I. S. Jawahir
414B, Institute for Sustainable Manufacturing (ISM), and
Department of Mechanical Engineering
University of Kentucky, Lexington, KY 40506-0108.
Phone: 859-323-3239 E-mail: is.jawahir@uky.edu Fax: 859-257-1071 Web: www.ism.uky.edu

EDUCATION

University of New South Wales, Sydney, Australia.	PhD	1986	Manufacturing Engineering
P. F. University, Moscow, U.S.S.R.	MS	1975	Mechanical Engineering

APPOINTMENTS

April 2012 – present:	Director, Institute for Sustainable Manufacturing (ISM)
July 2002 – present:	James F. Hardymon Chair in Manufacturing Systems Department of Mechanical Engineering, University of Kentucky, Lexington, KY.
July 1996 – present:	Professor, Mechanical Engineering, University of Kentucky, Lexington, KY.
July 1990 – June 1996:	Associate Professor (Tenured in July 1993), Mechanical Engineering, University of Kentucky, Lexington, KY.
Sept. 1989 – June 1990:	Manager, Carbide Product Design, Carboloy Inc., Warren, MI.
July 1986 – Sept. 1989:	Lecturer and Senior Lecturer, Dept of Mech. Eng, Univ. of Wollongong, Australia.

SELECTED RECENT PUBLICATIONS (From over 300 papers, including 130 refereed journal papers)

1. Outeiro, J.C., D. Umbrello, R. M'Saoubi, and I. S. Jawahir, "Evaluation of Present Numerical Models for Predicting Metal Cutting Performance and Residual Stresses", *J. Machining Science and Technology,* Vol. 19(2), 2015, pp. 183-216.
2. Pusavec F., A. Deshpande, S. Yang, R.M'Saoubi, J. Kopac O.W. Dillon, Jr. and I.S. Jawahir, "Sustainable Machining of High Temperature Nickel Alloy – Inconel 718: Part 2 – Chip Breakability and Optimization", *J. Cleaner Production,* Vol. 87, 2015, pp. 941-952.
3. Yang, S., D. Umbrello, O. W. Dillon, Jr., D. A. Puleo and I. S. Jawahir, "Cryogenic Cooling Effect on Surface and Subsurface Microstructural Modifications in Burnishing of *Co-Cr-Mo* Biomaterial", *J. Materials Processing Technology,* Vol. 217, 2015, pp. 211-221.
4. Kaynak, Y., S.W. Robertson, H.E. Karaca and I. S. Jawahir, "Progressive Tool-wear in Machining of Room-temperature Austenitic NiTi Alloys: The Influence of Cooling/lubricating, Melting, and Heat Treatment Conditions", *J. Materials Processing Technology,* Vol. 215, 2015, pp. 95-104.
5. Shuaib, M., F. Badurdeen, K.E. Rouch and I.S. Jawahir, "Product Sustainability Index (*ProdSI*) – A Metrics-based Framework to Evaluate Total Life-cycle Sustainability of Manufactured Products", *J. Industrial Ecology,* Vol. 18(4), 2014, pp. 491-507.
6. Kaynak, Y., T. Lu and I. S. Jawahir, "Cryogenic Machining-induced Surface Integrity: A Review and Comparison with Dry, MQL, and Flood-cooled Machining", *J. Machining Science and Technology,* Vol. 18(2), 2014, pp. 149-198.
7. Klocke, F., D. Lung, S. Buchkremer and I.S. Jawahir, "From Orthogonal Cutting Experiments Towards Easy-to-Implement and Accurate Flow Stress Data", J. *Materials and Manufacturing Processes,* Vol. 28, 2013, pp. 1222-1227.
8. Arrazola, P., T. Ozel, D. Umbrello, M. Davies and I.S. Jawahir, "Recent Advances in Modeling of Machining Processes", *Annals of the CIRP,* Vol. 62(2), 2013, pp. 695-718.

9. Haapala, K. F. Zhao, J. Camello, J.W. Sutherland, S.J. Skerlos, D.A. Dornfeld, I.S. Jawahir, A.F. Clarens and J.L. Rickli "A Review of Engineering Research in Sustainable Manufacturing", *ASME J. Manufacturing Science and Engineering*, 2013, Vol. 135(4), Art No. 041013.

