: 1.75

Organizarea secțiunii discuții

- Capitol “Discuții” independent. (Ex. 1)

- “Rezultate și discuții”. “Concluzii finale”. (Ex. 2)

(**Conference :** SMTA International 2006)

- Discuțiile inserate în “Concluzii”. (deobicei la lucrările în volumele conferințelor unde nr. de pagini este limitat sau articole de tip NOTE, LETTERS). (Ex. 3)

Studiu de caz

Mark S. Thompson*

Ian D. McCarthy

Lars Lidgren

Department of Orthopaedics,
Lund University Hospital,
Lund 22185, Sweden

Leif Ryd

Department of Orthopaedics,
Linköping University Hospital,
Linköping 58185, Sweden

Compressive and Shear Properties of Commercially Available Polyurethane Foams

Background: *The shear properties of rigid polyurethane (PU-R) foams, routinely used to simulate cancellous bone, are not well characterized.* ***Method of approach:*** *The present assessment of the shear and compressive properties of four grades of Sawbones "Rigid cellular" PU-R foam tested 20 mm gauge diameter dumb-bell specimens in torsion and under axial loading.* ***Results:*** *Shear moduli ranged from 13.3 to 99.7 MPa, shear strengths from 0.7 MPa to 4.2 MPa. Compressive yield strains varied little with density while shear yield strains had peak values with "200 kgm^{-3}" grade.* ***Conclusions:*** *PU-R foams may be used to simulate the elastic but not failure properties of cancellous bone.* [DOI: 10.1115/1.1614820]

Journal of Biomechanical Engineering OCTOBER 2003, Vol. 125 / 733

Studiu de caz

- 4 tipuri de spume cu densități diferite
- 10 epruvete pentru fiecare densitate
- 2 tipuri de teste – torsiune
  - compresiune

Table 1 Approximate cell diameter for each grade

Grade	120	140	200	320
Diameter (mm)	2	1	0.5	<0.25

Materials and Methods

Samples of four grades (nominal densities 120, 160, 200 and 320 kgm^{-3}) of Rigid Cellular Foam (Sawbones Europe AB, Malmö, Sweden) were used. The apparent densities were obtained by measuring the dimensions and mass of four samples of each grade. A standard dumb-bell shaped test specimen geometry was used with a gauge length of 40 mm and gauge diameter of 20 mm. The specimen dimensions were chosen with reference to Harrigan et al. [7] so that the continuum property, shear stress, varied by less than 20–30% over 3 to 5 cell diameters. Table 1 contains approximate cell diameters for the different grades. More recent work [8] suggests that with ratios of specimen size to cell size larger than 8 the effect of size on Young's modulus, compression and shear strength vanishes. The largest cell foam, "120" had at least 8 cells across the 20 mm diameter in the direction of greatest cell size.

Aluminum collars glued with epoxy resin to the specimen ends enabled them to be gripped without crushing the foam. Ten specimens of each density were tested in torsion and 10 in compression. Before testing to failure in torsion or to 8% strain in compression, specimens were conditioned by three ramped rotations to $\pm 5°$ or displacements to 0.4 mm with ramp rates of $18° min^{-1}$ and 1 mm min^{-1}, respectively. This was to ensure that the specimens were gripped correctly. If a nonlinear response was obtained the specimen was released and reloaded. Testing was carried out on a biaxial Instron 8511 with an MTS TestStar II controller at $20 \pm 1°C$ with ramp rates of $18° min^{-1}$ in torsion and 1 mm min^{-1} in compression. Compressive strain and twist per unit length in the gauge length were calculated from the nominal strain and twist per unit length. This calculation was performed assuming continuum elasticity and using the geometry of the specimens. The calculated gauge compressive strains were $5.4\% \pm 2\%$ larger and the calculated gauge twists per unit length were 10.9% $\pm 2\%$ larger than the respective nominal values.

Studiu de caz

Results

Figures 1 and 2 present respectively typical stress-strain curves and typical torque-rotation curves for all foam grades. In the compression tests, failure occured only with specimens of "120" grade and no regularity was seen in the fracture surfaces. All torsion specimens failed by brittle fracture giving characteristic 45° helical surfaces. Compressive and shear moduli and maximum stresses all showed increasing trends with increasing apparent density (Table 2).

The shear and compressive strains at maximum stress both had maximum values for the "200" grade (Table 3), but showed no linear correlation with density. The "200" grade also showed the greatest plasticity in shear with the largest difference between yield strain and failure strain.

Figure 3 shows the foam shear moduli normalized by the bulk material Young's modulus, $E_s = 2.7$ GPa [3] and maximum shear stress normalized by the bulk material yield stress, $\sigma_{ys} = 127$ MPa [9] plotted against normalized density (bulk solid density $\rho_s = 1200\ \mathrm{kgm}^{-3}$ [9]) on a logarithmic scale.

Equations (1,2) and R-squared values for the least-square best-fit trend lines to the shear modulus and maximum shear stress data are as follows:

$$G^*/E_s = 0.4[\rho^*/\rho_s]^{1.9}, \quad R^2 = 0.99 \tag{1}$$

$$\tau^*_{\max}/\sigma_{ys} = 0.3[\rho^*/\rho_s]^{1.7}, \quad R^2 = 0.97 \tag{2}$$

(where* indicates, as in Gibson and Ashby [5], a foam property and $_s$ a bulk solid property, G shear modulus, E Young's modulus, $\tau_{\max}$ maximum shear stress, σ_{ys} bulk solid yield stress, ρ_s bulk solid density, ρ^* foam apparent density).

Similar plots of the normalized compressive Young's modulus and normalized maximum compressive stress suggested the following relationships [Eqs. (3,4)] with relative density:

$$E^*/E_s = 0.5[\rho^*/\rho_s]^{1.9}, \quad R^2 = 0.99 \tag{3}$$

$$\sigma^*_{\max}/\sigma_{ys} = 0.4[\rho^*/\rho_s]^{1.7}, \quad R^2 = 0.99 \tag{4}$$

(where $\sigma^*_{\max}$ is the foam maximum compressive stress).

