

OANA CAZACU: Curriculum Vitae

OANA CAZACU

Associate Professor,
Dept of Mechanical and Aerospace Engineering
University of Florida
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Place of Birth: Giurgiu, Romania

Date of Birth: July 25, 1967

Nationality: Romanian (US Permanent Resident)

Education:

H.D.R (Habilitation a Diriger les Recherches)

University of Sciences and Technologies of Lille (USTL), Lille, France, December 2004,
Mathematics-Mechanics

D. S.

University of Sciences and Technologies of Lille (USTL), Lille, France
November (1995), Civil Engineering
Honors: *Très Honorable Avec Les Félicitations du Jury* (Highest Honors)

Joint BS -M.S.

University of Bucharest, Bucharest, Romania
June (1990), Mathematics-Mechanics

Employment:

Associate Professor, University of Florida/ REEF, Shalimar, FL (7/2006-present)
Assistant Professor, University of Florida/ REEF, Shalimar, FL (5/2002-6/2006)
Visiting Assistant Professor, University of Florida, Gainesville, FL (8/ 2001- 5/ 2002)
Associate Researcher, University of Florida, Gainesville, FL (1/1996 – 8/.2001)
Research Assistant, USTL, Lille, France (10/1992- 11/1995)
Instructor, University of Bucharest, Bucharest, Romania (10/1990-10/1992)

Invited International Visiting Professor Appointments

- University Paris-Nord, LPMTM, CNRS, Institut Galilee, Paris, France (5/2007-6/2007)
- University of Savoy, Chambéry, France (5/2004 – 6/2004)
- University of Lille, Villeneuve d'Ascq, France (3/2002 – 4/ 2002)

Professional Interests

Theory of Plasticity, Viscoplasticity, Damage Mechanics, Mechanics of Particulate and Granular Materials, Rock and Soil Mechanics, Penetration Mechanics.

Awards

5/2005 Best Teacher Award, College of Engineering, University of Florida

9/2008 2008 *International Educator of the Year Award*, College of Engineering, University of Florida

International Conferences Organizing Activities

- 2011 **Chairman**, the 2011 IUTAM (International Union of Theoretical and Applied Mechanics) topical symposium entitled “Linking Scales in Computations: Microstructure to Macro-scale Properties”(GA. 08-09). The symposium will be held at UF/REEF. Co-organizer of the symposium is Prof. Ted Belytschko of Northwestern University.
- 2009 **Chairman**, ICACM 2009, The 3rd US-France Symposium “Damage and Fracture of Heterogeneous Materials and Structures” 22-24 April 2009, Shalimar, FL.
- 2008 Member of the International Scientific Committee of ICACM 2008, the 2nd US-France Symposium, Materials under Extreme Loadings; Application to penetration and Impact, May 28-30 2008, Rocamadour, France.
- 2008 Member of the International Scientific Committee of ICTP 2008, the 9th International Conference on Technology of Plasticity, 7-11 2008 Gyeongju, Korea.
- 2007 **Chairman**, ICACM 2007, The 1st US-France Symposium on Advances in Bridging Scales in Computation 28-30 March 2007, Shalimar, FL.
- 2006 **Established the International Center for Applied Computational Mechanics (ICACM)** at UF/REEF, a partnership between six US and French Universities with the mission of “facilitating the exchange and application of the world’s most advanced knowledge in applied mechanics and mathematical sciences and in interdisciplinary fields like robotics, energetics, biomechanics, and environmental engineering.”
- 2005-2009
Co-organizer of symposia of the European Society for Metal Forming international conferences (ESAFORM 2005, 2006, 2007, 2008, 2009-2 symposia).

