Ehab Adel El-Danaf

Professor of Materials Engineering

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Education

- Ph.D. in Materials Engineering, June 1998, Drexel University, Philadelphia, PA. U.S.A G.P.A :**3.9/4.0**. Thesis: " Large Deformation Stress-Strain Response in Low Stacking Fault Energy FCC Metals".
- M.Sc. in Mechanical Engineering, July 1994, Cairo University, Cairo, Egypt. G.P.A : **3.6/4.0**. Thesis: " Computer Aided Design and Optimization of Spur and Helical gear sets".
- B.Sc. in Mechanical Engineering (Mechanical Design and Production Department) July 1991, Cairo University, Cairo, Egypt, ***Distinction with Honor***, G.P.A : **3.3/4.0**, ranked as ***top of class*** 1/200.

Work Experience:

12/2010 – present **Professor, Department of Mechanical Engineering, King Saud University, Saudi Arabia.**

6/2010 – present **Professor, Department of Mechanical Design and Production, Faculty of Engineering, Cairo University (On leave).**

12/2004 – 12/2010 **Associate professor, Department of Mechanical Engineering, King Saud University, Saudi Arabia.**

12/2004 – 6/2010 **Associate Professor, Department of Mechanical Design and Production, Faculty of Engineering, Cairo University (On leave).**

9/1999-12/2004 **Assistant Professor, Department of Mechanical Design and Production, Faculty of Engineering, Cairo University.**

Teaching undergraduate (first, second and fourth year) and post graduate (Diploma and Master Degree) materials engineering courses.

9/1998-9/1999 **Research Assistant Professor, Department of Materials Engineering , Drexel University, Philadelphia, PA., USA.**

Working with the Orientation Image Microscopy (OIM) to study the evolution of grain orientations (texture) during large plastic deformations and comparing experimental results with finite element simulations and model predictions to test current models and improve on them by implementing a physical model for length scale.

6/1998-9/1998 **Research Associate Post Doctorate, Department of Materials Engineering, Drexel University, Philadelphia, PA., USA.**

Teaching materials courses for sophomores (MATE 211 & 212), basics and introduction to Material Science

6/1995-6/1998 **Research Assistant, Department of Materials Engineering, Drexel University, Philadelphia, PA., USA.**

Studying the various aspects such as grain size, composition (stacking fault energy), heat treatment on strain hardening during large plastic deformations in different stress states on large group of metals for a wide range of stacking fault energies (cu-zn alloys- stainless steels- Co-Ni super alloy) and studying the concurrent microstructural and texture evolution in the deformed materials.

6/1991-6/1994 **Instructor of Machine Design, Mechanical Engineering Department, Cairo University, Cairo, Egypt.**

Instructing the labs for Machine Design, teaching recitations, teaching machine design concepts and theory. Supervising design projects for senior, Sophomores and Junior students.

Practical Training Experience:

6/1987-9/1987

Institute of Metallurgy in Aachen University "Institute fur Eisen Hutten Kunde", Aachen Germany.

6/1988-9/1988

Chemical Plant for producing valves and heat exchangers for power plants "Chemar" in Kielce , Poland.

6/1990-8/1990

Paper company for producing paper and other products from wood bulbs "Papierotehtat O Y" in Kajanii,Finland.

Experimental Work Experience:

- Designing Fixtures and Dies for different testing (Simple compression, Plane strain compression, Simple shear).
- Experience in different methods of testing (uniaxial tension, simple compression, plane strain compression and simple shear, etc..).
- Mechanical testing with MTS (Servo Hydraulic Equipment), Instron (Gear Driven).
- Hardeness, Micro Hardness.
- SEM (Jeol-Amray), Optical Microscopy, Image Analysis, Orientation Image Microscopy, Metallography.
- Heat Treatment operations.

Computer Skills Experience:

- Finite Element Analysis using "ABAQUS" (simulation of different stress states in large plastic deformations and non-homogeneous deformations processing).
- C language, C++ (developed a CAD and Optimization software for design of gears), Fortran, Basic programming.
- Autocad.
- Word processing and Excel.

Scientific and Technical Memberships:

- Member of TMS. (The American materials Society)
- Member of the Engineering syndicate in Cairo, Egypt.

