

N Venkata Reddy

Professor
Department of Mechanical and Aerospace Engineering
Indian Institute of Technology Hyderabad
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Research Interests: Predictive Tools for Digital Fabrication, Analysis (Numerical as well as Experimental) of Manufacturing processes, Development of Integrated Product and Process Design Systems (IPPDS) for various manufacturing processes including Layered Manufacturing.

EXPERIENCE

July 2012 – Till Date (July 2012 – July 2013 on leave from IIT Kanpur)	Professor	Dept. Mechanical and Aerospace Engg. IIT Hyderabad
Dec 1998 – July 2013	Professor Associate Professor Assistant Professor	Dept. Mechanical Engg, IIT Kanpur
Sep 1997 – Dec 1998	Visiting Faculty	Dept. Mechanical Engg, IIT Bombay
Feb 1997 – Aug 1997	Asst. Manager	TATA STEEL, Jamshedpur

EDUCATION

Ph.D. Mechanical Engineering, *Indian Institute of Technology Kanpur*, 1998

M.Tech. Mechanical Engineering, *Indian Institute of Technology Kanpur*, 1992

B.Tech. Mechanical Engineering, *Nagarjuna University, India*, 1990

PUBLICATIONS

Books/Proceedings/Book Chapters

1. Proceedings of National Symposium on Manufacturing Engineering in Twenty First Century, March 2-3, 2001, IIT Kanpur, Edited by: P. C. Pandey, *N. V. Reddy* and V. Raghuram.
2. Fundamentals of Design and Manufacturing , G. K. Lal, Vijay Gupta and *N. V. Reddy*, Narosa Publishers, New Delhi (2005) (reprint: 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2014)
3. Introduction to Engineering Plasticity, G K Lal, *N V Reddy*, Narosa Publishers, New Delhi. (2009)
4. Modelling Techniques for Metal Forming, G K Lal, P M Dixit, *N V Reddy*, Narosa Publishers, New Delhi (2011).

5. Incremental Sheet Metal Forming, *N V Reddy*, R Lingam, J Cao, Handbook of Manufacturing Engineering and Technology, Springer , 2015.
6. Materials in Metal Forming, S Idapalapati, S Xu, *N V Reddy*, F Pahlevani, N Srikanth, K R Narayanan, M Zarinejad, Handbook of Manufacturing Engineering and Technology, Springer, 2015

Papers in Refereed Journals

1. *Reddy*, N. V., Dixit, P. M., and Lal, G. K., 1995, Die Design for Axisymmetric Extrusion, *Journal of Materials Processing Technology*, V55, 331-339.
2. *Reddy*, N. V., Dixit, P. M., and Lal, G. K., 1996, Central Bursting and Optimal Die Profile for Axisymmetric Extrusion, *ASME Journal of Manufacturing Science and Engineering* (formerly Journal of Engineering for Industry), V118 , 579-584.
3. *Reddy*, N. V., Sethuraman, R., and Lal, G. K., 1996, Upper Bound and Finite Element Analysis of Axisymmetric Hot Extrusion, *Journal of Materials Processing Technology*, V57, 14-22.
4. *Reddy*, N. V., Dixit, P. M., and Lal, G. K., 1996, Analysis of Axisymmetric Tube Extrusion, *International Journal of Machine Tools and Manufacture*, V36, 1253-1267.
5. *Reddy*, N. V., Dixit, P. M., and Lal, G. K., 1997, Die Design for Axisymmetric Hot Extrusion, *International Journal of Machine Tools and Manufacture*, V37, 1635-1650.
6. *Reddy*, N. V., Dixit, P. M., and Lal, G. K., 2000, Ductile Fracture Criteria and Its Prediction in Axisymmetric Drawing, *International Journal of Machine Tools & Manufacture*, V40, 95-111.
7. *Reddy*, N. V., and Suryanarayana, G., 2001, A Set-up Model for Tandem Cold Rolling Mills, *Journal of Materials Processing Technology*, V116, 269-277.
8. Pandey, P. M., *Reddy*, N. V., and Dhande, S. G., 2003, Real Time Adaptive Slicing for Fused Deposition Modelling, *International Journal of Machine Tools and manufacture*, V41, 61-71.
9. Pandey, P. M., *Reddy*, N. V., and Dhande, S. G., 2003, Improvement of Surface Finish by Staircase Machining in Fused Deposition Modelling, *Journal of Materials Processing Technology*, V132, 310-318.
10. Sonis, P., *Reddy*, N. V., and Lal, G. K., 2003, On Multistage Deep Drawing of Axisymmetric Components, *ASME Journal of Manufacturing Science and Engineering*, V125, 352-362.
11. Gupta, S., *Reddy* N. V., and Dixit, P. M., 2003, Ductile Fracture Prediction in Axisymmetric Upsetting using Continuum Damage Mechanics, *Journal of Materials Processing Technology*, V141, 256-265.
12. Pandey, P. M., *Reddy*, N. V., and Dhande, S. G., 2003, Slicing Procedures in Layered Manufacturing: A Review, *Rapid Prototyping Journal.*, V9, 274-288. **67**
13. Trimurthulu, K., Pandey, P. M., and *Reddy*, N. V., 2004, Optimum Part Deposition Orientation in Fused Deposition Modeling, *International Journal of Machine Tools and Manufacture*, V44, 585-594.
14. Pandey, P.M., Trimurthulu, K., and *Reddy*, N. V., 2004, Optimal Part Deposition Orientation in FDM by using a Multi-criteria Genetic Algorithm, *International Journal of Production Research*, V42, 4069-4089.
15. Rajak, A., and *Reddy*, N. V., 2005, Prediction of Internal Defects in Plane Strain Rolling, *Journal of Materials Processing Technology*, V159, 409-417 .