Professional Membership

- Founding Member of the International Center for Computational Mechanics (ICACM)
- Member of the Scientific Committee Board of the European Society for Metal Forming since 2006
- Member of the American Society of Mechanical Engineers (2003-present)
- Member of Society of Engineering Science (2001-2005)
- International Society for Rock Mechanics (1997-2002)

Panelist and Grant Proposal Reviewer

- Proposal panelist, National Science Foundation, Design Manufacturing and Industrial Innovation Program, Dec 16, 2008. Reviewed 8 proposals.
- Proposal panelist, National Science Foundation, Design Manufacturing and Industrial Innovation Program, Jan 9, 2007. Reviewed 8 proposals.
- Proposal panelist, National Science Foundation, Design Manufacturing and Industrial Innovation Program, Jan 11-12, 2005. Reviewed 8 proposals.
- Grant proposal reviewer for the National Science Foundation, NSF Partnership for International Research and Education Program, NSF, May 2005.
- Grant proposal reviewer for the Computational Mathematics Program, Air Force Office of Scientific Research, since 2004.
- Served as an external reviewer for proposals to the Institute for Research in Health and Security of Labor, Quebec, Canada since 2000.

Teaching Service

(i) Courses taught at the UF/REEF

- EGM 6611 Continuum Mechanics (Fall 2007; Spring 2009)
- EGM 6321 Advanced Ordinary Differential Equations (Fall 2002, 2003, 2004, 2005, 2006, 2008)
- EGM 6322 Advanced Partial Differential Equations (Spring 2003, 2004, 2005, 2006, 2007, 2008)
- EGM 6905 Damage Mechanics Spring 2003)
- EGM 6905 Individual Study (Plasticity and damage in solids materials) Summer 2003.

(ii) Courses taught at the UF/REEF

- EGM 35201 Mechanics of Materials (Fall 2001)
- EGM 4313 Intermediate Engineering Analysis (Fall 1999)

(iii) Courses taught at the University of Bucharest

- Recitation classes for graduate courses in Rock Mechanics and Composite Materials

Funded Research Projects

(i) Funded by Government Agencies (Total \$ 1,888, 1986)

- 2008-2010 PI, NSF GOALI with ALCOA (Co-PI: J.W. Yoon) “Effects of Directional Hardening and Texture Evolution on Earing During Cup Drawing” (\$200,000)
- 2008-2010 PI, AFOSR “On Modeling Plasticity of Heterogeneous Anisotropic Media Using The Discontinuous Velocity Domain Splitting Method” (\$183,264)
- 2008-2011 PI, US Air Force “Development of Constitutive Model for Description of the Role of Texture on Void Growth in Metallic Materials Displaying Tension/Compression Asymmetry” (\$643,567)
- 2008-2010 PI, US Air Force “Development of Constitutive Model for Sand” (\$50,671)
- 2005-2008 PI, US Air Force “Development of a Micro-Scale Methodology for Prediction of the Macroscopic Anisotropic Stress-Strain Response to Textured Metals Under Dynamic Loading” (\$170,114).
- 2007-2008 PI, AFOSR “On Modeling Anisotropic Grain Level Behavior of Particulate Materials (\$89,687).
- 2004-2007 PI, AFOSR “Investigation into the combined effects of compaction, strain rate sensitivity, and anisotropic damage of a geologic target on the trajectory stability of rigid penetrators” (\$82,423).
- 2006-2007 Co-PI AFOSR (PI J. Rogacki) “US-France Workshop on Advances in Bridging Scales in Computation” (\$26,000).
- 2003-2005 PI, NSF “Interdisciplinary Investigation of Warm Forming of Magnesium Alloy Sheet”(\$61,301)
- 2003-2004 PI, US Air Force “Theoretical and experimental investigation of blast resistant window systems” (\$49,773)
- 2003-2005 PI, US Air Force “On modeling penetration in compressible rate dependent media” (\$48,938)
- 2004-2005 PI, US Air Force “Non-Newtonian compressible fluid formulations in view of application to penetration into porous/brittle media” (\$46,250)
- 2001-2004 Co-PI, US Air Force (PI: N.D. Cristescu) “Steady flow of a particulate target medium over a projectile; Experiments and Modeling” (\$150,000)
- 2000-2001 Co-PI, US Air Force (PI: N.D. Cristescu) “Experiments and Modeling of Virgin and Damaged Concrete and Geomaterials”(\$79,998).

