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LMPM, Department of Mechanical Engineering
University of Sidi Bel Abbès, BP 89, Cité Ben M'hidi
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Academic Rank : Professor

Distinction : Scopus award 2012

Education :

- PHD in Mechanical engineering at Sidi Bel Abbès University. 2002 . Thesis entitled :
“ Analyse of the notch effect on the fracture behaviour of aircraft structures”.
- Master of science at Sidi bel Abbès University 1991.
- Engineering Diploma at University of science and technology of Oran .

Undergraduate courses:

- Mechanics of Solid
- Finite element method
- Mechanics of materials
- Fracture mechanics

Graduate courses:

- Finite element method
- Boundary element method
- Fracture and fatigue
- Mechanics of composite materials
- Mechanics of riveted and adhesively bonded assemblies

Research responsibility :

- Director of biomechanics and biomaterials team at the LMPM laboratory.

Research interests:

- Fatigue and Fracture of aircraft structures
- Fatigue and Fracture of composite materials
- Fatigue and fracture of biomaterials
- Fatigue and fracture of biomaterials (ceramic-metal couples)
- Computational fracture mechanics

Research projects direction :

- Effect of residual stresses on fracture behaviour of ceramic metal assemblies. Project realised between 2006 and 2008.
- Effect of micro- defects in the cement mantle on mechanical behaviour of total hip prosthesis. Project agreed in 01/01/2009 for three years.

International Collaboration

- Visiting professor at king Saud university, Riyadh , Saudi Arabia, 2010-2012
- Member of research cooperation project between University of Sidi Bel Abbes and University of Tours (France) (1997 – 2000).
- Member of research cooperation project between University of Sidi Bel Abbes and University of Larochele (France) (Agreed 01/01/2009)

PHD supervision

- Smail Benbarek . Thesis title : “Effcet of micro-voids in the cement mantle on fracture behaviour of cemented hip prosthesis. Presented at Sidi Bel Abbes University 2008.
- Fekirini Hamida. Thesis title : “Analyse of the performances of bonded composite repair with two adhesive bands in aircraft structures. Presented at Sidi Bel Abbes University 2009
- Tarik Achour. Thesis title : “Effect of microcracks in the cement mantle on fracture behaviour of cemented hip prosthesis. Presented at Sidi Bel Abbes University. 2006
- Djamel Ouinas. Thesis title : “ Analyse of behaviour of repaired cracks with bonded composite patch in aircraft structures. Presented at Sidi Bel Abbes University. 2006
- Bouziane Mohamed Mokhtar “Analysis of the effects of micro-defects on the mechanical behaviour of PTH”, 2010

International Publications

A. Referred journals :

-Article in Press

- 1) W. Oudad, K. Madani, **B. Bachir Bouiadjra**, M. Belhouari, S. Cohendoz, S. Touzain, X. Feaugas, Effect of humidity absorption by the adhesive on the performances of bonded composite repairs in aircraft structures, Composites Part B: Engineering, In press, doi:10.1016/j.matdes.2011.12.006
 - 2) M. Bezzerrouki, A. Albedah, **B. Bachir Bouiadjra**, W. Ouddad, F. Benyahia, Computation of the stress intensity factor for repaired cracks with bonded composite wrap in pipes under traction effect, Journal of Thermoplastic Composite Materials, 0892705711430428, first published on December 26, 2011
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3) Mohamed Sahnoun, Djamel Ouinas, Nouredine Benderdouche, Mohamed Belhouari, and **Bel Abbes Bachir Bouiadjra**, Effect of notch and crack initiating from notch on the behavior of adhesively bonded composite laminated plate, Journal of Thermoplastic Composite Materials, 0892705711425844, first published on December 9, 2011

4) A. Belarbi, **B. Bachir Bouiadjra**, M. Belhouari, Node - Failure Technique - Based Representative Unit-Cell Lifetime-Dependent Ductile Damage Model Between Elastoviscoplastic Matrix and Rigid Fibre, International Journal of Damage Mechanics, 1056789511426018, first published on October 19, 2011