Studiu de caz

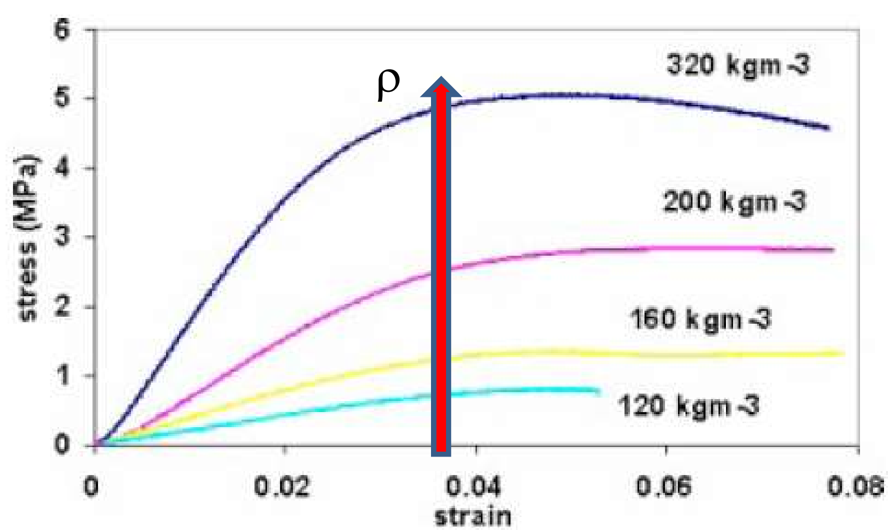


Fig. 1 Typical stress strain curves for all foam grades.

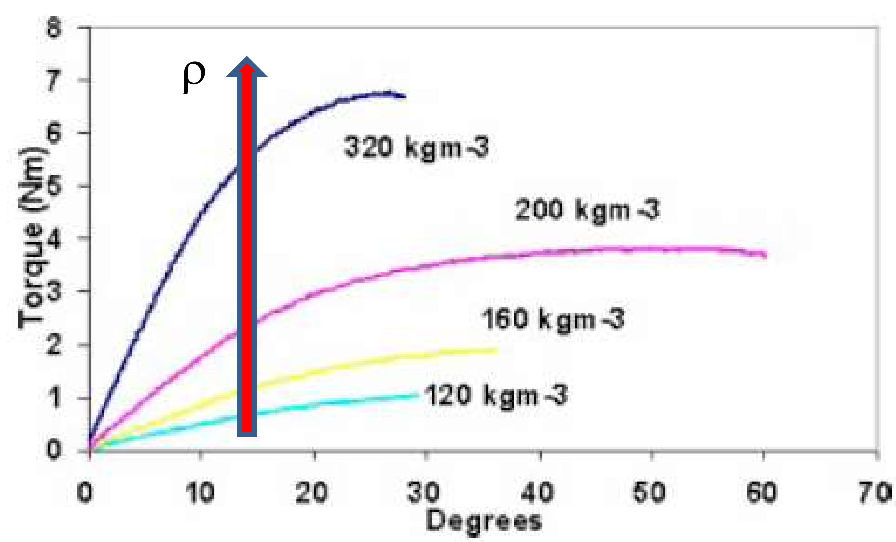


Fig. 2 Typical torque rotation curves for all foam grades.

Table 2 Results of mechanical testing, mean±SD. ρ apparent density, E compressive Young's modulus, σ_{max} compressive maximum stress, G shear modulus, τ_{max} maximum shear stress.

Grade	ρ (kgm^{-3})	E (MPa)	σ_{max} (MPa)	G (MPa)	τ_{max} (MPa)
120	115±2.0	22.0±1.47	0.85±0.03	13.3±0.67	0.71±0.06
160	158±3.7	38.7±4.49	1.44±0.08	23.6±2.01	1.31±0.16
200	209±2.9	79.3±7.55	2.71±0.21	41.3±1.85	2.50±0.14
320	332±5.7	164±27.8	5.14±0.15	99.7±4.57	4.15±0.14

Studiu de caz

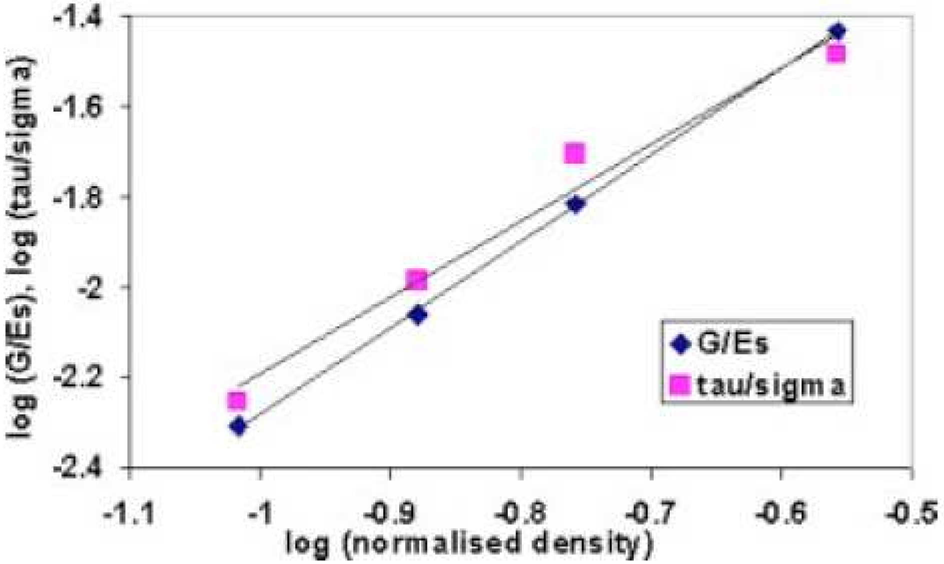


Fig. 3 Normalized shear properties plotted against normalized density, logarithmic scale. "G/Es" is normalized shear modulus, "tau/sigma" is normalized maximum shear stress. Least-square linear trend lines also plotted.