(ii) Funded by Industrial Organizations (\$120, 323)

- 2008-2009 PI, Alcoa (as part of NSF GOALI agreement, \$15,000)
- 2007-2008 PI, General Motors, “Formability of Hexagonal Metals” (\$15,000)
- 2006-2007 PI, General Motors, “Modeling of plasticity of hexagonal metals” (\$10,000)
- 2003-2004 PI, Alcoa Inc. “Constitutive modeling of anisotropic plasticity in aluminum alloys” (\$15,000)

- 2000-2001 PI, Alcoa Inc “Constitutive Modeling of Anisotropic Materials” (\$10,000)
 1998-1999 Co-PI, H.B. Fuller Co project (PI. R.W. Mei and J.F. Klausner) “Powder Flow, Fluidization and Compaction” (\$35, 323).
 1998-1999 Co-PI, Cargill Fertilizer (PI: N.D. Cristescu) “Theoretical Study on Compaction of Tailings” (\$20,000).

Ph.D. Dissertation Advising

(i) Completed Dissertations (Chair of the Ph.D. Committee): 5

1. Nixon Michael Eugene “*Experimental characterization and modeling of the mechanical response of titanium for quasi-static and high-strain rate loadings*” Award May 2008 (Current Position: Staff Scientist, Air Force Research Laboratory, Eglin Air Force Base, FL).
2. Soare Stefan “*Description of coupling between initial and damage induced anisotropy with application to ceramic matrix composites*” Award August 2007 (Current Position: PostDoctoral Fellow, Technical University of Cluj, Romania).
3. Plunkett Brian William “*Multi-scale modeling and simulation of plastic anisotropy of hexagonal metals*” Award December 2005 (Current Position: Staff Scientist, Air Force Research Laboratory, Eglin Air Force Base, FL).
4. Genovese Claudia Veronica “*Study of particulate systems under compaction*” Award August 2003
5. Schmidt Martin J “*High pressure, high strain rate behavior of cementitious materials: experiments and modeling*” Award August 2003 (Current Position: Team Leader, Air Force Research Laboratory, Eglin Air Force Base, FL).

(ii) Current Doctoral Supervision (in progress, Chair of the Committee)

1. Bradley E. Martin “Dynamic Behavior of Granular Materials” (Expected Award, Aug 2011)
2. Nitin Chandola “Distortional Hardening of hexagonal Materials” (Expected Award, Dec 2012)

(iii) Current Post-Doc Supervision: Jong-Hun Yoon (2008-present) “Modeling texture induced anisotropy: a macroscopic approach”

Invited Talks at Conferences

(i) International Conferences

1. “Failure asymmetry of hexagonal closed-packed metals”, *Keynote lecture*, Int Plasticity Symposium 2009, St Thomas, V. I, Jan 3-8 2009.
2. “Plastic anisotropy of metal sheets”, *Keynote lecture*, Topical Symposium of Ecole Nationale Supérieure d’Arts et Métiers (ENSAM), Metz, France, May 19, 2008.

3. “On modeling yielding asymmetry of hexagonal closed-packed metals” *Keynote lecture*, Int Plasticity Symposium 2008, Kona, Hawaii, Jan 3-8 2008.
4. “Orthotropic yield criterion for description of the anisotropy in tension and compression of sheet metals”, *Keynote lecture*, ESAFORM 2007, April 18-20, 2007, Zaragoza, Spain.
5. “Plastic anisotropy of metal sheets”, Keynote Lecture in the symposium “Constitutive Laws in Materials Mechanics: from Fundamentals to Industrial Applications” CNRS-LPMTM, Paris, France, June 1st, 2007.
6. “Evolving yield function for zirconium taking into account texture development and anisotropic hardening”, *Keynote lecture*, ESAFORM 2006, April 26-28, 2006, Glasgow, U.K.