16. Pandey, P. M., Reddy, N. V., Dhande, S. G., 2006, Virtual Hybrid-FDM System to Enhance Surface Finish, *Virtual and Physical Prototyping (An International Journal)*, V1, 101-116.
17. Tuli, M., Reddy, N. V., Saxena, A., 2006, Constrained shape modification of B-spline curves, *Computer Aided Design and Applications (An International Journal of CAD and CAM)*, V3, 437-446.
18. Pandey, P. M., Reddy, N. V., Dhande, S. G., 2007, Part Deposition Orientation Studies in Layered Manufacturing, *Journal of Materials Processing Technology*, V185, 125-131.
19. Deep, K. S., Reddy, N. V., Agrawal, A., Ramkumar, J., 2007, A Mathematical Model for Determination of Limiting Blank Holding Force and Cavity Pressure in Hydromechanical Deep Drawing, *IMEchE Part – B Journal of Manufacture*, V221, 155 – 162.
20. Reddy, B. V., Reddy, N. V., Ghosh, A., 2007, Fused Deposition Modelling using Direct Extrusion, *Virtual and Physical Prototyping (An International Journal)*, V2, 51-60.
21. Agrawal, A., Reddy, N. V., Dixit, P. M., 2007, Determination of Optimum Process Parameters for Wrinkle Free Products in Deep Drawing Process, *Journal of Materials Processing Technology*, V191, 51 – 54.
22. Bansal, S., Malik, P., Reddy, N. V., Saxena, A., 2008, Modular Fixture Planning for Minimum 3D Tolerances using Neutral Part Data Exchange Format, *International Journal of Production Research*, V46, 1455 -1476.
23. Agrawal, A., Reddy, N. V., Dixit, P. M., 2008, Optimal Blank Shape Prediction Considering Sheet Thickness Variation: An Upper Bound Approach, *Journal of Materials Processing Technology*, V196, 249-258.
24. Bansal, S., Nagarajan, S., Reddy, N. V., 2008, An Integrated Fixture Planning System for Minimum Tolerances, *International Journal of Advanced Manufacturing Technology*, V38, 501-513.
25. Chakraborty, P., Reddy, N. V., 2009, Automatic Determination of Parting Directions, Parting Lines and Surfaces for Two Piece Permanent Molds, *Journal of Materials Processing Technology*, V209, 2464-2476.
26. Nagarajan, S., Reddy, N. V., 2010, STEP-based Automatic System for Recognizing Design and Manufacturing Features, *International Journal of Production Research*, V48, 117-144.
27. Bansal, S., Reddy, N. V., 2010, Automatic Setup Planning System using a Neutral Part Data Exchange Format, *International Journal of Computer Aided Engineering and Technology*, V3, 107-125.
28. Bassi, R., Reddy, N. V., Bedi, S., 2010, Automatic Recognition of Features for Side Core Design in Two Piece Permanent Molds, *International Journal of Advanced Manufacturing Technology*, V50, 421-439.
29. Malhotra, R., Reddy, N. V., Cao, J., 2010, Automatic 3D spiral path generation for single point incremental forming, *ASME Journal of Manufacturing Science and Engineering*, V132, 061003:1-10.
30. Rohith, U., Reddy, N. V., Dixit, P. M., 2011, An Analytical Approach for the Prediction of Forming Limit Curves subjected to Combined Strain Paths, *International Journal of Mechanical Sciences*, V53, 365-373.
31. Malhotra, R., Bhattacharya, A., Kumar, A., Reddy, N. V., Cao, J., 2011, A New Methodology for Multi-Pass Single Point Incremental Forming with Mixed Tool Paths, *CIRP Annals – Manufacturing Technology*, V60(1), 323-326.
32. Agrawal, A., Reddy, N.V., Dixit, P.M., 2011, Prediction of Wrinkling and Determination of Minimum Blankholding Pressure in Multi-stage Deep Drawing, *ASME Journal of Manufacturing Science and Engineering*, V133, 061023:1-8.