Table 3 Strain results, mean±SD. ε_y compressive strain at max stress, γ_y shear strain at max stress, γ_f shear strain at failure.

Grade	ε_y	γ_y	γ_f
120	0.050±0.004	0.0622±0.0083	0.0646±0.0084
160	0.053±0.005	0.0859±0.0190	0.0893±0.0198
200	0.062±0.005	0.1410±0.0106	0.1677±0.0213
320	0.051±0.004	0.0734±0.0054	0.0790±0.0067

Studiu de caz

Discussion

The values obtained for the compressive properties agree with some and differ from other reports in the literature. Wilsea et al. [1], using cube-shaped specimens, found compressive moduli of 32 and 62 MPa and compressive yield strengths of 0.78 and 2.28 MPa for foam densities of 68 and 173 kgm^{-3}, respectively. These are higher than the trends predicted by the data here. Szivek et al. [2] found values of compressive modulus in the range 87–150 MPa and yield strength 2.2–4.7 MPa for an unrecorded range of densities. The results of Goods et al. [3], with compressive moduli in the range of 25–600 MPa and yield strengths from 1–20 MPa for apparent densities from 120 to 600 kgm^{-3}, are in general agreement with the present data. A lack of detailed reporting prevents more extensive comparison. Testing using an anticlastic plate bending method [6] gave shear moduli in the range 33.5–37.1 MPa, though unfortunately no density information was reported. Palissery et al. [4] found compressive strength and stiffness of 0.65±0.01 MPa and 40.2±1.5 MPa, respectively, for a foam with apparent density of 80 kgm^{-3}. This stiffness seems high in comparison with the data reported here for 120 kgm^{-3} foam and may be due to different chemical composition of the foamed polymer, which was obtained from a different source.

Comparație cu rezultatele altor cercetători

The relationships [Eqs. (1–4)] suggested between density and mechanical properties are similar to those derived from theoretical considerations by Gibson and Ashby [9]. For open cell foams they found a direct relationship between the normalized Young's and shear moduli and the square of the normalized density. This relationship was corrected for closed cells by the addition of a linear normalized density term. Although the polyurethane foams in the present work are closed cell, the power indices of the relative density relationships above are close to those in the open cell forms of Gibson and Ashby's equations. This result means that the elastic mechanical behavior observed is adequately described by the open cell foam theory, suggesting that the majority of the material in the foams is concentrated in the cell edges and not in the cell faces.

The power indices in the strength to density relationships found for the present data are higher than in Gibson and Ashby's derivation for rigid polymer foams such as PU-R, which fail by plastic collapse. This is interesting because the plastic collapse mechanism is predicted to operate between relative densities of 0.04 and 0.3 and thus for all the foams in this paper. Gibson and Ashby's plastic collapse mechanism depends upon $[\rho^*/\rho_s]^{1.5}$, while the elastic buckling depends upon $[\rho^*/\rho_s]^2$, suggesting some elastic buckling may be taking place in addition to plastic collapse. Differences in the coefficients in the relationships between mechanical properties and relative density defined by Gibson and Ashby and in those found in this paper may be attributed to inadequate knowledge of the properties of the solid bulk material. For example, a solid material Young's modulus of 1.6 GPa is used by Gibson and Ashby [10], but Goods et al. use a figure of 2.7 GPa, the figure used in this report. Patel and Finnie's figure for σ_y, 127 MPa, is used here and by Gibson and Ashby.

Argumentează diferențele

Studiu de caz

Identifică sursa de erori – incertitudinea caracteristicilor mecanice

Unfortunately, an extensometer with sufficient measuring range was not available and so the compressive strain was calculated less accurately from the nominal specimen strain and geometrical considerations. Since the specimen stiffness is negligible compared with that of the load frame, the main error introduced is through uncertainty in the specimen geometry. This error is estimated to be up to ±2% of the calculated strain. Similarly, the only available method for determining gauge twist per unit length was to calculate it from nominal twist per unit length. This calculation introduced errors of up to ±2% of the calculated value.

The calculations of gauge strains and twists per unit length from nominal strains and twists per unit length are based upon the assumption that the loaded part of the specimen may be modelled as an elastic continuum. According to the criteria of Harrigan et al. [7] this assumption is justified in the three most dense foams. The 120 kgm^{-3} foam has a cell size which places it on the boundary of applicability of continuum elasticity. However, the high correlations found for the derived relationships between density and material properties suggest that this assumption is also justified in the case of 120 kgm^{-3} material.

Justifică corelațiile găsite și limitele de valabilitate a acestora

The foams are anisotropic, with elongated cells in the rise direction. Brief inspection of a specimen of each density suggested long to short axis ratios of approximately 1.2. Unfortunately, the shape of the supplied material stock meant that in all specimens the test axis was perpendicular to the rise direction. Gibson and Ashby [9] suggest that a cell shape ratio of 1.5 would give modulus and strength anisotropy ratios of 3.5 and 1.8, respectively. The uncertainty over the values of the solid material properties prevents further conclusions without additional tests in orthogonal directions.

The large standard deviation of the compressive modulus for the "320" grade is interesting. It cannot be explained by variations in density between specimens and may be due to differences in material batch, information that was unfortunately unavailable.

The high shear yield strains and plasticity of the "200" grade compared with the other densities are unexpected. They may suggest that specimen size effects on shear yield are not negligible. Onck et al.'s [8] criteria for the independence of shear yield from specimen size are derived from consideration of the shearing of a 2-D hexagonal foam between rigid platens and so may not be applicable in the case of torsion.