Committees:

2006	**Department accreditation committee, Mechanical Engineering Department, King Saud University.**
2007	**Department committee for post graduate students, Mechanical Engineering Department, King Saud University.**
7/2003 – 10/2004	**Committee For Deepening the Local Manufacturing of Road Vehicles Spare Parts, under the Auspices of the Egyptian Ministry of Industry.**

A member of the committee that was held under the auspices of the ministry of industry and technology development. Some of the shores included revising engineering drawings of spare parts, and creating a data base for all imported vehicle spare parts.

Awards

- **First place award for Research Excellence from College of Engineering, King Saud University, 2012.**
- **Highly Cited Author Award**, 2003, THOMSON ISI.
- **Best Academic achievement** "Harry Roger award",1998, Drexel University.
- **Best Academic Achievement**, 1993, from the Engineering Syndicate in Cairo, Egypt.

Grants:

1. Superplastic behavior induced by friction stir processing in AA5083 and AA7010. **50,000 SR, 21/429 SABIC. (Finished)**
2. Friction Stir Welding of Aluminum and its alloys. **40,000 SR, 26/426 SABIC. (Finished)**
3. Effect of Equal channel angle extrusion (ECAE) processing parameters on the cyclic deformation behavior of 1050 commercially pure aluminum. **237,000 SR, 6/2008 CEREM. (Finished)**
4. Effect of Plane Strain compression on Texture Development in Equal Channel Angular Pressed Commercial Purity Aluminum. **261,800 SR, 6/2008 CEREM. (Finished)**
5. Studying microstructure and microtexture evolution during processing of commercial purity aluminum by equal channel angle pressing. **30,000 SR, 63/427 RESEARCH CENTER. (Finished)**
6. Design and Manufacturing and Preliminary Experimentation with an Equal Channel Angle Pressing Die. **30,000 SR, 3/426 RESEARCH CENTER. (Finished)**
7. Deformation Behavior of 6xxx Aluminum Alloy Under Different Heat Treatment Conditions. **30,000 SR, RESEARCH CENTER. (Finished)**
8. Production of nanocrystalline materials using novel techniques. **400,000 SR NM-26-4 KACST. (Finished)**
9. High temperature deformation of commercial purity aluminum alloys, 5083AA and 7010AA. **40,000 SR, 30/426 SABIC. (Finished)**
10. High temperature deformation of 6082 aluminum alloy. **30,000 SR, 38/428 SABIC. (Finished)**
11. Characterization of power plant steel using ultrasionic testing. **1,226,000 SR, National Plan Project.**
12. Development of Nanostructured Aluminum Alloy by Cryomilling and Subsequent Consolidation. **1,873,000 SR, National Plan Project.**
13. Precipitation-hardened 6082 aluminum alloy processed via equal channel angular pressing and subjected to different aging treatments: Experimentation and Modeling at different strain-rates and temperatures. **1,800,000 SR, National Plan Project.**

Scientific visits:

Jan. 2006 Sabic Research Center at Gubail. The visit involved discussing steel plant production problems and giving seminar presentations. Two presentations were given under the titles:
1. " Plane strain compression testing of FCC metals and alloys : strain hardening and microstructure"
2. " Texture evolution in plane strain compression"

Participation in Workshops :

Nano technology, KACST, 2006.
Nano technology, KSU, 2007.
One dimensional nano structures, CEREM, 2008.

Societal services:

3/2004 – 5/2004 **General Secretary of the 1st Conference for Deepening The Local Manufacturing of Spare Parts for Road Vehicles, Under The Auspices of the Egyptian Ministry of Industry and Technology Development.**

1/ 2001- 1/2004 **General Secretary and Editor in Chief for the 8th International Conference on Mechanical Design and Production MDP-8. Cairo University, Egypt.**

International Conference organized by the Dept. of Mechanical Design and Production, Cairo University, 4-6,January 2004. 160 research papers were presented by delegates from 37 countries.

6/1991-6/1994 **Research and part-time jobs conducted**

Participated in different design projects (designing pipe line and pumping system for Fountains). Design and producing a prototype of a mechanical land cultivator. Process planning study for a food company. Research project on modal analysis in state space presentation.

