

# Curriculum Vita for ROLLIN C. DIX, PhD

## PERSONAL DATA:

Home Address: 10154 South Seeley, Chicago, Illinois 60643  
Home Phone (email): (773) 239-3514 (rollin.dix@gmail.com)  
Cell Phone: (630) 842-0773  
Professional Engineer: (Illinois #29829) 1971-present  
Education: Ph.D. - Purdue University, January 1963  
Honors: Fellow, American Society of Mechanical Engineers,  
Listed in Who's Who in America  
PhD Thesis "Heat Transfer to a Laminar Fog Flow"

## PROFESSIONAL EXPERIENCE:

1965 – present Legal Expert Witness (list of cases below, references on request)  
1964 – 2004 Professor, Mechanical and Aerospace Engineering Department,  
Illinois Institute of Technology  
1980 - 1996 Associate Dean for Academic Computing, Illinois Institute of  
Technology  
1978 - 1979 Acting Chairman, Mechanical and Aerospace Engineering  
Department  
Summer, 1970: Fulbright-Hays Lectureship, Institute of Mechanical  
Engineering, University of the Republic, Montevideo, Uruguay  
1962 - 1964 Senior Engineer, Bendix Mishawaka Division  
2014 - 2015 Professor Emeritus, Mechanical and Aerospace Engineering  
Department, Illinois Institute of Technology – teaching CAD

## SELECTED PUBLICATIONS:

"The Isotherm Migration Method in Transient Heat Conduction Analysis," Proceedings of the Fourth International Heat Transfer Conference, Paris, France, 1970 (with J. Cizek)

"Simulation of the Dynamics of Machinery," Journal of Engineering for Industry, Trans ASME, Series B, Vol. 94, No. 2, May 1972 (with T. J. Lehman).

"Thermal Stimulation of the Vestibular System," Advances in Bioengineering, American Society of Mechanical Engineers, New York, 1974, (with Leonard Proctor).

"A Swinging Shock Absorber for Pneumatic System," Proceedings of the National Conference on Fluid Power, Volume 28, IIT Center, Chicago, Illinois, 1974.

"Balancing Using a General Mechanisms Program," Proceedings of the Fourth Applied Mechanisms Conference, Chicago, Illinois, 1975, (with D. Argawalla)

"Stresses in Roller Chain Link Plates," Revue Roumaine des Science Techniques, Series de Mechanique Appliques, Vol. 20, No. 2, 1975 (with N. Antonescu).

"Residual Stress Generation and Relaxation in Butt-Welded Pipes," Journal of Vessel Technology Transactions ASMS Vol. 104, No. 1, February 1982 (with S. Nair)

“Wheel Wear Compensation for Numerical Form Grinding,” ASME Winter Annual Meeting, Miami, Florida, November 1985 (with T. Giridharan and S. Nair).

“Hypertext for Organizing Engineering Design”, CAD/CAM Robotics and Factories of the Future, Vol. 1, pp. 10-15, Springer-Verlag, 1989

“Project HAWK”, Proceedings of the Seventh Annual University Programs in Computer-Aided Engineering, Design, and Manufacturing, UPCAEDM, pp. 106-112, 1989.

“Editing Octree-Based Three Dimensional Objects”, Proceedings of the Eighth Annual University Programs in Computer-aided Engineering, Design and manufacturing, UPCAEDM, pp. 14-18, 1990 (with R. J. Gupta).

“Impulse-Momentum in Spacecraft Landing: Analysis and Experiment”, 7<sup>th</sup> Biennial ASME Conference on Engineering Systems Design and Analysis, June 2004, Manchester, UK (with Chung-Ook Chong).

“Development of a Pedal Powered Wheelchair”, with Rahuljit Pal, David A. Brown and Mohsen Makhous, Transactions of the ASME, Journal of Medical Devices, v. 3, n 2, June 2009.

#### PATENTS:

U.S. Patent 3,811,147, “Mobile Roadway Repair Unit”, issued May 21, 1974

U.S. Patent 4,106,496, “Method and Apparatus for Air-Caloric Testing of the Vestibular System”, issued 1983, with L. Proctor

#### OTHER PAPERS AND REPORTS:

“Rocket Nozzle Design,” and “Solar Energy Desalination Unit Design,” Problems in Computers in Engineering Design Education, the University of Michigan, 1966.

“United Technology Center - Experience with the FW-45 Rocket Nozzle,” - case study written during the 1966 Stanford Case Study Seminar - classified “confidential” by Air Force and never released (with W. Eubank and B. Short)

“MORV - New Expressway Repair Concept,” Rural and Urban Roads, February 1971.