2012

- 5) **B. Bachir Bouiadjra**, W. Oudad, A. Albedah, F. Benyahia, M. Belhouari, Effects of the adhesive disband on the performances of bonded composite repairs in aircraft structures, Materials & Design, 2012, 37: 89-95
- 6) A. Albedah, M. Berrahou, M. Es-Saheb, F. Benyahia, **B. Bachir Bouiadjra**, Mass gain estimation between double and single bonded composite repairs in aircraft structures, Journal of thermoplastic composites materials, 2012, 25: 181-191
- 7) Mhamdia Rachid, B. Serier, **B. Bachir Bouiadjra**, M. Belhouari, Numerical analysis of the patch shape effects on the performances of bonded composite repair in aircraft structures, Composites Part B: Engineering, 2012, 43: 391-397
- 8) D. Ouinas, **B. Bachir Bouiadjra**, S. Himouri, N. Benderdouche, Progressive edge cracked aluminium plate repaired with adhesively bonded composite patch under full width disbond, Composites Part B: Engineering, 2012, 43: 805-811

9) A.Merdji, **B. Bachir Bouiadjra**, B. Ould Chikh, R. Mootanah, L. Aminallah, B. Serier, I.M. Muslih, Stress distribution in dental prosthesis under an occlusal combined dynamic loading, *Materials & Design*, 2012, 36: 705-713

10) Farida Bouafia, Boualem Serier, **Bel Abbes Bachir Bouiadjra**, Finite element analysis of the thermal residual stresses of SiC particle reinforced aluminum composite, *Computational Materials Science*, 2012, 54:195-203

2011

11) B. Mechab, B. Serier, **B. Bachir Bouiadjra**, K. Kaddouri, X. feaugas, Linear and non-linear analyses for semi-elliptical surface cracks under bending. *International journal of pressure vessels and piping*, 88,(2011) 57-63.

12) A.Albedah, **B. Bachir Bouiadjra**, L. Aminallah, . Es-Saheb, F. Benyahia, Numerical analysis of the effect of thermal residual stresses on the performances of bonded composite repairs in aircraft structures, *Composites: Part B* 4 2 (2011) 511–516

13) A. Albedah, **B. Bachir Bouiadjra**, R. Mhamdia . Es-Saheb, F. Benyahia, Comparison between double and single sided bonded composite repair with circular shape, *Materials and Design* 32 (2011) 996–1000

14)A.Albedah, **B. Bachir Bouiadjra**, W.Ouddad, . Es-Saheb, F. Benyahia, Elastic plastic analysis of bonded composite repair in cracked aircraft structures, *Journal of reinforced plastics and composites*, 30, (2011),66-72

15) T. Achour, A. Merdji, **B. Bachir Bouiadjra**, B. Serier, N. Djebbar, Stress distribution in dental implant with elastomeric stress barrier, *Materials and Design* 32 (2011) 282–290

16) A. Aid, A. Amrouche, **B. Bachir Bouiadjra**, M. Benguediab, G. Mesmacque, Fatigue life prediction under variable loading based on a new damage model, *Materials and Design* 32 (2011) 183-181.

17) B., Serier , S., Sellam , **B. Bachir, Bouiadjra** , D., Threux, Effect of oxygen dissolved in metal on the strength of Silver- Alumina junctions formed in the solid state , *Vacuum*, Volume 85, Issue 10, 25 March 2011, Pages 955-960.

18) D. Ouinas, **B. Bachir Bouiadjra**, N. Benderdouche, B. Ait Saadi, J. Viña, Numerical modelling of the interaction macro–multimicrocracks in a plate under tensile stress, *Journal of Computational Science*, 2 2011, 153-164

19) **B. Bachir Bouiadjra**, M. Fari Bouanani, A. Albedah, F. Benyahia, M. Es-Saheb, Comparison between rectangular and trapezoidal bonded composite repairs in aircraft structures: A numerical analysis , *Materials & Design*, 32, 2011, s 3161-3166.