Consultations:

1. Consultation project for a petroleum company in Egypt "GUPCO" for failure of pipes. A detailed study for sulfides stress corrosion cracking for different pipe lines was conducted (microstructure, mechanical properties).
2. Consultation for the research center at Cairo University for failure analysis of chimney Ducts (high temperature tensile testing to simulate the real chimney environment, detailed microstructure study).
3. Working among a team at the mechanical testing lab at Cairo university as a consultant for the Egyptian water and sewage organization, testing water pipes for mechanical properties and microstructure evaluation (mainly different type of cast iron pipes)
4. A member of a committee that was held under the auspices of the Egyptian ministry of industry and technology development. Some of the shores included revising data base for all imported vehicle spare parts and reverse engineer and design some spare parts.

Teaching Experience:

- Taught machine design courses, design concepts and procedures. (2nd and 3rd year in the Department of Mechanical Engineering, Cairo University)
- Taught material science courses. (Sophomores in the Department of Materials Engineering, Drexel University, 1st and 2nd Year in the department of Mech. Eng. Cairo University)
- Taught Material Technology and Engineering Materials course for post graduate diploma, Material Selection in Design and Crystal Plasticity courses for master degree**,** in the Department of Mechanical Engineering, Cairo university.
- Other courses that participated in teaching: Statics, Strength of Materials, Experimental Laboratory recitations.
- In the mechanical engineering department at King Saud University, I was involved in teaching materials science and mechanics of materials courses. Both courses were fully prepared in power point presentation files and uploaded on the web page for the students to download. Data show is used in lecturing which gave a way for running course related movies to stress out the application side of the scientific material given in class.

Thesis supervised:

Master thesis:
" Strain hardening rate behavior and microstructure evolution of polycrystalline fcc metals and alloys" **A. A. Shehata. Cairo University, 2003.**

"Effect of Equal Channel Angular Pressing, ECAP, on the Microstructure and Mechanical Properties of 1050 Aluminum Alloy**" M. M. Salem, Cairo University, 2007.**

"Effect of Stacking fault energy in Cu-Al Alloys on mechanical behavior and texture evolution" **A. A. Al Mutlaq, King Saud University, 2012.**

Ph.D. Thesis:
" Effect of SiC particles in reinforcing 2124 aluminum alloy produced by powder metallurgy techniques on the cyclic deformation behavior" **M. Emara, Cairo University, 2006.**

Publications (Research journal and conference papers):

1. Baig, M., **El-Danaf, E.**, Mohammad, J.A. Thermo-mechanical responses of an aluminum alloy processed by equal channel angular pressing, Materials and Design, Article in Press**, 2014.**
2. Al Jabbari, Y.S., Koutsoukis, T., Barmpagadaki, X., **El-Danaf, E**., Fournelle, R.A., Zinelis, S. . "Effect of Nd:YAG laser parameters on the penetration depth of a representative Ni-Cr dental casting alloy" Lasers in Medical Science, Article in Press**, 2013.**
3. **El-Danaf, E.A.**, Soliman, M.S., Almajid, A.A., Khalil, K.A., "Mechanical characterization of cryomilled Al powder consolidated by high-frequency induction heat sintering "*Advances in Materials Science and Engineering* 2013 , art. no. 397351, **2013**
4. **Ehab A. El-Danaf** and Muneer Baig, "High temperature deformation characteristics of equal channel angular pressed AA6082-T6" *Materials Science and Engineering A* 565 , pp. 301-307 , **2013.**
5. Sherif, E.-S.M., Soliman, M.S., **El-Danaf, E.A.**, Almajid, A.A. , "Effect of equal-channel angular pressing passes on the corrosion behavior of 1050 aluminum alloy in natural seawater" International Journal of Electrochemical Science Volume 8, Issue 1, , Pages 1103-1116, January **2013.**

