MY CV/ RESUME

BRIAN PRASAD, Ph.D.

EDUCATION:

Illinois Institute of Technology , Chicago, Illinois.
      Ph.D.   Mechanical and Aerospace Engineering,   1977
Stanford University, Palo Alto, California.
      D.Engineer   Mechanical Engineering, Div. Of Applied Mechanics,   1975
Indian Institute of Technology, Kanpur, India
      M.S.   Mechanical Engineering,   1971
Bihar College of Engineering, Patna, India
      BS.ME.   Mechanical Engineering,   1969

EXPERIENCE:

Parker Aerospace, Control Systems Division (CSD), Irvine, California   **2002-2013**
(Annual sales exceeding $13 billion in fiscal year 2012, Parker is the world's leading diversified manufacturer of motion and control technologies for aircraft systems)

Change Management Leader/ Lean Specialist (July 2009-13)
Defined and developed integrated team structure for efficient operations of key strategic business units. Managed development of lean processes, tools, techniques and solutions for minimizing design development time and costs on major product lines. Worked with a multidisciplinary development team of managers and engineers.

- Negotiated contracts with overseas suppliers that saved the engineering department over several millions
- Reduced overhead by 30%, resulting from using new & efficient structures and programs, e.g., IPDs, CE, Lean
- Deployed high-power IPD teams throughout the organization that increased annual revenue multi-folds.
- Turned around troubled high development program cost overruns from a negative -$XM to a positive $XXM – first year. Saved product development costs of production manifolds over 30%
- Applied IPD & CE methodologies to many new product lines, increasing business growth by 20% - first year

Manifold Product line Engineering Design Manager (July 2007-09)
Worked with a team of engineers/designers from Manifold product line business unit for building an automated solution for Rapid Manifold Design (RMD) Engineering System.

- Introduced unique manifold engineering design system architecture with greater modularity & flexibility
- Established a network of integrated engineering design macros that reduced the design turnaround time from weeks to days. Developed a rapid manifold engineering design (RMD) tool/ system that reduced the manifold development time for any new designs from months to weeks
- Designed a user-friendly RMD user's manual, currently used all manifold designers/ engineers
- Completed all required engineering designs of production manifolds ahead of program schedule and budget

Senior Project Engineer/Supervisor (August 2002-07)
Worked with a group of Actuator engineers/designers to design & build a Knowledge Driven Automation (KDA) wizard for the entire suit of hydraulic line of control valve products.

- Developed and implemented knowledge-based strategies for designing products, increasing parts reuse by 30%

- Developed and implemented a new knowledge-based architecture for lean engineering that promoted parts commonality, standard features, & flexibility in capturing knowledge and reusing captured engineering rules
- Classified and transformed key product configurations into families, increasing ease of engineering design modifications and enabling parts' exchange at run-time
- Created design power copies and standardized parts cataloguing system that improved parts reuse by 30%

California Institute of Technology (Caltech), Visiting Faculty, 1200 E. California Blvd. Pasadena.

Jan. 2002-August 2002: Teach (3 to 6 class hours) per week for the academic year, in addition to other scholarly/research activities.

- Worked with Joint Propulsion Lab (JPL) staff in Pasadena and other CALTech division of Science and Engineering faculties.
- Taught undergraduate and graduate courses and laboratories; conduct research, and participate in service activities in division of engineering and Science.
- Provided mentoring opportunities for junior faculty and graduate students, lectures and presentations to faculty and students in the School of Engineering and Computer Science and practicing engineers in the local Orange County area.
- Coordinated program activities including curriculum development, lab work, and classroom instruction with students and guest lecturers.

University of California (UCI) Extension, Director of Engineering, Information Technologies, and Sciences Department, Irvine, CA, USA.

July-Dec. 2001: Curriculum and Course Management in IT, Engineering and Medical Sciences. Design, develop, and acquire new programs and courses primarily designed for engineers and computer science professionals.

- Develop educational programs for professionals in the sciences, and health sciences and safety.
- Develop programs to include courses offered at UCI or clients' sites, customized programs that focus on clients' specific needs, seminars/short courses or through distance education channels.

California State University, Fullerton, Part-time Faculty, Fullerton, CA

September 2000-Current: Teaching responsibilities (3 to 6 class hours) per week for the academic year, in addition to other scholarly/research activities working with Mechanical Engineering Department. faculties.

Spec2Market Solutions, Tustin, CA, USA.