20) B. Serier, **B. Bachir Bouiadjra**, M. Belhouari, D. Treheux, Experimental analysis of the strength of silver–alumina junction elaborated at solid state bonding , *Materials & Design*, 32, 2011, 3750-3755

- 21) A.Benhamena, L. Aminallah, **B. Bachir Bouiadjra**, M. Benguediab, A. Amrouche, N. Benseddiq, J integral solution for semi-elliptical surface crack in high density poly-ethylene pipe under bending, *Materials & Design*, 32, , 2011, 2561-2569.
- 22) Farida Bouafia, Boualem Serier, Benali Boutabout, **Bel Abbas Bachir Bouiadjra**, Numerical analysis of the effect of pore on local stresses in spot welds , *Computational Materials Science*, 50, 2011, 2517-2529
- 23) M. Belhouari, **B. Bachir Bouiadjra**, K.Kaddouri, T. Achour, Plasticity Effect on Crack Growth along Ceramic/Metal Bimaterial Interface: Numerical Analysis, *Mechanics of Advanced Materials and Structures* , 18, 2011, 364-372.
- 24) A.Hadjoui, H. Mebarek , **B. Bachir Bouiadjra**, Free Vibration Analysis for Cracked Triangular Orthotropic Plates Using h–p Finite Element Method, *International Journal for Computational Methods in Engineering Science and Mechanics*, 12,2011, 59-74
- 25) R. Mhamdia, **B. Bachir Bouiadjra**, Stress intensity factor for repaired crack with bonded composite patch under thermo-mechanical loading, *Journal of reinforced plastic and composites*, 30, 2011,416-424.
- 26) A.Aminallah, L. Rezgani, **B. Bachir Bouiadjra**, K. Madani, A. Albedah, F. Benyahia, Effect of the composite and the adhesive aging on the plasticity in bonded composite repair, *Journal of reinforced plastic and composites* 2011, 30:1245-1250

2010 :

- 27) D. Ouinas, A. Hebbar, B. Bachir Bouiadjra, N. Benderdouche, **B. Serier** Interaction effect crack–interfacial crack using finite element method Original Research Article *Materials & Design*, Volume 31, Issue 1, January 2010, Pages 375-381
- 28) B. Bachir Bouiadjra, T. Achour, M. Berrahou, D. Ouinas, X. Feaugas Numerical estimation of the mass gain between double symmetric and single bonded composite repairs in aircraft structures *Materials & Design*, Volume 31, Issue 6, June 2010, Pages 3073-3077
- 29) D.Ouinas, B. Bachir Bouiadjra, T. Achour, N. Benderdouche Influence of disbond on notch crack behaviour in single bonded lap joints Original Research Article. *Materials & Design*, Volume 31, Issue 9, October 2010, Pages 4356-4362
- 30) A.Hebbar, D. Ouinas, A. Lousdad, **B. Bachir Bouiadjra**, Erosive Wear Modeling of Polymeric Composite Materials, *Journal of reinforced plastics and composites*, 29, 2010, 1893-1899
- 31) **B. Bachir Bouiadjra**, H. Fekirini, M. Belhouari, B. Serier, B. Benguediab, and D. Ouinas, SIF for Double- and Single-sided Composite Repair in Mode I and Mixed Mode, *Journal of reinforced plastics and composites* 30, 2010, 416-424
- 32) A. Merdji, **B. Bachir Bouiadjra**, T. Achour, **B. Serier**, **B. Ould Chikh**, Z.O. Feng Stress analysis in dental prosthesis Original Research Article *Computational Materials Science*, Volume 49, Issue 1, June 2010, Pages 126-133

- 33) M.M. Bouziane, **B. Bachir Bouiadjra**, S. Benbarek, M.S.H. Tabeti, T. Achour Finite element analysis of the behaviour of microvoids in the cement mantle of cemented hip stem: Static and dynamic analysis *Materials & Design*, Volume 31, Issue 1, January 2010, Pages 545-550
- 34) T. Achour, M.S.H. Tabeti, M.M. Bouziane, S. Benbarek, **B. Bachir Bouiadjra**, A. Mankour Finite element analysis of interfacial crack behaviour in cemented total hip arthroplasty Original Research Article *Computational Materials Science*, Volume 47, Issue 3, January 2010, Pages 672-677
- 35) N. Djebbar, B. Serier, **B. Bachir Bouiadjra**, S. Benbarek, A. Draï Analysis of the effect of load direction on the stress distribution in dental implant. *Materials & Design*, Volume 31, Issue 4, April 2010, Pages 2097-2101
- 36) L. Rezgani, **B. Bachir Bouiadjra**, M. Belhouari, K. Madani, B. Serier, and X. Feaugas Effect of composite hygrothermal aging on the SIF variation in bonded composite repair of aircraft structures. *Journal of Reinforced Plastics and Composites*, December 2010; vol. 29, 24: pp. 3631-3636
- 37) A.Flitti, D. Ouinas, **B. Bachir Bouiadjra**, N. Benderdouche, Effect of the crack position in the cement mantle on the fracture behavior of the total hip prosthesis *Computational Materials Science*, Volume 49, Issue 3, September 2010, Pages 598-602
- 38) A.Benhamena, B. Bachir Bouiadjra, A. Amrouche, G. Mesmacque, N. Benseddig, M. Benguediab Three finite element analysis of semi-elliptical crack in high density polyethylene pipe subjected to internal pressure . *Materials & Design*, Volume 31, Issue 6, June 2010, Pages 3038-3043