6. AAbdulsatter, MA, **El-Danaf EA**, Waluyo NS, Wagner L, Sever plastic deformation of commercuial purity aluminum by rotary swaging: Microstructure evolution and mechanical properties. Mat Sci Eng A, 565, 351-358, **2013**.
7. **Ehab A. El-Danaf,** Magdy El-Rayes, "Microstructure and Mechanical Properties of Friction Stir Welded 6082 AA in As Welded and Post Weld Heat Treated Conditions" ***Journal*** Materials and Design,46, 561-572 **(2013)**.
8. Y.S. Al Jabbari, X. Barbagadaki, K.A. Al Wazzan, **E.A. El-Danaf,** G. Eliades , S. Zinelis, "Shear bond strength and characterization of interfaces between electroformed gold substrates and porcelain" ***Journal*** Materials Chemistry and Physics , 137 (3), 825-833 **(2013).**
9. **Ehab El-Danaf,** Baig M. Alshalfan W AlMojil, Alshahrani S., Mechanical, microstructure and texture characterization of API X65 steel, Materials & Design 47, 529-538, **2013.**
10. Khalil Abdelrazek Khalil, Abdulhakim A. Almajid, **Ehab A. El-Danaf,** Magdy M. El Rayes, El-Sayed M. Sherif, " Direct Fabrication of Yttrium Aluminium Garnet Nanofibers by Electrospinning" *Int. J. Electrochem. Sci.*, 7 **(2012)** 12218 - 12226
11. Mahmoud S. Soliman, **Ehab A. El-Danaf,** Abdulhakim Almajid, "Effect of Equal Channel Angular Pressing Process on Properties of 1050 Al alloy" Materials & Manufacturing Processes, 27 (7), 1-5, **2012**.
12. El-Sayed M. Sherif, **Ehab A. El-Danaf**, Mahmoud S. Soliman, Abdulhakim A. Almajid, "Corrosion Passivation in Natural Seawater of Aluminum Alloy 1050 Processed by Equal-Channel-Angular-Press" *Int. J. Electrochem. Sci.*, 7 **(2012)** 2846 – 2859.
13. Magdy ElRayes, **Ehab El-Danaf,** "The influence of multi-pass friction stir processing on the microstructural and mechanical properties of Aluminum Alloy 6082" ***Journal*** of Materials Processing Technology, 212 **(2012)** 1157–1168.
14. Mahmoud S Soliman, **Ehab A El-Danaf** Abdulhakim A Almajid, "Enhancement of static and fatigue strength of 1050 Al" Accepted . ***Journal*** Materials Science and Engineering A, *Volume 532, 15 January **2012**, Pages 120-129.*
15. Mahmoud T A Abdu; Mahmoud S Soliman,.; **Ehab A El-Danaf**,; Abudlhakim Almajid, ; Farghalli A. Mohamed, Creep Characteristics and Microstructure in Nano-Particle Strengthened AA6082. Accepted . ***Journal*** Materials Science and Engineering A, *Volume 531, 1 January **2012,** Pages 35-44.*
16. **Ehab A. El-Danaf**, Khalil Abdelrazek Khalil, Mahmoud S. Soliman, "Effect of equal-channel angular pressing on superplastic behavior of eutectic Pb–Sn alloy" ***Journal*** Materials and Design 34 **(2012)** 235–241.
17. **Ehab A. El-Danaf,** "Mechanical properties, microstructure and micro-texture evolutionfor 1050AA deformed by equal channel angular pressing (ECAP)and post ECAP plane strain compression using two loading schemes" ***Journal*** *Materials & Design*, 34 **(2012)** 793–807.
18. **Ehab El-Danaf** , Ayman Al-Mutlaq and Mahmoud Soliman, "Role of Stacking Fault Energy on the Deformation Characteristics of Copper Alloys Processed By Plane Strain Compression. ***Journal*** Materials Science and Engineering A, 528 (2011) 7579– 7588.
19. **Ehab El-Danaf**, Magdy El-Rayes and Mahmoud Soilman, "Low Temperature Enhanced Ductility of Friction Stir Processed 5083 Aluminum Alloy" ***Journal*** Bulletin of Materials Science, Vol 34, No 7, December 2011, 1-7.
20. **Ehab El-Danaf, "**Mechanical properties, microstructure and texture of single pass equal channel angular pressed 1050, 5083, 6082 and 7010 aluminum alloys with different dies" ***Journal*** *Materials & Design, Volume 32, Issue 7, **2011,** 3838-3853.*
21. **Ehab El-Danaf**, Mahmoud soliman, Abdulhakim Almajd, " EBSD Investigation of the Microstructure and Microtexture Evolution of 1050 Aluminum Cross Deformed From ECAP to Plane Strain Compression" ***Journal*** of materials science, *46, **2011**, 3291-3308.*
22. Magdy M El-Rayes, **Ehab A. El-Danaf**, Mahmoud S. Soliman, "High-temperature deformation and enhanced ductility of friction stir processed-7010 Aluminum Alloy" ***Journal*** *Materials & Design, Volume 32, Issue 4, April 2011, Pages 1916-1922.*