Concluzii - recomandări

Secțiunea “Discuții” prezintă:

- interpretarea rezultatelor prin prisma: legilor fundamentale ale naturii, verificarea și organizarea logică a principalelor legi de cauzalitate și corelații între diverse mărimi fizice și de calcul, raportarea la rezultatele publicate în fluxul informațional.
- o structură logică pentru interpretarea rezultatelor.
- sublinierea elementelor de originalitate și a contribuțiilor proprii.
- indică posibilele căi de continuare a cercetării.

Nu există o rețetă privind extensia acesei secțiuni!

Concluzii - recomandări

- Ce implică rezultatele obținute

The novel heat-treatment described in Section 2 gives steels which are 10% stronger and 20% tougher than those heat-treated in the normal way.

- Nu repetați doar rezultatele

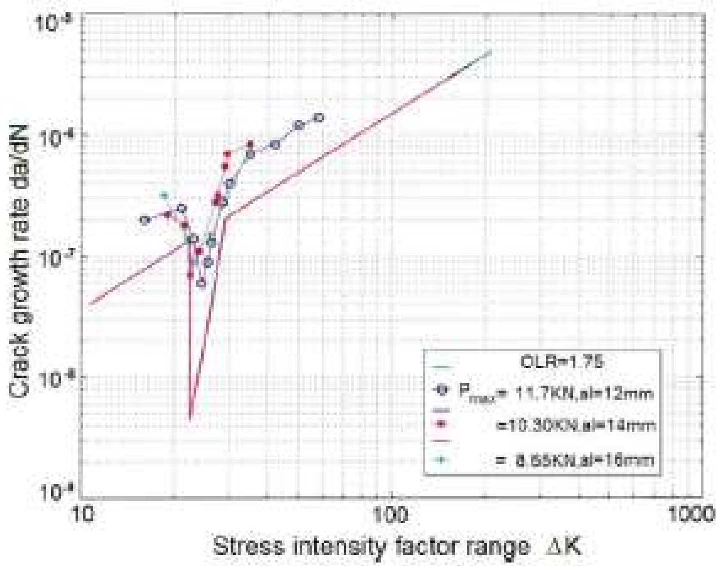
- Comparați rezultatele cu ale altor cercetători

The obtained stress intensity factors of modes I and II in the case when the loads are applied at far distances from the centerline of the specimen and the crack lies at the middle are in accordance with the results cited in literature. It is also seen from Fig. 2 that when the crack is placed at the middle of the specimen, the K_I value has a significant value in spite of the earlier predictions [2]

Concluzii - recomandări

- Prezentați concluziile și justificațiile în cadrul secțiunii discuții

Fig. 6 provides crack growth results, i.e., FCGR versus ΔK for the OLR 1.75 for three different loads with Pmax = 11.7, 10.3 and 8.65 kN with initial crack lengths of 12, 14 and 16 mm, respectively. The model gives the triangular spike depressions due to retardation effect, for fatigue crack growth rate and matches experimental findings.



- Nu faceți speculații

Concluzii - recomandări

- Indicați în ce fel poate fi continuată cercetarea, dar nu exagerați (1 – 2 propoziții)

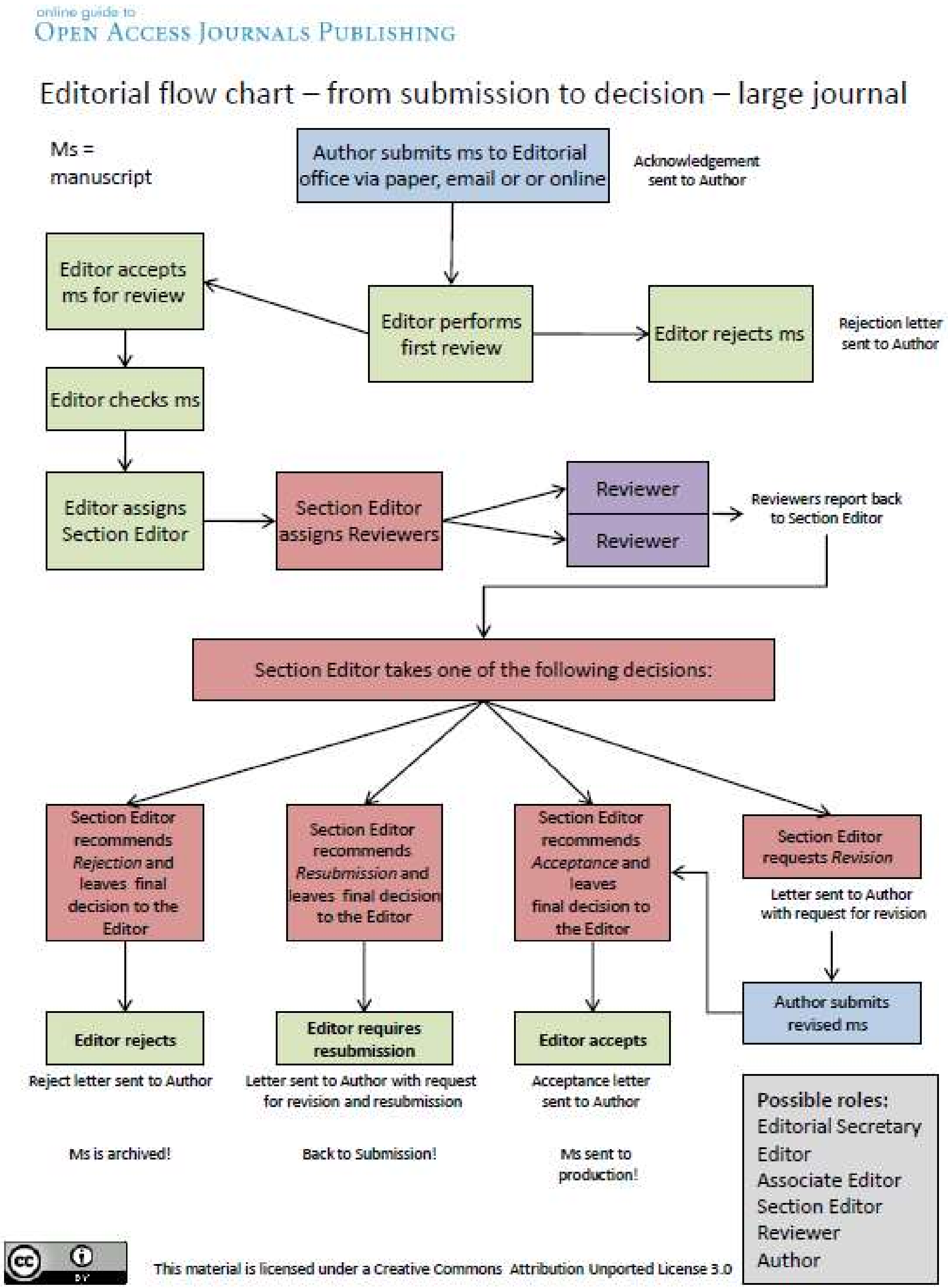
Similar methods and approaches can be applied to other fibre foam systems to reduce the number of experimental iterations and understand the effects of process variables on associated mechanical properties.