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- 39) **B. Bachir Bouiadjra**, M. Elmegueni, M. Benguediab, M. Belhouari, M. Nait-Abdelaziz, Numerical estimation of the effects of microcavities on the plastic zone size ahead of the crack tip in aluminum alloy 2024 T3, *Materials & Design*, Volume 30, 2009, pp: 752-757.
- 40) S. Benbarek, **B. Bachir Bouiadjra**, A. Mankour, T. Acour, B. Serier, Analysis of fracture behaviour of the cement mantle of reconstructed acetabulum *Computational Materials Science*, Volume 44, 2009, pp: 1291-1295
- 41) W. Oudad, **B. Bachir Bouiadjra**, M. Belhouari, S. Touzain, X. Feaugas, Analysis of the plastic zone size ahead of repaired cracks with bonded composite patch of metallic aircraft structures, *Computational Materials Science*, Volume 46, 2009, pp 950-954.

- 42) B. Serier, **B. Bachir Bouiadjra**, S. Benbarek, T. Achour, Analysis of the effect of the forces during gait on the fracture behaviour in cement of reconstructed acetabulum, *Computational Materials Science*, Volume 46, 2009, pp: 267-274
- 43) D. Ouinas, **B. Bachir Bouiadjra**, B. Achour, N. Benderdouche, Modelling of a cracked aluminium plate repaired with composite octagonal patch in mode I and mixed mode, *Materials & Design*, Volume 30, 2009, pp: 590-595.
- 44) D. Ouinas, **B. Bachir Bouiadjra**, B. Serier, N. Benderdouche, A. Ouinas, Numerical analysis of Brazilian bioceramic discs under diametrical compression loading, *Computational Materials Science*, Volume 45, 2009, pp: 443-448.
- 45) A. Draï, **B. Bachir Bouiadjra**, M. Meddah, M. Benguediab, Analysis of interfacial fracture in ceramic–metal assemblies under effect of thermal residual stresses, *Computational Materials Science*, Volume 46, 2009, pp: 1119-1123.
- 46) D. Ouinas, A. Hebbar, **B. Bachir Bouiadjra**, N. Benderdouche, B. Serier, Interaction effect crack–interfacial crack using finite element method, *Materials & Design*, Volume 31, , pp 375-381.
- 47) A. Metehri, B. Serier, **B. Bachir bouiadjra**, M. Belhouari, M.A. Mecirdi, Numerical analysis of the residual stresses in polymer matrix composites *Materials & Design*, Volume 30, 2009, pp: 2332-233.
- 48) L. Aminallah, T. Achour, **B. Bachir Bouiadjra**, B. Serier, A. Amrouche, X. Feaugas, N. Benssediq, Analysis of the distribution of thermal residual stresses in bonded composite repair of metallic aircraft structures, *Computational Materials Science*, Volume 46, 2009, Pages 1023-1027.
- 49) M. Belhouari, R. Malfi, **B. Bachir Bouiadjra**, A. Mankour, B. Serier, Numerical analysis of fracture behaviour of multilayered bimaterials composites beams *Computational Materials Science*, Volume 46, 2009, pp:s 321-326.
- 50) B. Boutabout, M. Chama, **B. Bachir Bouiadjra**, Effect of thermomechanical loads on the propagation of crack near the interface brittle/ductile, *Computational materials science*, Volume 46, 2009, pp: 906-911
- 51) D. Ouinas, M. Sahnoune, N. Benderdouche, **B. Bachir Bouiadjra**, Stress intensity factor analysis for notched cracked structure repaired by composite patching *Materials & Design*, Volume 30, 2009, pp: 2302-2308