23. **E.A. El-Danaf**, M.S. Soliman and A.A. Almajid, "Texture Manipulation in Commercial Purity Aluminum by Deformation Path Change From ECAP to Plane Strain Compression" ***Journal*** *Materials Science Forum Vols. 667-669 (2011) pp 445-450*
24. M.S. Soliman, **E.A. El-Danaf** and A.A. Almajid, "Static and Cyclic Deformation of Commercially Pure Al Processed by Equal-Channel Angular Pressing Using Two Routes" ***Journal*** *Materials Science Forum Vols. 667-669 (2011) pp 833-838*
25. M.S. Soliman, **E.A. El-Danaf**, A.A. Almajid **"**Deformation characteristics of A 6082-Al alloy at high temperatures" TMS Annual Meeting 2010, pp. 77-82.
26. **Ehab A. El-Danaf**, Ayman Al-Mutlak, Mahmoud S. Soliman "Mechanical behavior and texture evolution of Cu-Al alloys processed by plane strain compression" International conference on Applied Mechanics, materials and Manufacturing, ICAMMM 2010, December 13-15, 2010
27. **Ehab A. El-Danaf**, Mahmoud S. Soliman, Khalil A. Abdelrazik "Superplastic behavior of eutectic Pb-Sn alloy processed by equal channel angular pressing" International conference on Applied Mechanics, materials and Manufacturing, ICAMMM 2010, December 13-15, 2010
28. M.M. El Rayes, **E.A. El Danaf**, M.S. Soliman "Achieving higher ductility of 7010 aluminum alloy via friction stir processing" International conference on Applied Mechanics, materials and Manufacturing, ICAMMM 2010, December 13-15, 2010
29. M.S. Soliman, **E.A. El-Danaf**, A.A. Almajid "Mechanical deformation and microstructure evolution of commercially pure al processed by equal-channel angular pressing using two routes" International conference on Applied Mechanics, materials and Manufacturing, ICAMMM 2010, December 13-15, 2010
30. **E.A. El-Danaf**, M.S. Soliman, A.A. Almajid, " Effect of deformation path change on plastic response and texture evolution for 1050 Al pre-deformed by ECAP and subsequently plane strain comopressed" ***Journal*** *Materials Science and Engineering: A, 527, 2010, PP.2547-2558*
31. **Ehab El-Danaf**, Magdy El-Rayes and Mahmoud Soilman "Friction stir processing: An effective technique to refine grain structure and enhance ductility", ***Journal*** of materials & design. Vol. 31, Issue 3, March 2010, Pages 1231-1236.
32. **Ehab A. El-Danaf**, Tarek El-Hossainy "Different Stress States Deformation Of AA6082 Subjected To Different Artificially Aged Conditions" ***Journal*** Advanced Materials Research Vols 83-86 (2010), pp 421-428.
33. M.S. Soliman, **E.A. El-Danaf**, A.A. Almajid "Effect of Heat Treatment Conditions on the High Temperature Deformation of 6082 Al Alloy", ***Journal*** Advanced Materials Research Vols 83-86 (2010), pp 407-414.
34. Magdy El-Rayes, **Ehab A. El-Danaf**, Mahmoud Soliman "Microstructural And Mechanical Charaterization Of Friction Stir Welded- 1050 Aluminum Alloy", ***Journal*** Advanced Materials Research Vols 83-86 (2010), pp 1173-1181.
35. Abdulhakim Almajid, **Ehab A. El-Danaf**, Mahmoud Soliman " Effect of Combining plane strain compression with equal channel angular pressing on mechanical properties and texture development in an Al alloy", ***Journal*** of materials science, 2009, 44: 5654-5661.
36. **Ehab A. El-Danaf**, Mahmoud Soliman, Abdulhakim Almajid "Effect of Solution Heat Treatment on the Hot Workability of Al-Mg-Si Alloy", ***Journal*** *of Materials and Manufacturing Processes*, 24: 637-644, 2009.
37. **E.A. El-Danaf**, A.A. Almajid, M.S. Soliman "High-temperature deformation and ductility of modified 5083 Al alloy", ***Journal*** *of Materials Engineering and performance*, Vol 17, 4, 572-579, 2008.
38. **Ehab A. El-Danaf** "Texture evolution and fraction of favorably oriented fibers in commercially purealuminum processed to 16 ECAP passes", ***Journal*** *Materials Science and Engineering: A* 492, 141-152, 2008.
39. **Ehab A. El-Danaf** "Texture during ECAP and post ECAP simple compression of commercial purity 1050 aluminum alloy", *MN2008, ASME 2nd International Conference and Exhibition on*