Jan. 2001- Current: **Consultant**. Developed methods and tools to streamline integrated product Development (IPD) Process to clients.

- Sought innovative use of CAD/CAM/ CAE/PDM, Product Life-cycle Management (PLM) tools for Collaborative Product Commerce and knowledge reuse.
- Developed web-based solutions to address customers' problems.
- Consulted clients on Supply-chain integration, Business Plan development, funding, business development, financial management, new product introduction/positioning, and relationship mgt.
- Helped clients on Partnership Development, Strategic Planning, EAI (Enterprise Application Integrations).

Unigraphics Solutions (now Siemens), Manager, Product Business Unit, Cypress, CA, USA

July 1998-Dec' 00: Integrated Product development, Strategic Planning, management & technical leadership. Responsible for division-level design, engineering, product development, and engineering support functions.

- Managed engineering/Mfg. groups, Responsible for multiple aerospace and automotive product lines, allocate manpower among groups
- Provided technical oversight on all projects, including product development, proposals, and sustaining engineering mgt. Tasks.
- Worked with the engineering management and other team leaders to support all of the division's needs.
- Solved production and testing problems and troubleshooting in assembly & test.
- Applied tools like Knowledge-based Engineering, ICAD-UG Bridge Product, Parametric Engineering, Capturing Rules, Knowledge Management, Workflow, Geometric Modeling, and Collaborative Engineering to product developments.
- Managed Application Development, System Integration, and Deployment and Support teams.

Electronic Data Systems, General Motors Account, Concurrent Engineering Services, Delphi Automotive System, Senior Corporate Consultant and CES Technical Director, Troy, MI, USA.

    1993- June 98: Automated Concurrent Engineering (ACE), Management Consulting, ICAD consulting, Business Case Dev., Marketing, Process Development, Expert Life-cycle Methodology, Tools Evaluation, ACE Business Plan Development, Development of ACE/ Knowledge-based Applications for Automotive Component Parts.

    1991- 93:   Technology Support Services. CE Consulting, Math-based Process for Manufacturing (DES), DFM, QFD, Addendum Engineering, Process Reengineering, Formability Advisor, Knowledge-based Engineering. Applications of Concurrent Engineering and fast-to-market strategies to automate the product life cycle functions.

    1989-91: Computer Aided Engineering. Management & Technical leadership responsibility for applications development in Concurrent engineering & AI/Parametric technology areas.

    1988-89: Artificial Intelligence Services. Parametric/automation programming, object oriented applications, expert and rule based systems development.

    1987-88: EDS/Engineering Productivity Tools (EPT). Design/Build C3 (CAD/CAM/ CAE) custom tools/systems development for automating product design and engineering process of automotive components.

    1986-87: EDS/Applications Development Group. Managed a group with responsibility of supporting CAVIP (Components Automation & Vehicle Interface) and other corporate projects.

    1985-86: EDS/Strategic Planning & Technical Development (SPTD). Responsible for identifying, developing and implementing technical solutions for solving design and analysis problems.

Ford Motor Company, Scientific Research Laboratory , Dearborn, MI, USA.

    1982-85: Principal Research Scientist; Vehicle Concepts Laboratory. Developed method-ology/concepts for the design of automobile energy absorbing structures. Formulated techniques of crush energy management. Developed design sensitivity and optimization procedures on EAL (Engineering Analysis Language). CAE/ CAD and expert system applications in engineering. Large computer code development.

Ford Motor Company, Scientific Research Laboratory , Dearborn, MI, USA.

    1980-82: Research Scientist Senior; Material Sciences Laboratory.

    Performed research in structural optimization. Applications of optimization techniques to vehicle design. Developed large finite element packages for automated design of structures. Developed generic modeling techniques of finite element analyses. Designed an expert system for modeling of automobile wheels and car body concepts.

Association of American Railroads, Chicago, Illinois

    1977-80: Senior Research Engineer; Analysis (FEA) of railroad car and wheels. Fatigue life predictions. Dynamic simulation of trailer trucks and railroad track support systems.

Illinois Institute of Technology, Chicago, Illinois.

    1976-79: Teaching & Research; Research Assistant (76-77), Lecturer (78-79). Taught undergraduate courses. Thesis co-advisor for M.S. graduate student.

Failure Analysis Associates, Palo Alto, California.

    1974-75: Engineer Assistant; Structural failures, flaws, fractures predictions and simulations.

Xerox Research Center, Palo Alto, California.

    1974-75: Consultant; Numerical methods and computer programming.