(ii) Invited International Seminars

1. “Experimental and theoretical modeling of high-purity α titanium”, Royal Military School, Bruxelles, Belgium (22 May 2008).
2. “On modeling anisotropy of hexagonal metals”, Tokyo University, Division of Advanced Material Science and Technology, Koganei-shi, Tokyo, Japan (16 February 2007).
3. “Description of tension/compression asymmetry in hexagonal metals”, Institute for Materials Research, GKSS Research Center, Hamburg, Germany (11 May 2007).
4. “Plastic anisotropy of hexagonal metals”, University of Waterloo, Waterloo, Canada (20 October 2006).
5. “On modeling anisotropy and non-linearity of the response of engineering materials”, Dept of Mathematics and Fundamental Mechanics, University of Lille, Villeneuve d’Ascq, France (2 December 2004).
6. “Model for slow movement of natural slopes”, Laboratoire de Mathematiques - EDP, Université de Savoie, Le Bourget du Lac, France (9 April 2002).
7. “On modeling the mechanical response of initially anisotropic solids” Laboratoire 3S Institut National Polytechnique de Grenoble/ Université Joseph Fourier/CNRS, Grenoble, France (5 April 2002).
8. “Formulation invariante des critères et des lois de comportement dans les matériaux plastiques anisotropes”, Laboratoire de Mécanique de Lille, University of Lille, France (28 March 2002).

(iii) Invited National Seminars

1. “On modeling plastic anisotropy and strength differential effects in HCP metals”, Dept of Mechanical Engineering, MIT, Cambridge, MA (19 October 2007).
2. “On penetration in porous compressible media”, Dept of Aeronautical and Aerospace Engineering, Purdue University, West Lafayette, IN (11 February 2005).
3. “A new approach to model plastic anisotropy and strength differential effects in HCP metals”, Dept of Mechanical Engineering, Purdue University, West Lafayette, IN (10 February 2005).
4. “Orthotropic Criteria for HCP metal sheets” AFRL/ML, Wright-Paterson, AFB, Dayton, OH (2 August 2004).
5. “Plastic anisotropy of metal sheets”, Dept. of Mechanical, Aeronautical and Nuclear Engineering, Rensselaer Polytechnic Institute, Troy, NY, (2 October 2003).
6. “Yielding and hardening anisotropy in Al alloys”, Alcoa Technical Center, PA, (17 October, 2003).
7. “Compaction of cohesive systems: Experiments and Modeling”, The Dow Chemical Company, Engineering Science-Solids Processing Lab, Midland, MI 48667 (10 February 2001).
8. “A general anisotropic yield criterion for aluminum alloy sheets” Alcoa Technical Center, PA 15069-0001 (4 October 2000).

High Citation Papers (Papers cited 10 times or more)

(i) International Journal of Plasticity: Impact Factor = 4.516

1. O. Cazacu and F. Barlat, Vol. **20**, pp. 2027-2045 (2004): [Cited “33”](#)
2. O. Cazacu, B. Plunkett and F. Barlat, Vol. 22, pp. 1171-1194 (2006): [Cited “31”](#)
3. F. Barlat, J. W. Yoon, and O.Cazacu Vol. 23, pp. 876-896 (2007): [Cited “10”](#)

(ii) Acta Materialia: Impact Factor = 3.624

4. B. Plunkett, O. Cazacu, R. Lebensohn and F. Barlat, Vol. 54, pp. 4159-4169 (2006): [Cited “11”](#)

(iii) International Journal of Engineering Sciences: Impact Factor = 0.966

5. O. Cazacu, F. Barlat Vol. 41, pp. 1367-1385 (2003): [Cited “18”](#)

(iv) Mathematics and Mechanics of Solids: Impact Factor = 0.42

6. O.Cazacu and F. Barlat, Vol. **6**, pp. 613-630 (2001): [Cited “35”](#)

Research Publications

Total Publications Summary: 84

- Thesis: 3
- Book Chapters: 7
- Book Editor: 1
- Papers in Refereed International Journals: 41
- Papers in International Conference Proceedings: 37

Book Editor:

“Multiscale Modeling of Heterogeneous Materials” Wiley, 2008.
ISBN: 9781848210479, 320 pp.