This analysis was done with a limited amount of data available, especially from the used vehicles at different geographical locations. Thus further study with a greater number of used vehicles, as well as the varying amount of weight and the length of time that the weight is applied for a heat aging is necessary in order to confirm these results and to evaluate the effect of weight on the accelerated aging in more detail.

Concluzii - recomandări

- Secțiunea “Discuții” este partea cea mai importantă a unui articol.

- Poate fi decisivă pentru acceptarea spre publicare a lucrării!



Etapele procesului de publicare

Autor

Editori

Decizii ale editorilor

Recenzor

Platforme editoriale

- ELSEVIER - Elsevier Editorial System (EES)

User Guide for Authors, EVISE

- SPRINGER – Editorial Manager or Manuscript Central
- Platformă editorială română - Scipio

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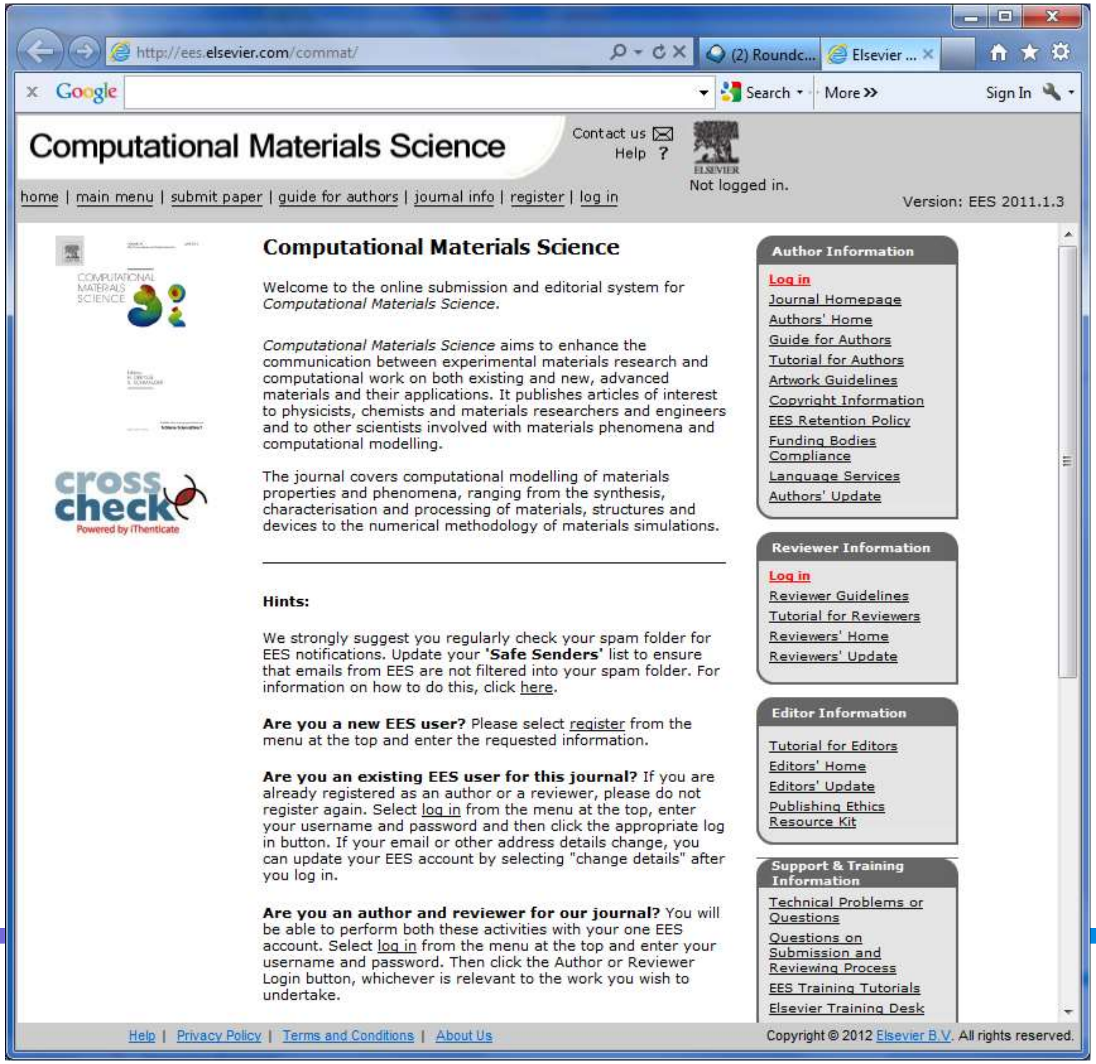