SPECIAL ACHIEVEMENTS AND HONORS:

    Who's who in America (Marquis, Inc.), 2002.
    International Who's Who of Professionals, 1996.
    International Men of Achievement, Int'l Biographical Center, England, 1986, 1996 (17th Ed.).
    International Who's Who, published by Europa Publications Limited, 1988.
    International Directory of Distinguished Leadership, ABI, Fifth Ed., 1994.
    Dictionary of International Biography, Int'l Biographical Center, England, 1986, 23rd Ed. (1996)
    5000 Personalities of the World, ABI, Fourth Edition, 1996.
    Who's who in the World (Marquis, Inc.), 1995.
    Who's who in the Midwest (Marquis, Who's Who Inc.), 24th Edition, 1994-95.
    Who's who in the Midwest America (Marquis, Inc.), 24th Edition, 1994; 25th Ed., 1996.
    Who's who in Science & Engineering (Marquis, Inc.), First Edition, 1992, 3rd Ed. (1995).
    Who's who in Frontier Science & Technology (Marquis, Inc.), First Edition, 1985

Who's who in Technology Today ,4th ed.,(J. Dick Publishing), 1985
Who's who in Aviation & Aerospace (Jane's Publishing),1983
International Directory of Engineering Analysts (IDEA), Southampton, England, 1983
Personalities of America, 4th Edition, American Biographical Institute, 1986
Research Board of Advisors (Honorary), American Biographical Institute, 1988, USA

INVENTIONS/PATENT:

Record of Inventions: Filed GM Saginaw Div, Saginaw, MI, on Critical Design Parameters for Anvil Design, Patent Pending, 1994. (jointly with T. Robertson and R. Duggirala)

AWARDS/RECOGNITION:

Distinguished Engineering Merit Award 2013, **Orange County Engineering Council (OCEC), National Engineers' Week Awards Banquet, February 22, 2013**
B.J. Fries Award of Merit 2012, CATIA Operator Exchange (COE) Forum, April 2012
Certificate of Appreciation Plaque: ASME Plenary Speaker at the 1997 Engineering Information Management Symposium (EIM'97), ASME International, Sept. 14-17, 1997
ASME Manufacturing Engineering Division Award of Appreciation Plaque: ASME keynote presentation at the 1996 ASME Mechanical Engineering Congress and Exposition, ASME International, Nov. 19, 1996
Outstanding Service Plaque: Recognition and Appreciation for Outstanding Service as the Managing Editor for CERA Journal, Pittsburgh, August, 1994
Commemorative Medal of Honor, American Biographical Institute, USA, Oct. 1987.
Plaque & Award: 10th Int'l ISPE/IFAC Conference on CAD/CAM Robotics and Factories of the Future (CARS & FOF '94), Ottawa, August 21-24, 1994.
        Received AIAA Survey Paper Citation Plaque & Award, 1982
NASA Award and a Certificate for Creative Development of a Technical Innovation on *PARS : Programs for Analysis and Resizing of Structures, 1981*
First Prize in All India Design Competition, Institutions of Engineers, Mysore, India., 1968
Nomination: Kenneth Andrew Roe Award, American Association of Engineering Societies, Nov. 1990

PROFESSIONAL SOCIETIES:
Life Fellow: International Society for Productivity Enhancement (ISPE)
Life Fellow: The American Biographical Institute Research Association,
Associate Fellow: American Institute of Aeronautics and Astronautics AIAA
Director: Int'l Institute of Systems Automation, ISPE
Director: Int'l Institute of Concurrent Engineering, ISPE
Fellow: American Society of Mechanical Engineering, ASME
Membership: American Society of Civil Engineering, ASCE
                Society of Automotive Engineering, SAE
                American Association of Artificial Intelligence (AAAI)

CURRENT ACTIVITIES:
KBE COE/DPC Chair: CATIA Operators Exchange, Development Product Council, Knowledge-based Engineering Committee Chair, (2005-current)
Vice President: International Society for Productivity Enhancement, ISPE, (1990-), USA.
General Conference Chair: ASME - Engineering Information Management Program (EIMP) Symposium, 1997, Sacramento, CA, Sept. 14-17, 1997.
Panel Member & Key Note Speaker: ASME 1996 International Mechanical Engineering Congress & Exposition, November 1996.
Steering Committee Member: ISPE Fifth Int'l Concurrent Engineering Conference, July 15-17, 1998, Tokyo, Japan.
Steering Committee Chair: ASME - Engineering Information Management Program (EIMP), Computers in Engineering Division.
SAE Committee Chair: SAE, Design for Manufacturability (DFM) Committee, Manufacturing Division, Standards 1997+