Book Chapters:

1. M. Schmidt, O.Cazacu, M. Green [2010] “Experimental and theoretical investigation of the high-pressure behavior of cementitious materials” in *Dynamic Behavior of Materials*. Eds: E. Buzaud, I.R. Ionescu, G. Voyadjis, Wiley, (20 pages).
2. O. Cazacu and F. Barlat [2008] “Modeling plastic anisotropy and strength differential effects in metallic materials” in: *Mechanics of Heterogeneous Materials* Ed: O. Cazacu, Wiley-ISTE, pp. 71-89.
3. B. Plunkett and O. Cazacu [2008] “Viscoplastic modeling of anisotropic textured metals” in: *Mechanics of Heterogeneous Materials* Ed: O. Cazacu, Wiley-ISTE, pp.111-127.
4. S. Soare, J.W. Yoon, O. Cazacu and F. Barlat [2007] “Applications of a recently proposed anisotropic yield function to sheet forming” in: *Advanced Methods in Material Forming*, Eds: D. Banabic. Publisher: Springer, pp. 131-151.
5. F. Barlat, O. Cazacu, M. Zyczkowski, D. Banabic and J.W. Yoon [2004] “Yield surface plasticity and anisotropy in sheet metals” in: *Continuum Scale Simulation of Engineering Materials, Fundamentals - Microstructures - Process Applications*, Eds: D. Raabe, L.-Q. Chen, F. Barlat, F. Roters. Publisher: Wiley-VCH Verlag Berlin GmbH, pp.145-167.
6. N. D. Cristescu and O. Cazacu [2000], “Viscoplasticity of geomaterials, Chapter 6 in: *Modeling and Applications in Geomechanics*, eds.: A. Zaman, G. Gioda, and J. R. Booker, John Wiley & Sons, Chichester, pp. 129-150.
7. O. Cazacu, “Rock anisotropy” [1998], Chapter 5.4 in: *Time Effects in Rock Mechanics* by N. D. Cristescu and U. Hunsche, John Wiley and Sons, Chichester, pp.169-179.

Papers in Refereed Journals :