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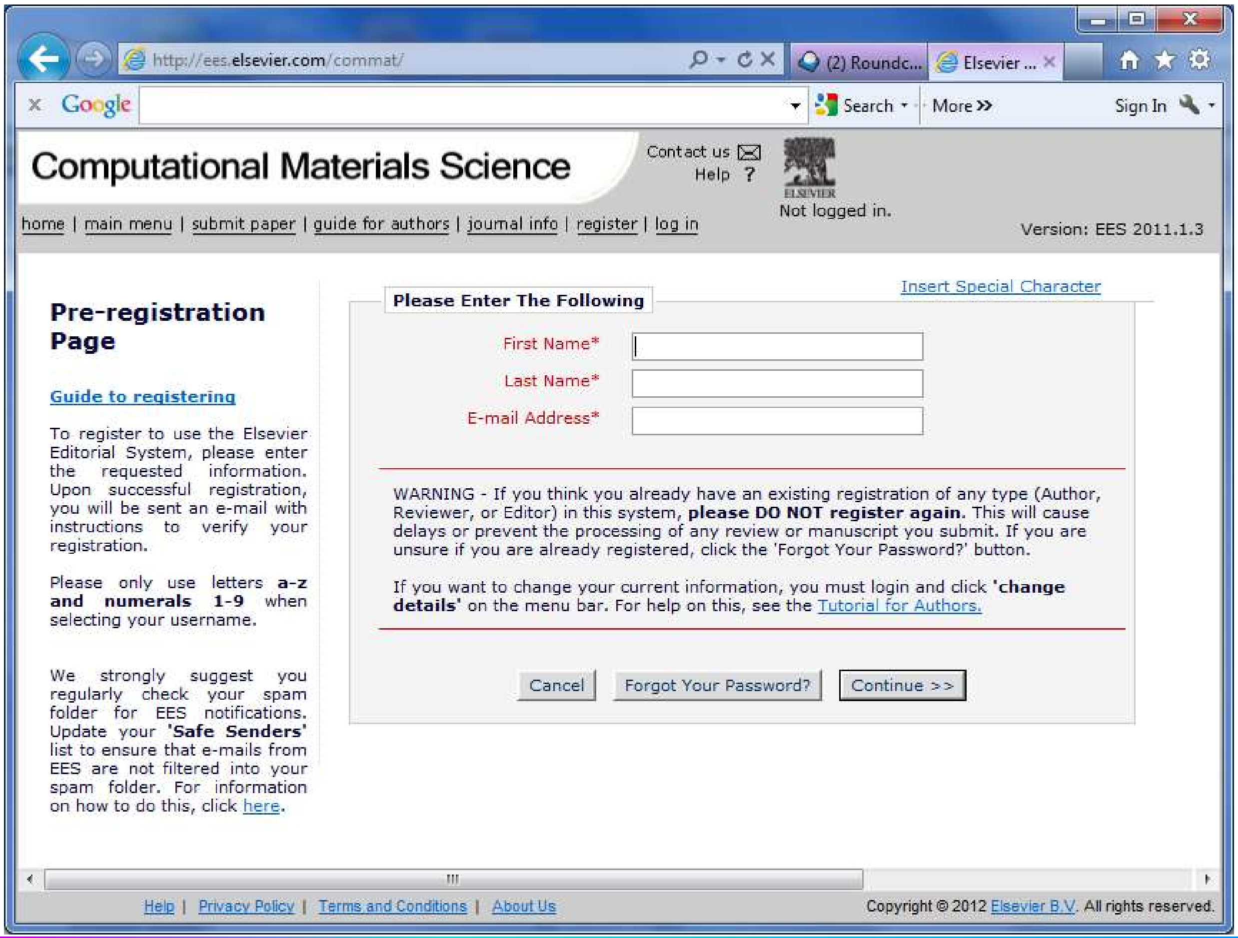

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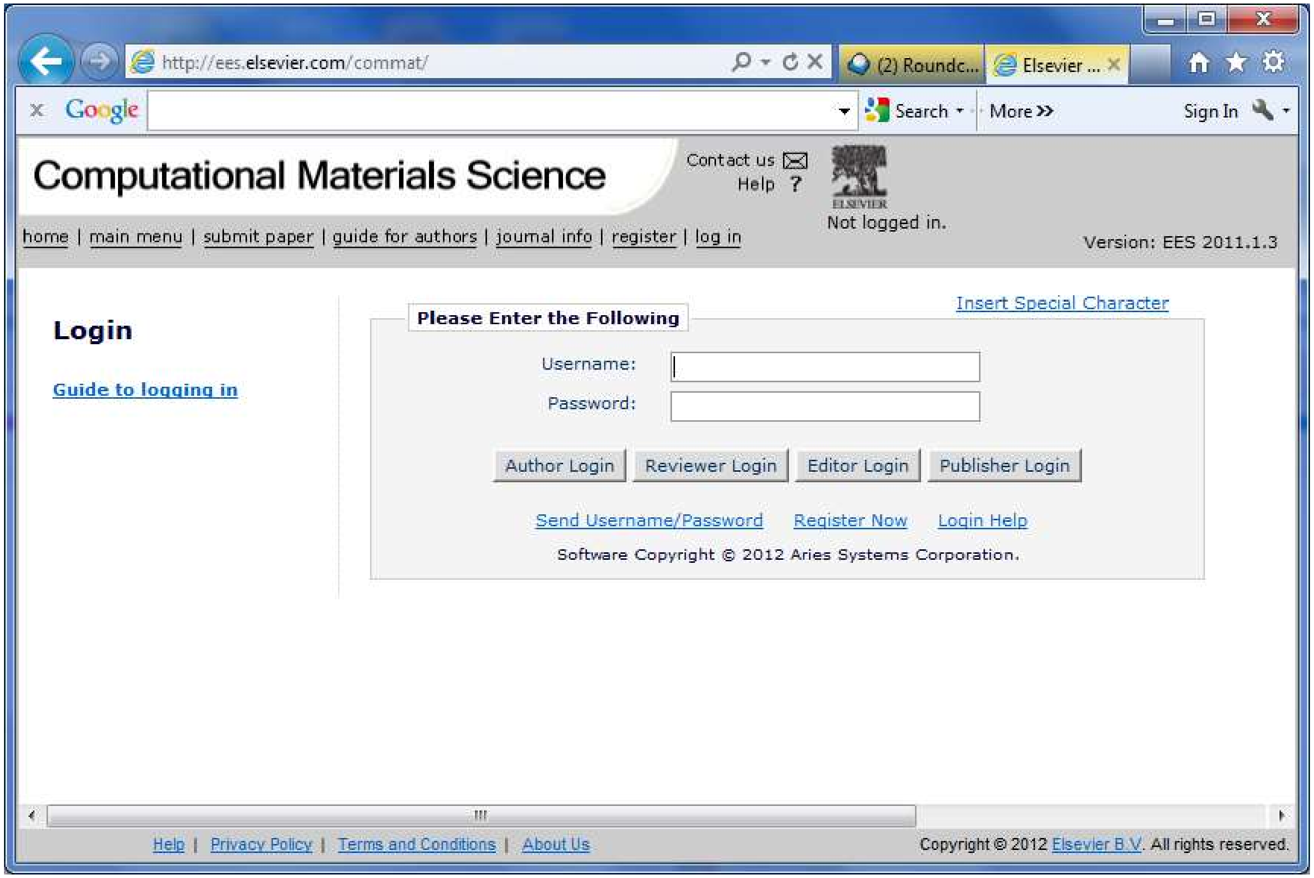