Multifunctional Nanocomposites and Nanomaterials January 11-13, 2008, Sharm El Sheikh, Egypt

40. **E. El-Danaf** "Mechanical properties and microstructure evolution of 1050 aluminum severely deformed by ECAP to 16 passes", ***Journal*** *Materials Science and Engineering: A* 487, 2008, 189-200.
41. **E.A. El-Danaf**, A.A. Almajid, M.S. Soliman " Hot deformation of AA 6082-T4 Aluminum alloy", ***Journal*** *of Materials Science,* 43 : 6324-6330, 2008.
42. Mohamed, M.S., **El-Danaf, E.A.,** El Enany, A.A., and Radwan "The Mechanical Properties and Microstructure Of Aluminum Alloy 1050 Processed By ECAP In Correlation To The Imposed Strain Tensor", A.A., ***Journal*** *of Engineering and Applied Science,* Vol. 55, 125-144, 2008.
43. **E. El-Danaf**, M.Soliman, A. Almajid and M.Elrayes " Enhnacement of Mechancial properties and grain size Refinement of commercial purity aluminum 1050 processed by ECAP" ***Journal*** *Materials Science and Engineering: A*, 458, 2007, 226-234.
44. Ahmed A.S. Mohammed, **E.A.El-Danaf** and A.A.Radwan, "A criterion for shear banding localization in polycrystalline FCC metals and alloys and critical working conditions for different microstructural variables" ***Journal*** *of Materials Processing Technology, Volume 186, Issues 1-3, 7 May 2007, Pages 14-21*
45. Ahmed A.S. Mohammed, **Ehab A. El-Danaf** and Abdel-Khalek A. Radwan "Equivalent twinning criteria for FCC alloys under uniaxial tension at high temperatures", ***Journal*** *Materials Science and Engineering: A, Volume 457, Issues 1-2, 25 May 2007, Pages373-379.*
46. **E. El-Danaf** "Reverse Shear of 70/30 Brass: A study of Bauschinger Effect", ***journal*** *of king saud university, Vol. 19 Eng. Sci (1),* pp. 83-89, 2006.
47. Shehata, A.A., **El-Danaf, E.A**.and Radwan "Effect of Grain Size and Stacking Fault Energy on Deformation Twinning in FCC Alloys Under Plane Strain Compression.", , A.A., ***Journal*** *of Engineering and Applied Science*, Faculty of Engineering, Cairo University, vol. 51, pp 741-756, 2004.
48. "Current Advances in Mechanical Design and Production VIII" ***Editor in Chief***, Conference proceeding on Mechanical Design and Production, Cairo University, January 2004.
49. **E. El-Danaf** "Effect of Grain Size on Strain Hardening and Microstructure Evolution in Plane Strain Compression in 70/30 Brass." ***Journal*** *of Engineering and Applied Science*, Faculty of Engineering, Cairo University, vol. 49, pp 493-512, 2002.
50. **El-Danaf** and A. El-Enany "Strain Hardening Response as an Indicator of Deformation Martensite", E, *Sixth Int. Conference on Production Engineering & Design for Development* (PEDD 6), 2002.
51. **E.El-Danaf**, S.R.Kalidindi, and R.D.Doherty "Influence of deformation path on the strain hardening behavior and microstructural evolution in low SFE FCC metals" *International* ***Journal*** *of Plasticity*, Vol 17, 2001.
52. Abhishek Bhattacharya, **Ehab El-Danaf**, Surya R. Kalidindi and Roger D. Doherty "Evolution Of Grain Scale Microstructure During Large Strain Simple Compression Of Polycrystalline Aluminum With Quasi-Columnar Grains: OIM Measurements And Numerical Simulations.", *International* ***Journal*** *Of Plasticity*, vol. 17, pp 861-883, 2001.
53. Abhishek Bhattacharya, **Ehab El-Danaf**, Surya R. Kalidindi and Roger D. Doherty, "Evolution of Grain-Scale Microstructure during Large Strain Simple Compression of Polycrystalline Aluminium" *Key Engineering Materials, Advances in engineering plasticity*, ISSN 1013-9826, P183.
54. **E El-Danaf**, S.R. Kalidindi, R.D. Doherty and C. Necker "Deformation Texture Transition in Brass: Critical Role of Micro-Scale Shear Bands." ***Acta Metallurgica***, Vol. 48, pp 2665-2673, 2000.
55. **E. El-Danaf**, S.R.Kalidindi and R.D. Doherty "Influence of stacking fault energy and grain size on deformation twinning in low SFE FCC metals" ***Metallurgical and Materials Transaction A.***, Vol 30A, 1999.