Steering Committee Member: SAE Manufacturing Division, Standards Committee, 1996+
Members International Editorial Board: Production Planning and Control Journal, Published by
        Taylor & Francis, (1997+)
    International Journal of Computer Applications in Technology (IJCAT) published by
        Inderscience Publishers. (1998+)
Steering Committee Chairman: 14th ISPE/IFAC Int. Conf. on CAD/CAM, Robotics and Factories
        of the Future (CARs & FOF '98), Baton Rouge, USA, Nov. 1998.
Editorial or Advisory Board: ASCE Journal of Aerospace Engineering, ASCE, New York
        (1988+)
    Computer Modeling and Simulation in Engineering (CMSE), Sage Science Press, USA (1996+),
        Int. Journal of Production Planning. (1998-)
Advisory Board: Int'l J. of Environmentally Conscious Manufacturing, ECM Press, New Mexico,
        (Dr. Mo. Jamshidi, Co-Editor-in-Chief), 1992.
    The Solid Modeling Handbook, McGraw-Hill Publ., Editor Don LaCourse, 1994.
Chairman: SAE - Computer Readers` Committee for SAE Transaction papers & Arch T. Cowell
        Merit Award (1985-).
Program Committee: ASME, Design for Manufacturability (DFM) Committee, Design Division,
        1995+
    International Congress on Environmentally Conscious Manufacturing (ECM'93), Key Bridge
        Marriott, Arlington, Virginia, Aug. 29-Sept. 1, 1993.
    European Robotics and Intelligent Systems Conference, EURISCON '94, Malaga, Spain,
        Torrequebrada Hotel, Aug. 22-25, 1994.

PREVIOUS ACTIVITIES:

Editor-in-Chief: International Journal of Systems Automation: Research & Applications (SARA),
        Ablex Publishing Corp, USA, 1990-1993
President: International Society for Productivity Enhancement, ISPE, (1988-90), USA.
General Conference Chairman: AIAA/ASME/ASCE/AHS/ACS 31st Structures, Structural
        Dynamics and Materials Conference (SDM) - A most prestigious interdisciplinary multi-
        society conference, April 2-4, 1990, Long Beach, CA, USA.
General Conference Chairman : Third ISPE International Conference in CAD/CAM, Robotics
        and Factories of the Future (CARS & FOF'88), Sponsored by GM, EDS, ISPE and 10
        others, Southfield Hilton, MI, USA, August. 14-17, 1988.
Managing Editor: Systems Automation: Research and Applications (ISSN 1055-8462):
        Volume 1 (1991) through Volume 2 (1992): (Quarterly: March, June, September,
        December). Published for 2 years. Publisher: Ablex Publishing Corp., Norwood, New
        Jersey
Managing Editor: Concurrent Engineering Research and Applications (ISSN 1063-293X):
        Volume 3 (1995) through Volume 9 (Current): (Quarterly: March, June, September,
        December). Published from 1995 until Today. Publisher: Technomic Publishing Co., 851
        New Holland Avenue, Box 3535, Lancaster, PA 17604, USA.
Steering Committee Member: ISPE First Int'l Concurrent Engineering Conference, August 29-31,
        1994, Pittsburgh, PA.
    ISPE Second Int'l Concurrent Engineering Conference, August 23-25, 1995, McLean, Virginia.
    ASME Design Technical Conferences -- Annual Engineering Information Management
        Symposium, Irvine, CA, 1994+.
    ISPE Fourth Int'l Concurrent Engineering Conference, August 20-23, 1997, Troy, MI.
Int'l Advisory Committee: The 13th International Conference on Production Research, Jerusalem,
        Israel, August 6-10, 1995.
    International Conference on Agile Manufacturing, Bangalore, February 22-24, 1996.
Keynote Speaker: 6th Int'l CAD/CAM, Robotics & Factories of the Future Conference (CARS &
        FOF'91), Southbank Polytechnic, London, UK, August 19-22, 1991.
Technical Program Chairman: ASME 1994 Design Technical Conferences -- 8th Annual
        Database Symposium, Minneapolis, MN, Sept. 11-14, 1994.
Steering Committee Chairman: 13th ISPE/IFAC Int. Conf. on CAD/CAM, Robotics and Factories
        of the Future (CARs & FOF '97), Colombia, S. America, Aug. 1995.