Decizii ale editorului unui jurnal

- Rejectare fără recenzie, dacă lucrarea nu se încadrează în scopul jurnanului.
- Rejectare după recenzie.
- Acceptare, dar după o recenzie majoră.
- Acceptare, după o recenzie minoră.
- Acceptare în forma trimisă.

Rejectare fără recenzie

Decision Letter - Reject: 03 June 2019

Ref: JCOMB_2019_2361
Title: ***
Journal: Composites Part B

Dear Dr. ************,

Thank you for submitting your manuscript to Composites Part B.

JCOMB receives a very large number of manuscript submissions every year, far too many to publish. It is therefore crucial that all manuscripts received are scrutinized against 3 key criteria: novelty, scientific quality and alignment with the journal scopes. Prior to sending your manuscript out for peer review I have carefully assessed it against the 3 criteria mentioned. Based on this it is clear that the topic of your manuscript does not align well with the key focus areas of JCOMB. Accordingly I have decided to reject your paper.

We appreciate your submitting your manuscript to this journal and for giving us the opportunity to consider your work.

Kind regards,

Editor Composites Part B

COMMAT-D-09-00822: Original Submission

"Similarities Between Globoidal And Ellipsoidal Worm Gears Using Numerical Methods And Dynamic Simulation"

Reviewer Recommendation Term: Do not publish

Overall Reviewer Manuscript Rating: 40

Comments to Editor: Please place an x in the appropriate space and expand where necessary.

1. SUBJECT MATTER

__ Within the scope of the journal
_x_ Not appropriate for the journal

2. ORIGINALITY

__ Similar papers published by author(s)
__ Similar papers published by others
_x_ Unaware of similar papers

3. TITLE

__ Accurately reflects content
_x_ Needs revision (suggest alternative): Numerical methods is not sustained by the information in the paper

4. LANGUAGE

__ Grammatically correct
_x_ Needs revision

5. ABSTRACT

_x_ Clear and adequate
__ Should be condensed
__ Should be rewritten
__ Missing

6. PRESENTATION

__ Good
__ Contains irrelevant material
_x_ Should be rearranged

7. ILLUSTRATIONS

__ Good
__ Fig(s)______ may be omitted
__ Extra figures required
_x_ Quality inadequate: The graphs from Figs. 6a, 6b and 7c are not clear and appears to be some image captions from a software!

8. TABLES

__ Good
__ Should be rearranged
__ Tables______ may be omitted

9. ABBREVIATIONS, FORMUALE, UNITS

__ Confirm to acceptable standards
__ Need revision
__ Should be explained
_x_ A notation list is necessary

10. REFERENCES

__ Appropriate
__ Incorrect
_x_ Insufficient
__ Too extensive

11. GRADING OF PAPER

__ Excellent
__ Good
_x_ Weak

COMMAT-D-09-00822: Original Submission

"Similarities Between Globoidal And Ellipsoidal Worm Gears Using Numerical Methods And Dynamic Simulation"

Comments to Editor: In this form the paper is out of the journal scope. In this form the paper should be submitted to a journal oriented to design and/or CAD applications. What CAD package was used? Are these calculations standard in this CAD program or the authors had some contributions.
Finite Element analysis is mentioned in the paper but there are no calculations at all. The conclusions show only possible future works. It is not clear what is the novelty of the paper and the original contributions of the authors.
As an overall opinion this paper looks more like a Lab tutorial/exercise for students than a real journal paper.

Comments to Author: In this form the paper is out of the journal scope. In this form the paper should be submitted to a journal oriented to design and/or CAD applications. What CAD package was used? Are these calculations standard in this CAD program or the authors had some contributions.
Finite Element analysis is mentioned in the paper but there are no calculations at all. The conclusions show only possible future works. It is not clear what is the novelty of the paper and the original contributions of the authors.
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COMMAT-D-11-01310

"NUMERICAL AND EXPERIMENTAL RESEARCH ON POLYISOCYANURATE FOAM"

Reviewer Recommendation Term: Major amendments required

Comments to Author:

The paper presents some experimental and numerical results on static compression test for polyisocianate foam. The paper needs majo revision in order to be published. Both experimental and numerical parts need to be better described.

For the experimental research part:

- is claimed that the load speed was 0.2 mm/min in line 47 page 1, than in line 49 the load velocity was 2.5 mm/min?
- specimen dimensions should be presented
- it is necessary to explain how did you measure POISSON RATIO, before to claim the auxetic behavior. It is not convincing that ν = -0.017 or -0.012 is really an auxetic behavior or some measurement errors.
- in Fig. 4 stress values for foams are at least more than ten times higher (35 and 80 MPa) comparing the compressive strength provided in Table 1: 0.6 MPa for FENIX 60 or 1.3 MPa for FENIX 100.