33. Bhattacharya, A., Maneesh, K., Reddy, N.V., Cao, J., 2011, Formability and Surface Finish Studies on Single Point Incremental Forming, *ASME Journal of Manufacturing Science and Engineering*, V133, 061020:1-8.
34. Malhotra, R., Cao, J., Ren, F., Kiridena, V., Xia, Z. C., and Reddy, N.V., 2011, Improvement of Geometric Accuracy in Incremental Forming by using a Squeezing Toolpath Strategy with Two Forming Tools, *ASME Journal of Manufacturing Science and Engineering*, V133, 061019: 1-10.
35. Surti, A., Reddy, N.V., 2012, A Non-Discretized Approach to Visibility Analysis for Automatic Mould Feature Recognition using STEP Part Model, *Journal of Advanced Manufacturing Systems*, V11, No 1, 1-16
36. Xu, D., Malhotra, R., Reddy, N.V., Chen, J., Cao, J., 2012, Analytical prediction of stepped feature generation in multi-pass single point incremental forming, *Journal of Manufacturing Processes* 14 (4), pp. 487-494.
37. M Beltran, R Malhotra, A. J. Nelson, A Bhattacharya, N. V. Reddy, Jian Cao, 2013, Experimental Study of Failure Modes and Scaling Effects in Micro-Incremental Forming, *ASME Journal of Micro and Nano-Manufacturing* 031005: 1-15.
38. J Asghar, R Lingam, E Shibin and NV Reddy, 2014, Tool path design for enhancement of accuracy in single-point incremental forming, *Proc IMechE Part B: Journal of Engineering Manufacture*, V228(9), 1027-1035.
39. R Lingam, A Bansal, N V Reddy, 2016, Analytical prediction of formed geometry in multi-stage single point incremental forming, *International Journal of Material Forming*, V 9:395–404, DOI 10.1007/s12289-015-1226-y
40. R Lingam, Om Prakash, J Belk, N V Reddy, 2016, Automatic feature recognition and tool path strategies for enhancing accuracy in double sided incremental forming, *International Journal of Advanced Manufacturing Technology*, DOI 10.1007/s00170-016-8880-1
41. R Lingam, A Srivastava, N V Reddy, 2016, Deflection Compensations for Tool Path to Enhance Accuracy during Double Sided Incremental Forming, *ASME Journal of Manufacturing Science and Engineering*, V138(9), 091008; doi: 10.1115/1.4033956

Papers published in Conference Proceedings

1. Reddy, N. V., and Lal, G. K., 2000, Die Design for Defect Prevention and Minimum Power Consumption in Metal Forming Processes, 4th *India-Japan Joint Seminar on Advanced Manufacturing Systems*, Kharagpur.
2. Murthy, K. S., Pandey, P. M., and Reddy, N. V., 2001, Gate Location and part Quality in Injection Molding, Proc. National Symposium on *Manufacturing Engineering in Twenty First Century*, Kanpur, 37-40.
3. Reddy, N. V., and Rajak, A., 2001, Fracture Prediction in Metal Forming Processes, 5th *India-Japan Joint Seminar on Advanced Manufacturing Systems*, Tokyo, September 2001, 60-73. (On Invitation)
4. Sahu, A. K., and Reddy, N. V., 2002, A Knowledge Based Process Planning System for Axisymmetric Deep Drawing, *Symposium on Manufacturing Excellence*, IIT Madras, January 2002, 131-132.
5. Pandey, P. M., Reddy, N. V., and Dhande, S. G., 2002, Surface Roughness Control by Direct Adaptive Slicing in RP Parts, Proceedings of *International Conference on e-Manufacturing*, Bhopal, India, November 17-19, 2002.
6. Vijay Kumar, P. V., and Reddy, N. V., 2002, Product and Process Design System for Deep Drawing of Cylindrical Cups, Proceedings of Sixth India-Japan Seminar on Advanced Manufacturing Systems, Mussoorie, India, December 1 - 6, (2002) 83-90. (On Invitation)