12th ISPE/IFAC Int. Conf. on CAD/CAM, Robotics and Factories of the Future (CARs & FOF '96), Middlesex University, London, August 1996.

Symposium Organizer: New Product Introduction, ASME Winter Annual Meeting, Production Engineering Division, Chicago, IL, Nov. 13-18, 1994.

Co-chairman: International Program Committee, ISPE/IFAC INCOM '95 Symposium, P.R. China, October 1995.

Panel Member: National Science Foundation, ENG-CISE-IITA94, National Challenge Group Program (NSF 94-61), June 28-29, 1994.

Founding Member: North American Quality Engineering Forum, May 3, 1994, American Supplier Institute, Dearborn, MI.

Program Committee: 25th Int'l Symposium on Automotive Technology & Automation, Florence, Italy 1-5 June 1992 (Dedicated Conf. & Exhibits on Mechatronics.

26th Int'l Symposium on Automotive Technology & Automation, Aachen, Germany,13-17 September 1993.

Steering Committee Chairman: 10th ISPE/IFAC Int. Conference on CAD/CAM, Robotics and Factories of the Future (CARs & FOF '94), Ottawa, Canada, August 1994.

Conference Committee Member: 5th CAD/CAM, Robotics & Factories of the Future Conf. (CARS & FOF'90), Omni Int'l Hotel, Norfolk, Virginia, Dec. 2-5, 1990.

Organizing Committee Chairperson: CAD/CAM, Robotics & Factories of the Future Conferences (CARS & FOF'89), New Delhi, India, Dec. 19-21, 1989.

Chairman: ASCE Aerospace Division, SDM Conference Committee, (1987-)

Executive Chairman: AIAA/Long Range Planning Committee, Structures, Structural Dynamics and Materials Conference (SDM), 1990-.

Co-sponsor: Ninth Int'l Conference on Computer Graphics, CGI'91: Visualization of Physical Phenomena, MIT Lab., June 26-28, 1991. (Barbara Dullea)

7th IFAC/IFIP/IFORS/IMACS/ISPE Symposium on Information Control Problems in Manufacturing Technology (INCOM'92) Toronto, Canada, May 25-28, 1992.

Int'l Conference on Structural Eng. (STRUCENG-89), Institute for Industrial Technology Transfer (IIIT), Los Angeles, 9-11, 1989 (with Dr. A. Niku-Lari)

Delegation: Citizen Ambassador Program in Aerospace Materials to visit Poland, Czechoslovakia and Germany (1991), (invited by John H. Lupert, Director, Science & Technology Projects), Dwight D.Eisenhower Bldg., Spokane, Washington.\

PREVIOUS ACTIVITIES (Continued):

Co-chairman: 28th, AIAA/ASME/ASCE/ASC/AHS Structures, Structural Dynamics and Materials (SDM) Conference Committee, ASCE Engineering Mechanics Division TC committee, Doubletree Hotel, Monterey, CA, April 6-8, 1987.

28th, 29th and 30th AIAA/ASME/ASCE/ASC/AHS Structures, Structural Dynamics and Materials (SDM) Conference Committee (1986-)

Newsletter Editor: Productivity Alert: An ISPE Quarterly Bulletin, (1988-).

Session Chairman: The 1994 ASME Design Technical Conferences -- 8th Database Symposium, Sessions DB-1: Concurrent Engineering Direction and DB-3: September 11-14, 1994, Minneapolis, MN.

First International Conference on Concurrent Engineering: Research & Applications - A Global Perspectives, August 29-31, 1994, The Sheraton Station Square, Pittsburgh, PA.

10th ISPE/IFAC Int. Conference on CAD/CAM, Robotics and Factories of the Future (CARs & FOF '94), Ottawa, Canada, August 1994.

Session Chairman: 2nd Symposium on Parallel Computational Methods For Large-Scale Structural Analysis & Design, NASA Langley Research Center, Hampton, VA, Marriott Waterside Hotel, Norfolk, VA., Feb. 24-25, 1993.

Advisory Board: Member of the 1987-88 SDM Conference Advisory Board, Williamsburg, Virginia, April 18-20, 1988 (chaired by Dr. Keith T, Kedward)

Control Group Member: ASCE Aerospace Division SDM Conference. Committee (1984-)

ASCE Liaison: AIAA's Structures, Structural Dynamics and Materials Conf., 1989-91, (appointed by William J. Caroll, President ASCE, Nov. 3, 1988)

Ambassador Program: Citizen Ambassador Program in People to People, Aerospace Materials to visit Peoples Republic of China (May 29, 1989), invited by Mr. Harry Harcrow, Director, Science & Technology Projects, Washington.