- 52) **B. Bachir Bouiadjra**, D. Ouinas, B. Serier, N. Benderdouche, Disbond effects on bonded boron/epoxy composite repair to aluminium plates, *Computational Materials Science*, Volume 42, 2008, pp: 220-227
- 53) **B. Bachir Bouiadjra**, M. Benguediab, M. Elmeguenni, M. Belhouari, B. Serier, M. Nait Abdel Aziz, Analysis of the effect of micro-crack on the plastic strain ahead of main crack in aluminium alloy 2024 T3, *Computational Materials Science*, Volume 42, 2008, pp: 100-106
- 54) **B. Bachir Bouiadjra**, H. Fekirini, B. Serier, M. Belhouari and M. Benguediab, Energy Release Rate for Repaired Inclined Cracks with Bonded Composite Patch Having Two Adhesive Bands in Aircraft Structures, *Journal of Reinforced Plastics and Composites*, Volume 27, 2008, pp:1135-1145
- 55) **B. Bachir Bouiadjra**, H. Fekirini, M. Belhouari and B. Serier, Numerical analysis of the behaviour of repaired inclined cracks with bonded composite patch having two adhesive bands in aircraft structures, *Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering*, Volume 222, 2008, pp : 963-968.
- 56) H. Fekirini, **B. Bachir Bouiadjra**, M. Belhouari, B. Boutabout, B. Serier, Numerical analysis of the performances of bonded composite repair with two adhesive bands in aircraft structures, *Composite Structures*, Volume 82, 2008, pp: 84-89.
- 57) D. Ouinas, **B. Bachir Bouiadjra**, B. Serier, J. Viña . Influence of bimaterial interface on kinking behaviour of a crack growth emanating from notch *Computational Materials Science*, Volume 41, 2008, pp: 508-514.
- 58) D. Ouinas, **B. Bachir Bouiadjra**, N. Benderdouche, Interaction effect of a main crack emanating from a semicircular notch and a microcrack, *Computational Materials Science*, Volume 43, 2008, pp: 1155-1159.
- 59) M. Bezzerrouki, **B. Bachir Bouiadjra**, D. Ouinas, SIF for cracks repaired with single composite patch having two adhesive bands and double symmetric one in aircraft structures, *Computational Materials Science*, Volume 44, 2008, pp: 542-546.
- 60) A. Mankour, **B. Bachir Bouiadjra**, M. Belhouari, Brazilian disk test simulation intended for the study of interfacial cracks in bi-materials, *Computational Materials Science*, Volume 43, 2008, Pages 696-69.
- 61) M. Belhouari, S. Gouasmi, **B. Bachir bouiadjra**, K. Kaddouri, B. Serier, Elastic–plastic analysis of interaction between an interfacial crack and a subinterfacial microcrack in bi-materials, *Computational Materials Science*, Volume 43, 2008, pp: 924-929.

- 62) K. Kaddouri, D. Ouinas, **B. Bachir Bouiadjra**, FE analysis of the behaviour of octagonal bonded composite repair in aircraft structures, Computational Materials Science, Volume 43, 2008, Pages 1109-1111
- 63) M. Belhouari, S. Gouasmi, **B. Bachir Bouiadjra**, T. Achour, A. Amiri, Finite-element investigation of fracture behaviour in elastic-plastic film bonded to elastic substrate, Computational Materials Science, Volume 44, 2008, pp : 835-837.