7. Pandey, P. M., Reddy, N. V., and Dhande, S. G., 2003, Surface Roughness Simulation for FDM Processed Parts, Proceedings of 18th International Conference on Computer Aided Production Engineering (CAPE 2003), Edinburgh (UK), March 18 ? 19, 2003, 413-421.
8. Vijay Kumar, P. V., and Reddy, N. V., 2003, Computer Aided Process Design System for Axisymmetric Deep Drawing, Proceedings of 18th International Conference on Computer Aided Production Engineering (CAPE 2003), Edinburgh (UK), March 18 ? 19, 2003, 105-112.
9. Pandey, P.M., Reddy, N.V., and Dhande, S.G., 2005, Part Deposition Orientation Studies in Layered Manufacturing, Proceedings of 3rd *International Conference on Advanced Manufacturing Technology* (ICAMT 2004), Kuala Lumpur, Malaysia, May 2004.
10. P. V. Vijaykumar, Reddy, N. V., 2004, Prediction of limiting drawing ratio in first draw of the flat bottom axi-symmetric components, 7th Indo-Japan Seminar on Advanced Manufacturing Systems, March 15-22, 2003, Tokyo, Japan. (*On Invitation*)
11. Pritam Chakraborty and Reddy, N. V., Determination of Best Pair of Parting Directions for Mould Design, 2nd Asia Youth Forum in Advanced Manufacturing, Tokyo, Japan, February 15-19, 2004. (*On Invitation*)
12. Bhanu Kishore, B., and Reddy, N. V., 2004, Ductile Fracture Prediction in Open Die Forging, Proceedings of 3rd JSTP International Seminar on Precision Forging (3rd JSTP ISPF, Organized by Japan Society for Technology of Plasticity), Nagoya (JAPAN), 6 pages., March 14-19, 2004 (*On Invitation*).
13. Pritam Chakraborty and Reddy, N. V., Automatic Generation of Mold Halves for Rapid Prototyping, Conference on Advances in Materials and Manufacturing Technology, April 1 -2, 2004, Indian Institute of Technology Madras, Chennai.
14. Reddy, N. V., 2005, Build Strategies for Layered Manufacturing, 8th Indo-Japan Seminar on Advanced Manufacturing Systems, February 21-26, 2005, IIT Kanpur, India. (*On Invitation*)
15. Reddy, N. V., Pandey, P. M., 2005, Enhancement of surface finish in Fused Deposition Modelling, VRAP, Portugal, Proceedings is Published by Traylor and Francis.
16. Bansal, S., Malik, P., Reddy, N. V., Saxena, A., 2005, Automated Modular Fixture Planning, CAPE 2005, Australia (*Keynote Paper*)
17. Reddy, N. V, Pandey, P. M., 2006, Layered Manufacturing, Invited Talk, *National Conference on Design for Product Life Cycle(DPLC-2006)*, February 17 - 18, 2006, BITS PILANI.
18. Reddy, B.V., Reddy, N. V, Ghosh, A., An Extruder Deposition System for Layered Manufacturing to Enhance Bond Strength, Proceedings of *First India-Japan Joint Seminar on Micro/Nano Manufacturing Science*, February 19-25, 2006, Tokyo. (*On Invitation*)
19. Manna, I, Tuli, M., Reddy, N.V., Ghosh, A., Joshi, S., 2006, Laser and Plasma Technology in Manufacturing: The Indian Scenario, *Invited Talk - Country Paper* (Presented by Prof. A. Ghosh).
20. Bansal, S., Srivastava, S., Reddy, N. V., Kripashanker, 2006, An Integrated Fixture Planning System for Minimum Tolerances, *Ist International and 22nd AIMTDR Conference*, December 2006, IIT Roorkee.
21. Reddy, N. V., 2007, Automated Modular Fixture Planning - An Integrated Approach, *National Conference on Design, Dynamics and Manufacturing (NCDDM-2007)* (Keynote Paper), March 16-17, 2007, SLIET, Longowal.
22. Reddy, N. V., 2007, Modelling and Simulation of Manufacturing Processes: Some Examples, 23rd National Convention of Mechanical Engineers, Theme: *Emerging Trends in Manufacturing Systems and technologies*, (Invited Paper), September 10-12, 2007, Hyderabad.