Charter Member: ASME Aerospace Committee on Computer Aided Engineering, (chaired by Dr. Harry G. Schaeffer, Chairman) 1981-83.

Treasurer: and Council Members for AIAA - Michigan Section (1986-87).

Associate Editor: Computers in Engineering, ASME Publication, 1982.

Chairman: AIAA - Michigan Section, Education Program, 1984.

Co-chairman: ASME Ninth Design Automation Conference Committee, 1983.

Member: US-USSR Forum for Cooperative Research & Education (UUFCRE), West Virginia University, Morgantown and Univ. of Michigan, Dearborn.

International Society for Computational Methods in Engineering (ISCME), (Dr. C.A. Brebbia), 1982.

Computer and Automated Systems Association of SME, CASA/SME, (Donald A. Vincent), 1981.

General Secretary: AIAA/ASME/ASCE/AHS SDM Conference Advisory Board (85-90).

Representative: ASCE Engineering Mechanics Div, AIAA SDM Planning Committee, 1986.

Co-organizer: ASME Design Automation Conference (1983);

ASME Second Int'l Computer Engineering Conference, San Diego, USA (1982); Robotics and Factories of the Future, Charlotte, NC, USA (1984);

International Conference on Modern Vehicle Design Analysis, London, UK (1983).

Associate : International Journal of Vehicle Design, England, UK, 1984.

Lecturer: Third International Seminar on Finite Element Systems, Sept. 23-25, 1981 (invited by Dr. C. Brebbia, Southampton University, London)

TeleConference: IX Int'l Congress of Industrial Engineering, (Instituto Colombiano De Estudios Superiores De Incolda (ICESI), (with Rodrigo Varela V.), Columbia.

PREVIOUS ACTIVITIES (continued):

Committee Member: ASCE Committee on Optimization, Structures Division, A subcommittee of Electronic Computation (Dr. William R. Spillers, Chairman)(1983-86);
- SAE Vehicle Structures Mechanics (VSM) Conference, (1988-91).
- SAE Passenger Car Computer Application Committee (1985-91)
- SAE Passenger Car Activity Computers Committee (1985-87).
- AIAA: Design Engineering Technical Comm. (Dr. Bart Geer, Chairman), 1984-86.
- ASME Aerospace Committee on Computer Aided Engineering, (Dr. Larry G. Richards, Chairman), 1983-85.
- ASME Committee on Computer Aided Engineering (81-84);
- AIAA Design Engineering Technical Committee (83-85);
- College CAD/CAM Consortium (82-85)
- International Society for Computational Methods in Engineering (ISCME);
- Computer and Automated Systems Association (CASA) of SME (1981);
- American Academy of Mechanics (AAM), 1981;

Session Chairman : 5th Int'l Conference on CAD/CAM Robotics and Factories of the Future (cars & FOF '90), Omni International Hotel, Norfolk, VA, Dec. 2-5, 1990.
- 7th Int'l Conference on CAD/CAM Robotics and Factories of the Future (CARs & FOF '92), INRIA Lorraine/CESCOM, Metz, France, August 17-19, 1992.
- Symposium on Parallel Methods on Large-Scale Structural Analysis & Physical Applications, NASA Langley Research Center, Hampton, VA, Feb. 5-6, 1991.
- 26th, 27th and 28th AIAA SDM conferences (1985-89) ;
- ASME Second International Computer Engineering Conference (1982);
- Fourth International Symposium on Large Engineering Systems (1982);
- NASA/Air Force Symposium on Sensitivity Analysis in Engineering (1986 and 1988).
- NASA Symposium on Recent Experiences in Multidisciplinary Analysis & Design, April 24-26, 1984, Hampton, Virginia.

Permanent Member: Indo-US Forum for Cooperative Research & Technology Transfer (IFCRTT), December 17-18, 1989, New Delhi, India.