8. M.E. Nixon, O. Cazacu and R. A. Lebensohn [2009] “Anisotropic response of high-purity titanium: Experimental characterization and constitutive modeling” *Int. J. Plasticity* (accepted for publication)
9. O. Cazacu and J. B. Stewart [2009] “Plastic potentials for porous aggregates with the matrix exhibiting tension-compression asymmetry” *Journal of Mechanics and Physics of Solids*, **57**, pp. 325-341.
10. O. Cazacu, I.R. Ionescu, T. Perrot [2008] “Numerical modeling of projectile penetration into compressible rigid viscoplastic media” *International Journal for Numerical Methods in Engineering*, **74**, pp. 1240-1261.
11. M. Schmidt, O.Cazacu, M. Green [2008] “Experimental and theoretical investigation of the high-pressure behavior of cementitious materials” *International Journal for Numerical and Analytical Methods in Geomechanics*, , **33**, pp. 1-23.
12. S. Soare, J.W Yoon and O. Cazacu [2008] “On the use of homogeneous polynomials to develop anisotropic yield functions with applications to sheet forming” *International Journal of Plasticity*, **24**, pp. 915-944.
13. S. Cleja-Tigoiu, O. Cazacu and V. Tigoiu [2008] “Dynamic expansion of a spherical cavity within a rate-dependent compressible porous material” *International Journal of Plasticity*, **24**, pp.775-803.
14. B. Plunkett, O. Cazacu, and F. Barlat [2008] “Orthotropic yield criterion for description of anisotropy in tension and compression of sheet metals” *International Journal of Plasticity*, **24**, pp. 847-866.
15. V. Monchiet, O.Cazacu, E. Charkaluk, and D. Kondo [2008] “Macroscopic yield criteria for plastic anisotropic materials containing spheroidal voids” *International Journal of Plasticity*, **24**, pp. 1158-1189.
16. F. Barlat, J. W. Yoon and O. Cazacu [2007] “On linear transformations of stress tensors for the description of plastic anisotropy” *International Journal of Plasticity*, **23**, 876-896.
17. B. Plunkett, O. Cazacu, R.A. Lebensohn and F. Barlat [2007] “Elastic-viscoplastic anisotropic modeling of textured metals and validation using the Taylor cylinder impact test” *International Journal of Plasticity*, **23**, 1001-1021.
18. O. Cazacu and I.R. Ionescu [2006] “ Compressible viscoplastic fluids” *Journal of Mechanics and Physics of Solids*, **54**, 1640-1668.

19. O. Cazacu, B. Plunkett and F. Barlat [2006] “Orthotropic yield criterion for hexagonal closed packed materials”, *International Journal of Plasticity*, 22, 1171-1194.
20. O. Cazacu, I. R. Ionescu and T. Perrot [2006], Steady-state flow of compressible rigid-viscoplastic media, *International Journal of Engineering Sciences*, 44, 1082-1097.
21. B. Plunkett, O. Cazacu, R. Lebensohn and F. Barlat [2006] “Evolving yield function of hexagonal materials taking into account texture development and anisotropic hardening” *Acta Materialia*, 54, 4159-4169.
22. O. Cazacu and M.J. Schmidt [2006]“Behavior of cementitious materials for high strain-rate conditions”, *Journal de Physique IV (France)* 134, 1119-1124.
23. B. Plunkett, O. Cazacu, R. Lebensohn [2006] Strain-rate effects on the texture evolution of low symmetry metals: modeling and validation using the Taylor cylinder impact test”. *Journal de Physique IV (France)* 134, 81-86.
24. O. Cazacu, S. Soare, D. Kondo [2007] “On modeling the interaction between initial and damage-induced anisotropy in transversely isotropic solids” *Mathematics and Mechanics of Solids* **12**, pp. 305-318.
25. O. Cazacu, N.D. Cristescu and M .J. Schmidt [2006] “Analysis of the steady-state flow of a compressible viscoplastic medium over a wedge”, *International Journal for Numerical and Analytical Methods in Geomechanics*. **30**, pp. 489-499.
26. R. W. Armstrong and O. Cazacu [2006] “Indentation fracture mechanics toughness dependence on grain size and crack size: application to alumina and WC-Co”, *International Journal of Refractory and Hard Materials*” **24**, 129-134.
27. O. Cazacu and F. Barlat [2004] “A new yield criterion for the description of anisotropy and strength differential effects in pressure-insensitive metals”, *International Journal of Plasticity*, **20**, pp. 2027-2045.
28. D. Banabic, O. Cazacu, F. Barlat, D.S. Comsa, and K. Siegert [2003] “Description of anisotropic behaviour of AA3103-0 aluminium alloy using two recent yield criteria”, *Journal de Physique*, **105**, pp. 297-304.
29. O. Cazacu and F. Barlat [2003] “Application of representation theory to describe yielding of anisotropic aluminum alloys”, *International Journal of Engineering Science*, **41**, 12, pp.1367-1385.
30. D. Banabic, O.Cazacu, F. Barlat, D.S Comsa, S. Wagner, K. Siegert, [2002] “Recent anisotropic yield criteria for sheet metals” *Proceedings of the Romanian Academy*, **3**, pp. 91-98.
31. O. Cazacu [2002] “A new hyperelastic model for transversely isotropic solids” *ZAMP*, **53**, pp. 901-911.