For the numerical research part:

This part needs to be reworked and extended in order to address the journal scope.

- Fig 7 appears twice with tetrahedron model and sphere model did not appear,
- a better description of the model is necessary (number of elements and nodes, boundary conditions,...)
- a convergence study is requires to find the proper number of elements, mesh size,
- maybe an elasto-plastic finite element analysis is more appropriate for compression test. For the performed linear elastic analysis what value of Poisson ratio did you used?

COMMAT-D-11-01310

“NUMERICAL AND EXPERIMENTAL RESEARCH ON POLYISOCYANURATE FOAM”

Reviewer Recommendation Term: Major amendments required

Finally, conclusions are not relevant: is claims that "The comparison of the stress-strain results of numerical analyses and the experiment presented a good accordance", but this is not proved in the paper.

- you also claimed that: "The samples showed an auxetic behaviour only for the 3x3x3 cells model" but this is not quantified.

Almost all paper is rather descriptive and presents only qualitative interpretations and no qualitative results. Looks like a Note or Letter paper and not an original research paper.

English should be improved, too. Some examples:
- Fig. 1 caption "applications" instead "appliecations",
- Page 1 line 53 "investigated" sounds better than "researched",
- Page 2 line 56 (last paragraph from conclusions) did not say anything.
- use . instead , as decimal separators trough paper.

EFM-D-11-00314

"Size Effects on Fracture Toughness of Quasi-Brittle Materials - A New Approach"

Reviewer Recommendation Term: Minor revision

Decision Letter

Dear Prof. *** *******,

The above paper has now been assessed by our referees. Whilst the paper is basically acceptable for publication there are a number of points which require clarification before we can proceed. I am enclosing these comments for your attention.

Please respond to these comments in a covering letter and incorporate your answers into the above paper. Also it is a journal requirement that you upload a "Marked up Manuscript" (paper with changes highlighted) when submitting your revision online.

Please be aware that authors should submit their revised manuscript within 4 months of the date of the request to revise it. Revised manuscripts returned after this time may be considered as new submissions and subject for full re-review.

I look forward to hearing from you in due course.

To submit a revision, please go to http://ees.elsevier.com/efm/ and login as an Author.
Your username is: ******
If you need to retrieve password details, please go to: http://ees.elsevier.com/efm/automail_query.asp
On your Main Menu page is a folder entitled "Submissions Needing Revision". You will find your submission record there.

Yours sincerely,

Editor-in-Chief Engineering Fracture Mechanics

EFM-D-11-00314

“Size Effects on Fracture Toughness of Quasi-Brittle Materials - A New Approach”

Reviewer Recommendation Term: Minor revision

Editor's comment:

No acronyms in the abstract, please.

Reviewers' comments:

Reviewer #1:

The paper presents a new approach for quantifying the Size effect in quasi-brittle materials. The paper is well written and in the journal topic. Some minor corrections could be made to improve the paper quality:

- Page 4. line 18: Dugdale [20] - last 'e' is missing
- Page 5. line 12: 'dams' instead 'dames'
- Figure 7: Start the caption with capital letter: The

Reviewer #3:

The manuscript is suitable for publication. The paper deals with the important issue of size effect in fracture toughness testing. The following issues should be addressed to improve the manuscript.

EFM-D-11-00314

"Size Effects on Fracture Toughness of Quasi-Brittle Materials - A New Approach"

Reviewer Recommendation Term: Minor revision

1). The described approach is essentially a regression technique for the non-linear relationship using experimental data and hence a very good fit was achieved between the proposed model and the experimental data. It would be useful for the authors to discuss how A and B can be estimated (not based on regression) and what would be the potential performance of the proposed approach based on estimated A and B values.

2). The introduction of the key assumed relationship (Eq. 23) is a bit abrupt. It would be useful to present some background consideration. Also I would like to see a comparison of the proposed "r_c - w" relation with some existing ones (e.g., in Fig. 6a).

3). Eq 4 & 6: sigma_N is not properly defined. In the text after these two equations, it says "as mentioned above" - I don't think sigma_N is mentioned until this point.

4). The line after Eq 20: it says "…Eq (8) has 4 roots…". From what I can see, Eq. (8) is only a quadratic equation and therefore it only has two roots.

5).Figures: please make sure you have tick marks for both horizontal & vertical axes. Most of them are missing.

6). Reference [26]: the correct volume number for this publication is "24" not "27".

7). Please delete all "…and etc." in the manuscript.

COMMAT-D-12-0012R1

"ASYMPTOTIC STRESS FIELD FOR THE INTERFACE BETWEEN TEETH AND DIFFERENT RESTORATIVE MATERIALS"

Editor recommandation: Accept

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View Letter

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Date: Feb 22, 2012
To: "Liviu Marsavina" msvina@mec.upt.ro
cc: siegfried.schmauder@imwf.uni-stuttgart.de
From: Siegfried Schmauder siegfried.schmauder@imwf.uni-stuttgart.de
Subject: Your Submission COMMAT-D-12-00125R1

Ms. Ref. No.: COMMAT-D-12-00125R1
Title: ASYMPTOTIC STRESS FIELD FOR THE INTERFACE BETWEEN TEETH AND DIFFERENT RESTORATIVE MATERIALS
Computational Materials Science

Dear Dr. Marsavina,

I am pleased to confirm that your paper "ASYMPTOTIC STRESS FIELD FOR THE INTERFACE BETWEEN TEETH AND DIFFERENT RESTORATIVE MATERIALS" has been accepted for publication in Computational Materials Science.

Thank you for submitting your work to this journal.

With kind regards,

Siegfried Schmauder
Editor in Chief
Computational Materials Science

Close

- Cât mai multe DECISION LETTER cu **ACCEPT**