23. Malhotra, R., Reddy, N. V., Agrawal, A., 2007, Automatic Contour Path Generation for Incremental Sheet Metal Forming, *International Symposium on Automotive Sheet Metal Forming*, (Invited Paper) December 17-18, 2007, Tata Nagar (Organized by TATA STEEL and IIM Jmshedpur Chapter).
24. Malhotra, R., Reddy, N. V., Cao, J., 2008, A Generic Tool Path Generation Methodology for Incremental Forming, *International Manufacturing Science and Engineering Congress MSEC 2008*, October 7-10, 2008, Evanston, IL, USA.
25. Wang, Y., Huang, Y., Cao, J., Reddy, N. V., 2008, Experimental Study on a New Method of Double Side Incremental Forming, *International Manufacturing Science and Engineering Congress MSEC 2008*, October 7-10, 2008, Evanston, IL, USA.
26. Cao, J., Huang, Y., Reddy, N. V., Malhotra, R., Wang, Y., 2008, Incremental Sheet Metal Forming: Advances and Challenges, *International Conference on Technology of Plasticity (ICTP 2008)*, September 7 – 11, 2008, Gyeongju, Korea.
27. Reddy, NV, Cao, J., Incremental Sheet Metal Forming: A Review, 2008, Proceedings of the Indo-US workshop on Smart Machine Tools, Intelligent Manufacturing Systems at Multiscale Manufacturing, December 2008, PSG college of Technology, Combatore (Invited Paper).
28. Singh, S., Reddy, N.V., 2008, Incremental Sheet forming: A review, 3rd Mechanical National Conference (NCME), Thapar University, Nov 14-15, 2008.
29. Reddy, N.V., 2009, Incremental Forming: Review and Recent Developments, Third Indo-Japan Joint Seminar, Pune, March 2009, Invited Paper.
30. Wang, Y., Wu, W., Huang, Y., Reddy, NV., Cao., J., 2009, Experimental and Numerical Analysis of Double Sided Incremental Forming, *International Manufacturing Science and Engineering Congress MSEC 2009*, October 4-7, 2009, Indiana, USA.
31. Formability and surface finish studies in single point incremental forming, 3rd international and 24th All India MTDR Conference, December 13-15, 2010, Visakhapatnam, 133 – 137, 2010, S Singh, A Bhattacharya, N V Reddy.
32. A non-discretized approach to visibility analysis for automatic mould feature recognition using STEP part model, 3rd international and 24th All India MTDR Conference, December 13-15, 2010, Visakhapatnam, 597 – 602, 2010, A Surti, N V Reddy.
33. Grain orientation during single point incremental forming, The 6th international conference on micro-manufacturing (ICOMM 2011), March 7-10, 2011, Tokyo, 35-39, A Bhattacharya, N V Reddy.
34. Formability and surface finish studies in single point incremental forming, 2011 ASME International Manufacturing Science and Engineering Conference (MSEC 2011), June 13-17, 2011, OSU Corvallis, 2011, A Bhattacharya, S Singh, K Maneesh, N V Reddy, J Cao.
35. Determination of Minimum Blankholding Pressure for Producing Wrinkle Free Products in Multistage Deep Drawing, 2011 ASME International Manufacturing Science and Engineering Conference (MSEC 2011), June 13-17, 2011, OSU Corvallis, , 2011, A Agrawal, N V Reddy, P M Dixit.
37. Rohith, U., Reddy, N.V., Dixit, P. M., 2011, A bilinear strain path approach for the prediction of forming limit curves under complex loading paths, ICTP 2011.
38. Asghar, J., Shibin, E., Bhattacharya, A., Reddy, N.V., 2012, Twist in single point incremental forming, ASME 2012 International Manufacturing Science and Engineering Conference Collocated with the 40th North American Manufacturing Research Conference and in Participation with the Int. Conf., MSEC 2012 , pp. 243-247
39. Xu, D.-K., Malhotra, R., Cao, J., Reddy, N.V., Chen, J., 2012, Analytical prediction of stepped feature generation in multi-pass single point incremental forming, Transactions of the North American Manufacturing Research Institution of SME 40 , pp. 84-93