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- 64) **Bachir Bouiadjra Bel Abbes**, A. Mankour, M. Belhouari, Étude de la rupture interfaciale des bimatériaux par le test du disque brésilien, revue de composites et de matériaux avancés, Vol 17, 2007, pp.307-313.
- 65) **B. Bachir Bouiadjra**, H. Fekirini, M. Belhouari, B. Boutabout, B. Serier, Fracture energy for repaired cracks with bonded composite patch having two adhesive bands in aircraft structures, Computational Materials Science, Volume 40, 2007, pp: 20-26
- 66) Mebarek Hocine; **Bachir Bouiadjra Bel Abbes**; Hadjoui Abdelhamid, hp-Finite element for free vibration analysis of the orthotropic triangular and rectangular plates, Mathematical and Computer Modelling of Dynamical Systems: Methods, Tools and Applications in Engineering and Related Sciences, , Volume 13, , 2007, pp: 573 – 597
- 67) **B. Bachir Bouiadjra**, H. Fekirini, B. Serier, M. Benguediab, SIF for Inclined Cracks Repaired with Double and Single Composite Patch, Mechanics of Advanced Materials and Structures, 1537-6532, Volume 14, 2007, pp: 303 – 308
- 68) **B. Bachir Bouiadjra**, L. Rezgani, D. Ouinas, M. Belhouari, A. Ziadi, Numerical analysis of the notch effect and the behaviour of notch crack in adhesively bonded composite laminates, Computational Materials Science, Volume 38, 2007, pp: 759-764
- 69) **B. Bachir Bouiadjra**, A. Belarbi, S. Benbarek, T. Achour, B. Serier, FE analysis of the behaviour of microcracks in the cement mantle of reconstructed acetabulum in the total hip prosthesis, Computational Materials Science, Volume 40, pp: 485-491,
- 70) **B. Bachir Bouiadjra**, H. Fekirini, B. Serier, M. Benguediab, Numerical analysis of the beneficial effect of the double symmetric patch repair compared to single one in aircraft structures, Computational Materials Science, Volume 38, 2007, pp: 824-829.
- 71) S. Benbarek, **B. Bachir Bouiadjra**, T. Achour, M. Belhouari, B. Serier, Finite element analysis of the behaviour of crack emanating from microvoid in cement of reconstructed acetabulum Materials Science and Engineering: A, Volume 457, 2007, pp: 385-39
- 72) D. Ouinas, **B.B. Bouiadjra**, B. Serier, The effects of disbonds on the stress intensity factor of aluminium panels repaired using composite materials , Composite Structures, Volume 78, Issue 2, April 2007, Pages 278-284

73) D. Ouinas, **B.B. Bouiadjra**, B. Serier, M. Said Bekkouche, Comparison of the effectiveness of boron/epoxy and graphite/epoxy patches for repaired cracks emanating from a semicircular notch edge, *Composite Structures*, Volume 80, 2007, pp: 514-522

74) D. Ouinas, B. Serier, **B.B. Bouiadjra**, The effects of disbonds on the pure mode II stress intensity factor of aluminium plate reinforced with bonded composite materials, *Computational Materials Science*, Volume 39, 2007, pp: 782-787.

75) T. Achour, **B. Bachir Bouiadjra**, D. Ouinas, K. Kaddouri, Analysis of the effect of notch-inclusion interaction in a plate under tensile load, *Computational Materials Science*, Volume 39, 2007, pp : 495-501

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77) D. Ouinas, **B. Bachir Bouiadjra**, B. Serier and A. Ouinas, Influence of the prosthetic parameters on the durability of the Material couple constituent: The link of a Femoral Prosthesis of hip, *Journal of applied science*, Volume 7, 2007 pp: 2385-2388.

78) A. Benazza, A. Ziadi, B. Serier, **B. Bachir Bouiadjra**, B. Boutabout, Hot compression and fracture toughness of HSS composed strip work rolls, *Journal of materials sciences*, Volume 42, 2007, pp 834-840.

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79) K. Kaddouri, M. Belhouari, **B. Bachir Bouiadjra**, B. Serier, Finite element analysis of crack perpendicular to bi-material interface: Case of couple ceramic-metal, *Computational Materials Science*, Volume 35, 2006, pp: 53-60

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81) D.Ouinas , B. Serier and **B. Bachir Bouiadjra**; Interaction d'une fissure émanant d'entaille semi-circulaire orientée perpendiculairement à l'interface céramique/métal. *Revue des composites et des matériaux avancés* 2005 15 pp : 221-243.

82) D. Ouinas, B. Serier, **B. Bachir Bouiadjra**, Modélisation numérique de l'interaction entaille-inclusion dans une plaque sollicitée. *Mécanique et industries*, Volume 6, 2005, 521-527.

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83) B. Boutabout, B. Serier **B. Bachir Bouiadjra** and D. Tréheux Junction Ni/Al₂O₃ Elaborated by thermocompression : Determination of the Thermal Residual Stresses Mechanics of Adv Materials and struct. 2004 Vol 11(93) Pp: 93-107.