Reviewers: Applied Mechanics Reviews (1978-84);
- ASME J. of Mechanical Design;
- International J. for Numerical Methods in Engineering
- ASME - Design Technical Conferences; Design Theory & Methodology, etc.
- AIAA Journal
- SME Journal of Manufacturing Systems
- ASME Journal Of Applied Mechanics
- ASCE Journal of Aerospace Engineering.
- ASCE Computers and Structures Journal;

INVITATIONS/LECTURES:

Invitations: Int'l Conference on Computational Engineering Science, April 10-14, 1988. (Chaired by Dr. S. N. Atluri)

Int'l Symposium on "The Optimum Shape: Automated Structural Design", Sept. 30- Oct. 1, 1985, General Motors Research lab. (Chairs: Jim Bennett and Mark Botkin)

Taught short courses in Engineering Mgt., CAD/CAM Design, Knowledge-based Engineering, Knowledge Management, e-Manufacturing, finite element analysis, interactive application programming, Parametric design concepts, structural design, optimization and data base management system, Concurrent Engineering, Life-cycle Mgt., Lead-time Reductions.

Presented Papers at many national & international conferences.

Invited Speaker and/ or Lecture: on Numerous occasions to the following Institutions:
- Management Briefing Seminars, Japan Technology Transfer, UOM, MI
- University. of Michigan, Ann Arbor, Michigan
- MIT, Massachusetts
- Oakland University, Rochester, MI, April 26, 1996.
- Drexel University, PA, April 23, 1996
- SUNY at Stony Brook, July 3, 1995
- The Institute for Innovation and Design in Engineering, Texas A&M University, 1991.
- University. of Illinois at Urbana Champaign, Illinois
- University of Illinois, Chicago, ILL.
- Lockheed Palo Alto Research Center, Palo Alto, Ca.
- Illinois Institute of Technology, Chicago
- Indian Institute of Technology, New Delhi, India.
- USSR Academy of Sciences, USSR, Leningrad Institute for Informatics and Automation, (by Dr. V.M. Ponomaryov, Director), Nov. 1990.
- National Council of Industrial & Administrative Engineers, Cali, Colombia
- United States Information Agency (USIA), Washington, D.C.
- Wayne State University, Industrial & Manufacturing Dept., Detroit, MI
- Ford Motor Company, Course on Innovative CE Techniques, Feb. 1997, Dearborn, MI
- NASA Goddard Space Flight Center, CE Fundamentals Course, Nov., 1996, Washington, D.C.

PUBLICATION SUMMARY:

Over 100 Refereed Journal Papers (see List of Journal Publications attached).

Over 10 Contributed Book Articles :in "Advances in Computer Technology- 1980", NASA publication; "Trends in Computerized Structural Analysis and Synthesis"; and for books on "Innovative Numerical Analyses for the Applied Engineering Science" published by University Press of Virginia; and "Track/Train Dynamics and Design" published by Pergamon Press.

Over 45 Reports, NASA and US Government Publications (DOT, etc.) (**Separate list attached**)

Twelve Books (6 Hardcover, 6 Paperback). – (**See the List of Books attached).**

Founding Ex-Editor-in-Chief: International J. of Systems Automation: Research & Applications (SARA), Published by Ablex Publishing Corp., New Jersey, USA.

Founding Managing Editor: Concurrent Engineering: Research & Applications (CERA) -An International Journal, published by Academic Press Limited, London, U.K.('93-'94); Technomic Publishing Corp. ('95-'96) SAGE Publishers (2001-).

Series Editor: Advances in Concurrent Engineering, Technomic Publishing Corp, (CE96, CE97, CE98, CE99, CE2000, CE2001, +)

Numerous Conference Presentations & Invited Sessions Speakers.

Live Media Interview United States Information Agency & National Council of Industrial & Administrative Engineers,

Ninth Annual Convention, Cali, Columbia.
Channel 2 TV Interview, Detroit, August 2, 1988.

ACADEMIC ACHIEVEMENT:

Adjunct Professor, Department of Mechanical & Aerospace Engineering, West Virginia Univ., West Virginia, USA (with Dr. Donald W. Lyons, Chairman), May 1990-todate.

Adjunct Faculty: School of Engineering & Computer Science, Mechanical Engineering Dept., Oakland University, Rochester, MI., 1996-todate.

Adjunct Faculty: School of Industrial and Manufacturing Engineering, Wayne State University, Detroit, MI., 1994-todate.

Moderator: GM Technical Education Program, 1991-todate.

Instructor: Continuing Education, Society of Automotive Engineers (SAE) 1995-todate. University of Michigan, Dearbon Campus, MI.

Tenure Committee: North Carolina State University, Raleigh, NC (with Alan L. Tharp, Professor & Head), Jan. 1993.
New Jersey Institute of Technology, New Jersey, (with Dr. Bernard Koplik, Professor and Chairman), Nov. 1992

External Thesis Examiner, Department of Mechanical Engineering, University of Detroit, (with Dr. Y. Chadda, Chairman) Aug. 1991.