40. Asghar, J., Reddy, N. V, 2013, Importance of Tool Configuration in Incremental Sheet Metal Forming of Difficult to Form Materials using Electro-Plasticity, Proceedings of the World Congress on Engineering 2013 Vol III, WCE 2013, July 3 - 5, 2013, London, U.K.
41. J Asghar, R Lingam, N. V. Reddy, 2014, Tool Path Influence on Electric Pulse Aided Deformation during Incremental Sheet Metal Forming, Melbourne, January 6-10, NUMISHEET 2014.
42. R Lingam, J Asghar, A Bhattacharya, N V Reddy, 2015, Compensations for Tool Path to Enhance Accuracy during Double Sided Incremental Forming, ASME International Manufacturing Science and Engineering Conference (MSEC 2015).
43. R Lingam, C L Harikrishnan, I V M Kishan, N V Reddy, 2015, Importance of Feature Sequencing in Incremental Forming, ASME International Manufacturing Science and Engineering Conference (MSEC 2015).
44. A Agrawal, N V Reddy, P M Dixit, 2015, Optimal blank shape Prediction Considering Sheet Thickness Variation for Multistage Deep Drawing, ASME International Manufacturing Science and Engineering Conference (MSEC 2015)

THESIS SUPERVISION

Ph.D. Students (Graduated)

1. Pulak M. Pandey, 2003, Surface Finish Enhancement in Fused Deposition Modelling (IIT Kanpur) (with *IIT Delhi*)
2. Shrikant Bansal, 2006, A Neutral Format Part Model Based Integrated Fixture Planning System for Minimum Tolerances (IIT Kanpur)(with *GTZ*)
3. Anupam Agrawal, 2008, Studies on Optimal Blank Shape and Wrinkling in Axy-symmetric Multistage Deep Drawing (IIT Kanpur) (with *IIT Ropar*)
4. Dharmendra, B V, 2008, Electro Discharge Machining Tool Design and Development of Electro-conductive Ceramic Tool Materials (IIT Kanpur)(*Professor, Karnakata*)
5. Bhattacharya, A., 2014, Studies on Incremental Forming to Enhance Accuracy and Geometric Complexity. (IIT Kanpur) (With *IIT Patna*)

SPONSORED PROJECTS

Principal Investigator (Completed/ Ongoing)

1. Computer Modelling and Simulation of Plane Strain Rolling Process for Internal Defect Prediction, Department of Science and Technology, New Delhi, (2000 - 2002), (Young Scientist Project). **Completed**
2. Short-term Course on “Metal Forming - Modeling Techniques”, Sponsored by ISTE, New Delhi, June 10-22, 2000, **Completed**
3. Knowledge Based Process Planning System for Deep Drawing, Department of Science and Technology, New Delhi, (2000 - 2003). **Completed**
4. Hybrid Fused Deposition Modelling RP System for Enhancing Surface Finish, CSIR, New Delhi, (2003 – 2006), **Completed.**
5. A course on “Finite Element Applications in Metal Forming” for TATA STEEL (R&D) engineers (Four weeks course), TATA STEEL, Jamshedpur, **Completed.**
6. Consultancy on CAD/CAM, Indo German Institute of Advanced Technology, Vishakhapatnam, **2006 , Completed.**
7. Drawing of An Ultra Thin Wire: A Numerical and Experimental Study, DST, New Delhi, **2006 – 2008, Completed,** Indo-Japan Project.
8. One of the investigators in “Indo-US center on Advanced and Futuristic Manufacturing”, Indo-USA S&T Forum, DST, NewDelhi, **2006–2008,** (Indian coordinator: Prof Amitabha Ghosh) IIT