32. N. D. Cristescu, O. Cazacu, and C. Cristescu [2002] “A Model for Landslides” *Canadian Geotechnical Journal*, **39**, pp. 924-937.
33. O. Cazacu, F. Barlat [2001] “A new anisotropic yield criterion for aluminum alloys” *Key Engineering Materials*, **230-232**, pp. 537-540.
34. O. Cazacu and F. Barlat [2001], “Generalization of Drucker yield criterion to orthotropy”, *Mathematics and Mechanics of Solids*, **6**, (6), pp. 613-630.
35. O. Cazacu and N. D. Cristescu [2000], “Constitutive model and analysis of creep flow of natural slopes”, *Italian Geotechnical Journal*, **34**, (3), pp. 44-54.
36. O. Cazacu and N. D. Cristescu [1999] “A paraboloid failure surface for transversely isotropic materials”, *Mechanics of Materials*, **31**, pp. 381-393.
37. O. Cazacu [1999] “On the choice of stress-dependent elastic moduli for transversely isotropic solids”, *Mechanics Research Communications*, **26**, No.1, pp. 45-54.
38. O. Cazacu, N. D. Cristescu, J. F. Shao, and J. P. Henry [1998] “A new anisotropic failure criterion for transversely anisotropic solids”, *Mechanics of Cohesive-Frictional Materials*, **3**, pp. 89-103.
39. O. Cazacu, J. Jin, and N. D. Cristescu [1997] “A new constitutive model for alumina powder compaction”, *Kona*, **15**, pp.103-113.

Papers Under Review

40. J-H Yoon, O. Cazacu and J.W. Yoon “Effect of evolving anisotropy on the earing profiles of textured aluminum sheets” *Int J Plasticity*, 30 pages (under review).
41. K. Inal, R K. Mishra and O. Cazacu “Forming Simulation of Aluminum Sheets Using an Anisotropic Yield Function Coupled with Crystal Plasticity Theory” *Int. J. Solids and Structures*, 25 pages (under review).
42. O. Cazacu, I.R. Ionescu and J.W. Yoon “ Orthotropic strain rate potential for description of tension-compression asymmetry in hexagonal materials” *Int J Plasticity*, 40 pages (under review).
43. O. Cazacu and I.R. Ionescu “An Eulerian approach to dynamic plasticity” *J. Mech. Phys. Solids*, 30 pages (under review).
44. O. Cazacu and I.R. Ionescu “ Numerical modeling of rate-dependent crystal plasticity” *Int. J. Num. Methods Engineering* 25 pages (under review).
45. M.E. Nixon, R. A. Lebensohn and O. Cazacu “Bending of alpha-titanium: experiments and constitutive modeling”, *Int. J. Mech. Sci.* 20 pages (under review).

46. O. Cazacu and J. B. Stewart “Analytical plastic potential for an anisotropic material containing spherical voids and exhibiting tension-compression asymmetry”, *J. Mech. Phys. Solids*, 30 pages (under review).
47. V. Monchiet, C. Gruescu, O. Cazacu and D. Kondo “A micromechanical approach of crack-induced damage in orthotropic media: application to a brittle matrix composite”, *Int. J. Solids and Structures*, 35 pages (under review).