“A Study of MEDUSA as a Weapon Dynamics Computer Simulation Language,” submitted to the U.S. Army Weapons Command, Rock Island Arsenal, January 1973 (with T. Moran and P. Strauss).

“Window Shades and Energy Conservation,” a report to the Window Shade Manufacturing Association, February 1975

“Estimating the Stimulus Produced by a Temperature Difference Across the Semicircular Canal of the Labyrinth,” 30th Annual Conference on Engineering in Medicine and Biology, November 1977.

“Evaluation of Acceptability of Proposed Penetration Assembly Designs for Service Level D Stresses, Inspectability and Weld Residual Stresses,” Final Report for FY 1978 on ANL Contract No. 31-109-38-4261 for the U.S. Nuclear Regulatory Commission, December, 1978 (with Rafael T. Haftka and Sudhakar Nair).

“Dynamic Analysis of Rigid Link Mechanisms,” The Shock and Vibration Digest, Vol. 10, No. 1, January 1978.

“Synthesis of Plane Linkages for a Spatially Variable Temperature Environment,” Fifth World Conference on the Theory of Machines and Mechanisms, Montreal, Canada, July 1979.

“Computer Graphics in Engineering Education” SAE Paper 830503, SAE Congress, March 1983.

“Electronic Spreadsheets in Manufacturing Engineering,” Production Engineering, Vol. 32, No. 4, pp. 78-81 (April, 1985)

#### WORKSHOPS PRESENTED:

“Job Estimating”, SME Seminar on Successful Job Shop Management, 1981.

“Lotus 123 Short Course,” IITRI, June 1990.

“Strategic Alliances in Business”, University for Petroleum, Ploiesti, Romania, 2001

“Computer Aided Engineering”, Academy of Mining and Metallurgy, Krakow, Poland, 5 times, 2000-2008

#### COURSES TAUGHT AT ILLINOIS INSTITUTE OF TECHNOLOGY:

Computer Aided Engineering, Mechanical Engineering Design, Precision Mechanical Design, Vibrations, Statics and Dynamics, Heat Transfer, Thermodynamics, Thesis direction for over 100 MS or MME (professional degree) students and 2 PhD students.

#### EXPERT WITNESS EXPERIENCE (Mechanical Design, p=plaintiff, d= defendant)

Several 2014-2016 cases still pending

Jesus Martin vs Briggs & Stratton, Circuit Court of Cook County No. 2010 L 006338 – personal injury claimed due to defective product – (case dismissed in June 2015) – Pyes & Cherin, Chicago (d)

Rehco, LLC v Spin Master, Ltd – US District Court for Illinois, Northern District, Case 13-CV-02245 – patent infringement – Innovalaw, Chicago (p),

Zurich American Insurance v Ray Sagan and Sons – State of Illinois, County of Cook, 12 L 12680 – equipment mishandling – (case settled in 2013), Christopher Kendall and Associates, Chicago (d)

TC Development and Design, Inc. v Discount Ramps, et al – US District Court, Eastern Division of Wisconsin Case No. 07-C-0861 – patent infringement study with deposition, (case settled in 2012) - Husch Blackwell, Chicago (p)

Kamen v City of Chicago (settled, March 2010) – Circuit Court of Cook County No. 06-L-4179 – Kamen sues Chicago for causing injury through defective maintenance of Madison Avenue bridge – deposition scheduled – SJ Levy - SJ Levy and Associates (p)

SRAM v Formula (settled, March 2010) - Northern District of Illinois No. 07-CV-1565 and 06-CV-1025 – SRAM alleges patent infringement in hydraulic bicycle hand brake design - John Ruskusky - Ungaretti & Harris (d)

GSI v Tyco Electronics (settled March 2010) – Northern District of Illinois No. 08-CV-901 – GSI accuses Tyco of supplying defective RFID chip assembly line – report, deposition – Ken Goodsmith - Goodsmith, Gregg & Unruh (p)

Automotive Technologies, Inc. v BMW et al – ATI alleged patent infringement by BMW et al – report and deposition – Jeff Pine, Baniak & Pine (p)

Lancaster v Chattanooga Group et al – Champaign County No. 20-L-205 – Lancaster accuses Chattanooga of causing injury through defective equipment - David Mueller - Cassidy & Mueller, Peoria, IL (d)

Clipco, LTD v Ignite Design, LLC - patent infringement analysis - Keith Rockey, Wallenstein, Wagner & Rockey