- Kanpur and IIT Kharagpur are involved from Indian Side; UIUC, UCI and Northwestern University, Evanston are involved from USA Side. **Completed**
9. Automatic Modular Fixture Planning for Minimum Tolerances, DST, New Delhi, **2006 – 2009. Completed**
 10. Incremental Sheet Metal Forming at Multi-scales, Submitted to DST, New Delhi, **Feb 2008–Jan 2011, Completed**
 11. Strain Path Independent Forming Limit Diagram for sheet metal forming simulation, TATA STEEL, Jamshedpur, **2008-2011. Completed**
 12. One of the investigators in “Indo-US Centre for Research Excellence in Fabrics”, Indo-USA S&T Forum, DST, New Delhi. (Indian Coordinator: Prof. Amitabha Ghosh) **2008 – 2012.** Institutes Form India: IITK, IITKgp, BESU, CMERI; Institutes from US: UIUC, NU Evanston, UCI. **Completed**
 13. Single Point Incremental Forming of Ti Alloys, DRDO, Delhi, **2011-2012, Completed**
 14. Some studies on Incremental Forming, Boeing, **Since 2011 (On going)**
 15. Development of Electric Pulse Aided Forming Processes, UAY Project (Government of India Initiative) (In collaboration with TATA STEEL) (2016- , **Approved**)
 16. Development and Validation of Predictive Models for Forming of Large Components using DSIF and Studies on Difficult to Form Materials, SERB DST (GoI) (2016- , **Approved**)

RECOGNITION

- **Associate Editor**, Journal of Manufacturing Processes (SME Journal, USA), Published by Elsevier (Oct 2008-Sep 2014)
- **Editorial Board Member**, International Journal of Applied Engineering
- **Best Teacher** Citation for Introduction to Manufacturing Processes
- **Best Tutor** Citation for Engineering Graphics
- **Best Teacher** Citation Metal Forming
- **Best Teacher** Citation for Manufacturing Systems Course
- **Best Teacher** Citation for Rapid Manufacturing Course

ADMINISTRATIVE EXPERIENCE

1. **Dean (Research and Development)** @IIT Hyderabad, Since June 2014.
2. Departmental Seminar Coordinator (2000 – 2001) @IITK
3. Coordinator, Introduction to Manufacturing Processes (TA201N ME CORE) laboratory (January 2001- 2012) @IITK
4. Member, Senate Elections Committee (2002-2003) @IITK
5. Member, DPGC, Department of Mechanical Engineering (2001 – 2003, 2004-2005, 2006 – 2008, 2011-2012) @IITK
6. Convener, DPGC, Department of Mechanical Engineering (2003-2004, 2010-2011) @IITK
7. Warden, Hall V, Feb 2004 – Feb 2005. @IITK
8. Coordinator, Departmental D0 and Prototyping Laboratory, September 2007 - 2012. @IITK
9. Member and co-cordinator, VLFM coordination committee@IITK

OTHER RELEVANT INFORMATION

1. **TA201** Mechanical Engineering **Laboratory Development** (Institute Core Laboratory, Actively Involved with the Development of Departmental **Manufacturing Science Laboratory**. @IITK and IITH
2. **Co-convener**, National Symposium on Manufacturing Engineering in Twenty First Century, Sponsored by AICTE, New Delhi and IIT Kanpur, March 2-3, 2001, IIT Kanpur.
3. **Co-coordinator**, Winter Programme on Micro-fabrication, December 17-24, IIT Kanpur
4. **Participated** and **presented** about my research activities in the first and second meetings of *Asia Youth Forum in Advanced Manufacturing*, March 2-8, 2003, February 15-19, 2004 Tokyo, Japan.
5. **Coordinator**, Short-term Course on Metal Forming - Modeling Techniques, Sponsored by ISTE, New Delhi, June 10-22, 2000.
6. A workshop titled "Finite Element Applications in Metal Forming" for TATA STEEL, Jamshedpur R&D personnel. (**Coordinators**: Prof. P M Dixit and Dr N. V. Reddy).
7. **Reviewer**, ASME Journal of Manufacturing Science and Engineering, Journal of Materials Processing Technology, Machining Science and Technology (An International Journal), Indian Journal of Engineering and Materials Sciences, International Journal of machine Tools and Manufacture, International Journal of Production Research, International Journal of Advanced Manufacturing Technology, Computer Aided Design, J of Engineering Manufacture, Materials and Design.
8. **Delivered** lectures/seminars in many summer/winter schools/Programmes as well as in industries/Research laboratories
9. **Organized** a three-day course (jointly with Drs. P M Dixit & N N Kishore) "Introduction to Finite Element Method", for SAMTEL Engineers, at IIT Kanpur, March 2002.
10. **Course in charge**, HAL Manufacturing Technology Course (Four times)
11. **Organized** a one day workshop (jointly with Profs. A. P Sinha and Prashant Kumar) on "Learning by Doing" for IIT Kanpur students at IIT Kanpur. August 2003.