PROPOSAL/SYSTEM EVALUATION (Partial):

- ICAD System Evaluation, July 89.
- Battery Design Automation Project, GM/Delco Remy, Feb. 1989.
- CPC Stacking/Destacking Configuration Advisor II, GM/AES, Sept. 1988.
- Eaton's CIM Study Proposal, May 1988.
- Compact Master Cylinder Design Automation, Delco Moraine Division., Dayton, Ohio. , Oct. 1987.
- Design/Build Automation Platform, C4/GM, Aug. 1987.
- Seat System Design/Build Automation Project, Inland Division, Dayton, Ohio, Oct. 1986.

EDS/GM COURSES TAKEN (Partial List):

- Leadership Philosophy of Dr. W. Edwards Deming" Seminar, March 8-11, 1994, MCD Headquarters, Warren, MI, Quality Consulting & Resource Center, EDS.
- Basic Leadership, September 1985.
- Presentation Techniques, February 20, 1986.
- Basic Scheduling Techniques, April 7, 1986.
- Project Management Workshop, August 29, 1986.
- Corporate Planning System: Introduction to CPS, Sept. 30, 1986.
- VAX/VMS Utilities/Commands, November 16-20, 1987.
- Business Leaders Course, Oct. 19-20, 1987.
- Robert Allen's Leadership Class.
- Study Methodology Seminar, .
- SLC -Quality Management (TM20), Aug. 22-23, 1988
- Managing Systems Projects, July 5-7, 1988.
- Structured Walkthrough, June 27th, 1988.
- SLC - Overview for Managers (TM05), July 5-7, 1988.
- Prolog Programming (KED), Nov., 1988 .

- ❑ SmallTalk Programming (KED), Dec., 1988.
- ❑ Effective Business Writing, Feb. 6-7, 1989
- ❑ Group Dynamics, May 3-4, 1989.
- ❑ C Programming, June 26-30, 1989.
- ❑ C++ Programming, Self Study Course, May-June 1989.
- ❑ Knowledge Engineering Development (KED) Course (July- Aug. 89).

TECHNICAL SKILLS

- Extensive knowledge about geometric and solid modeling fundamentals and experience in Kernels such as ACIS^{TM} and Parasolid^{TM}
- Development of geometric algorithms for CAD and virtual prototyping applications and performing computation & optimization analysis.
- Familiar with CAD packages such as EMS^{TM}, Solid-Edge^{TM}, UniGraphics^{TM}, ProE^{TM}, Solid-Works^{TM}, Catia^{TM}, IDEAS^{TM} and IronCAD^{TM}.
- Participated in several CAD/CAM workshops and CE Seminars/symposiums. Familiar about the recent developments in CAD, Multimedia and virtual prototyping.
- Programming Skills
- Extensive experience in developing interactive graphics applications using APIs of OpenGL^{TM}, Motif^{TM}, Java3D^{TM} and WorldToolKit^{TM}.
- Extensive experience in object-oriented and procedural programming languages such as C++, C, Java, FORTRAN and Pascal.
- Development of software in Unix and Windows operating systems. Familiar with Silicon Graphics^{TM}, Sun^{TM}, HP^{TM}, IBM^{TM}, Intergraph TDZ^{TM} and DELL^{TM}.
- Experience in web-design using WWW/HTML, VRML and Java-applets.

CONSULTING:

- ❑ **Specialization:** Knowledge-based Engineering, CAD/CAM Integration, Product Life-cycle Management, Collaborative product Commerce, Automated Design and Optimization techniques and applications; Vehicle design, Parametric Programming, CAD/CAE, Constraint-based Programming and Design Automation, Concurrent Engineering, Product Design Automation.
- ❑ NASA Goddard Space Flight Center, Washington D.C.
- ❑ Association of American Railroads, Chicago, Bechtel Corporation,
- ❑ Boeing Corporation, Concurrent Engineering Research Center, Morgantown,
- ❑ Detroit Edison, Eaton Corporation, Engineering Methods Lab.,
- ❑ Ford Motors Company, General Electric, General Motors, GMF Robotics,
- ❑ ICAD Inc., Indian Space & Research Organization (ISRO/VSSC), India,
- ❑ Lockheed Corporation, MacDonnell Douglas Corp,
- ❑ NASA Langley Research Center,
- ❑ U.S. Postal Service.