International Conferences Publications

48. M. E. Nixon, O. Cazacu, R.A. Lebensohn, M.L. Lovato, G. Proust, C. Liu, C. Tome “ Mechanical response of high purity alpha titanium orthotropic plate: role of deformation twinning on anisotropy and its evolution with deformation” TMS 2008 13th Annual Meeting and Exhibition, Mar 9-15, 2008, pp. 81-83.
49. O. Cazacu and J.S. Stewart “A new yield criterion for porous hcp metals “ TMS 2008 13th Annual Meeting and Exhibition, Mar 9-15, 2008, pp. 140-143.
50. M. E. Nixon, O. Cazacu, R. A. Lebensohn “ Anisotropic elastic/plastic model for description of high purity alpha titanium” TMS 2008 13th Annual Meeting and Exhibition, Mar 9-15, 2008, pp. 297-299.
51. Soare, S., Yoon, J.W. and O. Cazacu, [2007] “On using homogeneous polynomials to design anisotropic yield functions with tension/compression symmetry/asymmetry” American Institute of Physics Conference Proceedings 908, pp. 607-612.
52. V. Monchiet, O. Cazacu, S. Soare, and D. Kondo “ Approximate yield criteria for anisotropic porous metals with non-spherical voids” Proceedings of the 9th International Conference on Metal Forming, ESAFORM 2006, April 26-28, 2006, Glasgow, United Kingdom, pp. 171-174.
53. O. Cazacu, B. Plunkett, R. Lebensohn, F. Barlat “ Evolving yield function for zirconium taking into account texture development and anisotropic hardening” Proceedings of the 9th International Conference on Metal Forming, ESAFORM 2006, April 26-28, Glasgow, United Kingdom, pp. 307-310.
54. O. Cazacu and B. Plunkett “Modeling of strain-rate and temperature effects on the texture evolution and mechanical response of pretextured metals” XXIII SECTAM Conference on Theoretical and Applied Mechanics, University of Puerto Rico, Mayaguez, May 21-23, 2006.

55. I.R. Ionescu and O. Cazacu “ Constitutive model for description of high strain rate behavior of concrete” Proceedings of the 16th International Conference on Fracture, ECF16, July 3-7, 2006, Alexandropolis, Greece, pp. 1108-1110.
56. O. Cazacu, B. Plunkett, F. Barlat “The influence of the plastic anisotropy on the shape and size of the crack tip plastic zone” The 12th International Symposium on Plasticity and Its Current applications, July 17-22, 2006, Halifax, Nova Scotia, Canada.
57. O. Cazacu “Elastic/ Viscoplastic Constitutive Equation For Anisotropic Rock” American Geophysical Union Fall Meeting, San Francisco, CA, December 11-15 December 2006.
58. O. Cazacu, B. Plunkett*, and F. Barlat [2005] “Orthotropic yield criterion for magnesium alloy sheets”, ESAFORM 2005, The 8th International Conference of the European Scientific Association for Metal Forming, April 27-29, 2005, Cluj, Romania
59. D. Banabic, O. Cazacu, L. Paraianu, P. Jurco [2005] “Recent development in the formability of aluminum alloys” AIP Conference Proceedings, Vol. 778-A, pp. 466-471.
60. S. Soare, J.W. Yoon, O. Cazacu, and F. Barlat [2005] “Earing predictions using recent yield criterion for aluminum”, ESAFORM 2005, The 8th International Conference of the European Scientific Association for Metal Forming, Cluj, Romania (in press; estimated length 4 pages).
61. C. Gruescu*, D. Kondo, and O. Cazacu [2005] “A micromechanics inspired damage model for initially transversely isotropic materials” The 11th International Conference on Fracture, March 20-25, Turin, Italy (in press; estimated length 4 pages).
62. O. Cazacu, B. Plunkett, and F. Barlat [2005] “Orthotropic yield criterion for hcp sheet metals” in Proceedings of Plasticity 05, The 11th International Symposium on Plasticity, January 3-6, 2005, Kauai, Neat Press, Eds: A. Khan & A. R. Khoei, pp.133-135 (Invited Paper).
63. O.Cazacu and S. Soare [2004] “ A new anisotropic damage model for ceramic matrix composites” American Society of Mechanical Engineers, Applied Mechanics Division, AMD 255, pp. 31-356
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