56. S. Asgrai, **E. El-Danaf**, E. Shaji, S.R.Kalidindi, and R.D.Doherty "The secondary hardening phenomenon in strain-hardened MP35N alloy", , ***Acta.Materialia***, Vol. 46, 1998.
57. **E. El-Danaf**, S.Kalidindi, R.Doherty "Effect of Stacking Fault Energy on the Strain Hardening in FCC metals", *Proceedings of Plasticity 98: Int. Symp. on Plasticity and its Current Applications*.
58. S.Asgari, **E. El-Danaf**, S.R.Kalidindi, R.D.Doherty. "Strain Hardening Regimes and microstructural evolution during large strain compression of low stacking fault energy FCC alloys that form deformation twins.", ***Metallurgical and Materials Transactions A***, Vol. 28A, 1997.
59. S.R.Kalidindi, A.Abusafieh, **E.El-Danaf** "Acurate characterization of machine compliance for simple compression testing", , ***Journal*** *of Experimental Mechanics,* Vol 37, 1997.
60. S.Kalidindi, **E. El-Dana**f, I.Shaji, R.Doherty "Strength and Toughness Characteristics of MP35N", *Proceedings of Plasticity 97: Int. Symp. on Plasticity and its Current Applications*.
61. **E.El-Danaf**, S.R.Kalidindi, and R.D.Doherty "Microstructure Evolution and Strain Hardening in MP35N", , *Aeromat '97, 8thAdvanced Aerospace Materials & Processes Conference and Exposition,*Williamsburg, VA, USA, 1997.
62. S.Metwalli**, E.El-Danaf** "Computer Aided Design and Optimization of Spur and Helical Gear Sets", *Design and automation ASME conference proceedings,* 1996.
63. S. R. Kalidindi, **E. El-Danaf**, I. Shaji, S. Asgari, and R. D. Doherty, "Strength and Toughness Characteristics of MP35N", Physics and Mechanics of Finite Plastic & Viscoplastic Deformation, Proceedings of Plasticity '97, p.255, Ed. A. Khan, Neat Press, Maryland, 1997.
64. **E. El-Danaf**, I. Shaji, S. Asgari, S. R. Kalidindi, and R. D. Doherty,"Microstructure Evolution and Strain Hardening in MP35N", Aeromat '97, 8thAdvanced Aerospace Materials & Processes Conference and Exposition,Williamsburg, 1997.
65. Shaji, **E. El-Danaf**, S. Asgari, R. D. Doherty, and S. R. Kalidindi, "Deformation and Failure Mechanisms in Materials that Deform by Twinning and Martensitic Transformation", The 126th TMS Annual Meeting & Exhibition,Orlando, 1997.
66. S. R. Kalidindi, S. Asgari, **E. El-Danaf**, and R. D. Doherty, "Deformation and Failure Mechanisms in Materials that Deform by Twinning and MartensiticTransformation", ASME International Mechanical Engineering Congress and Exposition, Atlanta, 1996.
67. S. R. Kalidindi, R. Doherty, S. Asgari, and **E. El-Danaf**, "Strain Hardening Regimes in Low Stacking Fault Energy FCC Metals and Their Relationship to Microstructure Evolution", ASME Mechanics and Materials Conference, Baltimore, June 1996.