Seath v Bromenn Healthcare et al – Eleventh Illinois Judicial Circuit No. 03-L-194 – Seath accuses Bromenn of supplying defective equipment – experiment, report – David Mueller, Cassidy & Mueller - Peoria, IL (d)

Armament Systems and Procedures v IQ Hong Kong et al – Eastern District of Wisconsin NO. 00-C-1257 – ASP accuses IQ et al of patent infringement – report and deposition – Steve Feldman - Welsh & Katz (p)

Lifetime Products, Inc. v GSC Technologies, Inc. – Puerto Rico District Court No. 3:2004cv01080 - report and deposition rebutting plaintiff's claim of patent infringement – Edward Manzo, Cook Alex, Ltd. (d)

Black & Decker v Coleman – Eastern District of Virginia No. 96-216-A and 96-656-A, 1996 report and deposition supporting Black & Decker's claim of infringement of multiple patents by Coleman, jury awarded B&D \$3.7M – John Jenka - Niro & Scavone. (p)

Stoller v Ford et al, US Patent No. 3,507, 538 – affidavit in support of motion for summary judgment concerning adjustable automobile headrests - John Crossan - Brinks, Hofer et al (d)

Marley v FE Petro – Southern District of Iowa 3-97-CV-70025 – design of gasoline station pump system – case settled by merger of the litigants before depositions – Eric Cohen & Marty LeFevour (p)

Dreisilker Electric Motors v Multifilm Packaging, DuPage County AR 00600 – Defendant did not pay for equipment, report and appearance before arbitration panel, case decided against Multifilm – Donna J. Cunningham (d)

Nagle Industries v Ford Motor Company, Michigan Civil Action No. 95-75840 – Nagle alleged infringement of US Patent 4,406,186 – report - Mike Dinnin – Dinnin & Dunn, Detroit (p)

Rockwell v DEV, 1992 report, deposition and court testimony regarding theft of trade secrets by DEV, DEV found guilty and fined \$3.2M - Steven Carponelli - Carponelli & Krug (d)

Walter Solomon v Overtons, Inc and Cabela – Eastern District of Texas Civil Action No. 2:02-CV-60-TJW – 2003 report rebutting Solomon’s claim of infringement of US Patent No. 6,339,894, Thomas Ross – Marshall, Gerstein & Borun (d)

Scharama v. Robenbostel, 1987 report rebutting plaintiff’s claim that neck injury was caused by design of swimming pool – James Nolan, Clausen Miller et al (d)

Republic Industries v Schlage Lock Company – 1979 report and court testimony rebutting Republic’s claim of infringement of US Patent No. 3,852,845, defendant prevailed – Henry Brinks, Brinks Hofer et al (d)

Affiliated Hospital Supply v Brian Baldwin – US District Court for Northern Illinois - report, deposition and court testimony for AHS on alleged theft of trade secrets by Baldwin, AFS won injunction and prevented shipment of equipment based on the trade secrets to Mexico – Ron Wilder, Hardin, Schiff & Waite (p)

Clamp Manufacturing v ENCO Manufacturing US District Court, Central District of California Case No. 82-4352-CBM – analysis of appearance of a clamp – Kirkland & Ellis (d)

Popeil v Sunbeam, 1967 – Popeil accuses Sunbeam of infringing patent on steam hair curler – report, deposition and court testimony – Dugald MacDougal (p)

Numerous reports evaluating education and/or experience of immigration candidates for Fragomen, Del Rey and Bernsen and Kempster and Lenz-Calvo

Numerous studies of Jeep rollover dynamics with reports and depositions for accident victims – cases settled – SJ Levy in Chicago, Michael Connelly in Detroit (p)

Numerous studies, reports, depositions and some trial testimony relating to varied accident cases with David Mueller, Cassidy & Mueller, Peoria, IL (d)

#### INDUSTRIAL CONSULTING EXPERIENCE:

Bronson and Bratton, Inc., Chicago, IL. – 1985-1995

Bimet Corporation, Morris, IL. - Member of the Board of Directors, 1982 - 1999

Mechanical design consulting with approximately 20 firms since 1965

USI Capital Corporation, President 1997-1999

COMMUNITY SERVICE:

Morgan Park High School Community Council (Treasurer, 1982-4; Chairman, 1985 - 8)

Bethany Union Church, Chicago (Board of Trustees Chairman, 1989-1991)

Habitat for Humanity, Pilsen, Donations Chair (1996 – 1998), Vice President (1998 – 2000), President (2001 - 2006)

International Visitors Center of Chicago (2000- present)

International Press Club of Chicago (2001- present)

Estero Beach and Tennis Club (2007-2010), Secretary, Board of Directors