10. Kaynak, Y. H, Karaca, R. Noebe and I.S. Jawahir, "Tool-wear Analysis in Cryogenic Machining of *NiTi* Shape Memory Alloys: A Comparison of Tool-wear Performance with Dry, and MQL Machining", *Wear*, Vol. 306, 2013, pp. 51-63.

11. Yang, S., O.W. Dillon, Jr., D.A. Puleo and I.S. Jawahir, "Effect of Cryogenic Burnishing on Surface Integrity Modifications of *Co-Cr-Mo* Biomedical Alloy", *J. Biomedical Materials Research – Part B; Applied Biomaterials*, Vol. 101B(1), 2013, pp. 139-152.

12. Pu, Z., J.C. Outeiro, A.C. Bartista, O.W. Dillon, Jr., D.A. Puleo and I.S. Jawahir, "Enhanced Surface Integrity of *AZ31B Mg* Alloy by Cryogenic Machining towards Improved Functional Performance of Machined Components", *Int. J. Machine Tools and Manufacture*, Vol. 56, 2012, pp. 17-27.

13. Jawahir, I.S., E. Brinksmeier, R.M'Saoubi, D.K. Aspinwall, J.C. Outeiro, D. Meyer, D. Umbrello and A.D. Jayal, "Surface Integrity in Material Removal Processes: Recent Advances", *Annals of the CIRP*, Vol. 60(2), 2011, pp. 603-626.

INTERNATIONAL RESEARCH COLLABORATORS

Prof. D. Umbrello (University of Calabria, Calabria, Italy); Prof. J.C. Outeiro (Portuguese Catholic University, Lisbon, Portugal); Prof. D. Aspinwall and Dr. S.L. Soo (University of Birmingham, Birmingham, United Kingdom); Prof. G. Poulachon (ENSAM, Cluny, France); Dr. R. M'Saoubi (Seco Tools, Sweden); Prof. J. Kopac and Prof. F. Pusavec (University of Ljubljana, Ljubljana, Slovenia); Prof. R. Hamade (American University of Beirut, Beirut, Lebanon); Prof. P. Mathew (University of NSW, Sydney, Australia); Prof. G. Seliger (Technical University of Berlin, Berlin, Germany); and Prof. V. Schulze (Karlstruhe Institute of Technology, Karlstruhe, Germany).

HONORS AND SYNERGISTIC ACTIVITIES

- ***Recipient of 2013 ASME Milton C. Shaw Manufacturing Research Medal, ASME, June 2013.***
- ***Fellow of the three major professional societies: CIRP (1999), ASME (2008), and SME (2010).***
- ***Technical Editor,*** Journal of Machining Science and Technology, Taylor & Francis Publishers, Philadelphia, PA (1998 – to date)
- ***Founding Editor-in-Chief,*** International Journal of Sustainable Manufacturing, Inderscience Publishers, United Kingdom, 2008 – to date).
- ***Founding Chairman,*** ASME Research Committee on "Sustainable Products and Processes" (2005-11).
- Delivered **40+ keynote papers** in international conferences and ***over*** **150 invited presentations** in **32 countries.**
- ***Chairman,*** CIRP International Working Group on "Surface Integrity and Functional Performance of Components", CIRP, Paris, (2008-11).
- ***Founder,*** CIRP International Conference Series – Modeling of Machining Operations, 1998 (This series still continues with the 15th conference held in Karlstruhe, Germany in June 2015, and the 16th conference being planned in Cluny, France in 2017).

GRADUATE STUDENTS (Total: 75 MS and 32 PhD Students)

Current Graduate Students: 9 PhD candidates and 5 MS students
Produced 20 PhD Graduates during the Last 18 Years:
Produced over 50 MS Graduates (Thesis Option) during the last 20 years

POSTDOCTORAL RESEARCHERS SUPERVISED (1990-to date): 23

PhD ADVISOR (1980-86): Late Professor P.L.B. Oxley (Univ. of New South Wales, Sydney, Australia)