84) B. Serier **B. Bachir Bouiadjra** and D. Tréheux Mechanism of Adhesion at Solid state bonding ceramic-metal : Case of Silver-Alumina Couple Key Engineering Materials Euro Ceramics VIII 2004, Pp : 667-670.

85) A. Megueni, **B. Bachir Bouiadjra** and M. Belhouari. Disbond effect on the stress intensity factor for repairing cracks with bonded composite patch Computational Materials Science, Volume 29, Issue 4, April 2004, Pages 407-413

86) M. Belhouari, **B. Bachir Bouiadjra**, A. Megueni and K. Kaddouri. Comparison of double and single bonded repairs to symmetric composite structures: a numerical analysis Composite Structures, Volume 65, Issue 1, July 2004, Pages 47-53

87) B. Serier, M. Belhouari and **B. Bachir Bouiadjra** Numerical study of the interaction between an interfacial crack and a subinterfacial microcrack in bi-materials Computational Materials Science, Volume 29, Issue 3, March 2004, Pages 309-314

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88) B. Serier, **B. Bachir Bouiadjra** and M. Belhouari Finite element analysis of bi-material interface notch crack behaviour . Computational Materials Science, Volume 27, Issue 4, June 2003, Pages 517-522

89) T. Achour, **B. Bachir Bouiadjra** and B. Serier Numerical analysis of the performances of the bonded composite patch for reducing stress concentration and repairing cracks at notch Computational Materials Science, Volume 28, Issue 1, July 2003, Pages 41-48.

90) A. Megueni, A. Tounsi, **B. Bachir Bouiadjra** and B. Serier The effect of a bonded hygrothermal aged composite patch on the stress intensity factor for repairing cracked metallic structures Composite Structures, Volume 62, Issue 2, November 2003, Pages 171-176.

91) A. Megueni, **B. Bachir Bouiadjra** and B. Boutabout. Computation of the stress intensity factor for patched crack with bonded composite repair in pure mode II. Composite Structures, Volume 59, Issue 3, February-March 2003, Pages 415-418

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B. Edited proceedings

- 93) B. Bachir Bouiadjra**, S. Benbraek, M. belhouari, T. Achour and B. Serier, Analysis of the behaviour of crack emanating from microvoid in Cement of Reconstructed acetabulum, Proceeding of the 17th European conference on fracture (ECF 17), Brno Czech Republic, September 2008, Edited by : Jaroslav Pokulda, Peter Lukas, Pavel Sandera, Ivo Dlouhy. Published by VUTUM Brno, pp: 1641-1647.
- 94) M. belhouari, B. Bachir Bouiadjra**, K. Kaddouri and K. Madani, Elastic-plastic analysis of cracks on Metal/ceramic joint, , Proceeding of the 17th European conference on fracture (ECF 17), Brno Czech Republic, September 2008, Edited by : Jaroslav Pokulda, Peter Lukas, Pavel Sandera, Ivo Dlouhy. Published by VUTUM Brno, pp: 2145-2152.
- 95) A. Draï and B. Bachir Bouiadjra**, Analysis of interfacial fracture between concrete and rock in gravity dam, Proceeding of Structures 2008 Conference, Edited and published by American society of civil engineering (ASCE), 2008, pp: 1576-1586.
- B. Bachir Bouiadjra**, M. Benguediab, M. Elmeguenni, M. Belhouari, B. Serier and M. Nait Abdelaziz, Effect of microcrack on plastic zone ahead of main crack in small-scale plasticity, Particle and Continuum aspects of Mesomechanics, Mesomechanics 2007, Edited by George C. Sih, Moussa Nait-Abdelazizi, Toan Vu-Khanh, published by : ISTE pp:237-244.
- 96) M. Elmeguenni, B. Bachir Bouiadjra**, M. Benguediab, A. Ziadi, M. Nait Abdelaziz and F. Zairi, Micro-cavity effect on the plastic zone size ahead of crack tip in confined plasticity, Particle and Continuum aspects of Mesomechanics, Mesomechanics 2007, Edited by George C. Sih, Moussa Nait-Abdelazizi, Toan Vu-Khanh, published by : ISTE pp:229-236.
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