

Bela L. Musits

Summary

A senior technology management leader with a strong experience base teaching at the graduate and undergraduate level. Experienced at new business creation, technology commercialization & licensing, business turnarounds, raising capital, and strategic business planning. Have developed and taught courses in the fields of entrepreneurship, new company formation, engineering, and business. Also served as mentor for students in the area of venture creation. Founder of two venture backed companies, also held senior management and technical positions at the corporate research labs of IBM and GE, focusing on the development and commercialization of technology. Also managed the successful spin-off of technology from IBM Research, serving as co-founder and president, raising over \$15 million in capital, and positioning the company for a successful IPO.

Academic Positions

Dean – School of Management – Union Graduate College. Degree programs include MBA, MBA in Healthcare Management, MBA-Accounting focus. Joint degree programs with; Albany Law School – JD/MBA, Albany Medical College – MD/MBA, Albany College of Pharmacy – PharmD/MBA. Teaching includes Entrepreneurship and New Venture Creation.

Lecturer – Babson College. Teach MBA level courses in Creativity, Innovation, and Entrepreneurship; Corporate Entrepreneurship; Creative Destruction and Technology. 2009 - 2011

Adjunct Professor of Management – Union Graduate College. Develop and teach MBA level course in entrepreneurship and new venture creation. 2009 – 2011

Adjunct Professor of Management - Rensselaer Polytechnic Institute. Teach graduate & undergraduate courses in entrepreneurship and new venture creation. Also teach corporate entrepreneurship and new business creation modules in EMBA program 1998 – 2009

Adjunct Assistant Professor of Engineering Management - The Hartford Graduate Division of Rensselaer Polytechnic Institute. Developed and taught a graduate level course in Industrial Robotics, 1981 - 1983

Adjunct Professor - Schenectady County Community College. Taught courses in Production and Operations Management as well as Business Organization and Management, 1979-1981

Professional Positions

Venture Partner - High Peaks Venture Partners, Troy, NY, 2011 – Present

Managing Director – 2001 – 2011

One of three founding partners of an early-stage venture capital firm.

- Raised over \$70 million from limited partners for investment in early-stage technology companies.
- Lead the Med-Tech and Tech-Commercialization efforts with-in the partnership.
- Establish relationship with key universities and technology development organizations.
- Provide strategic and operational guidance to portfolio companies.

Director – Incubator Program, Rensselaer Polytechnic Institute, Troy, NY, 1997 -2001

- Provide strategic management guidance for incubator companies.
- Identify university owned technologies and evaluate their commercial potential.
- Provide strategic input to technology commercialization initiatives at University.
- Develop support services for new technology ventures to accelerate their growth.
- Provide expertise in capital acquisition, marketing, finance, and operations for incubator companies.

President and CEO, Serotta L.L.C., South Glens Falls, NY, 1995 - 1997

Turned a \$3 million multi-brand manufacturing company around from losing in excess of \$700 thousand per year for the previous five years to break-even within one year. Company has two premium brands and several OEM accounts with numerous models. Full P&L responsibility. Following the turn-a-round, the company was sold in February 1997

- Developed marketing and sales programs that increased sales by 17% in a flat market.
- Improved manufacturing efficiencies to reduce WIP by 300%.
- Established total quality program that resulted in an 80% reduction in rework.
- Established standards, pricing policies, and credit terms for independent dealer network and international distributors.

President and COO, Integrated Surgical Systems, Inc., Sacramento, CA 1990 - 1995

Responsible for the development and establishment of Robodoc™ as the leading commercial, software based, image guided surgical system in the world. Spun technology out of IBM, founded company to commercialize technology, raised \$18 million in capital from corporate partners and professional investors. Positioned company for a successful IPO.

- Directed company from start-up through international product introduction and sales.
- Defined corporate strategy with Board of Directors, managed operating plan.
- Built Engineering, Marketing, Sales, Regulatory, and Manufacturing organizations.
- Established European-based company to manufacture, market, and distribute products to international markets.
- Negotiated distribution agreements for selected territories in Europe.
- Developed quality programs to exceed FDA requirements.
- Established medical advisory board and clinical trial advisory group.

Senior Manager, IBM, T. J Watson Research Center, Yorktown Heights, NY 1983 - 1990

Senior Manager of a world-class organization involved in the development and application of advanced technology. Focus on inter- and intra-plant simulation, planning and scheduling, process modeling, robotics, machine vision, and control systems.

- Refocused department (five groups totaling 45 employees) from a pure research organization to a customer driven applications business.
- Developed a job-shop scheduling tool that reduced manufacturing cycle time by 30% and improved equipment utilization by 25%.
- Developed a product planning and forecasting system that improved product deliveries to customers and reduced manufacturing inventories.
- Served for two years as Technical Assistant to the IBM Senior Vice-President of Science and Technology.

Director of Engineering, Nova Robotics Inc., Hartford, CT 1981 - 1983

One of four founders of leading software based industrial robotics company. Formulated business plan and raised a total of \$5.5 million to fund the company. Led all engineering and product development activities in company

Project Engineer GE, Corporate Research and Development Center, Schenectady, NY 1976 - 1981

Project engineer responsible for development and application of advanced computer based technologies. Particular focus on flexible manufacturing systems (robotics and machine vision), and improvements in manufacturing processes. Successful in transferring these technologies into use at GE's manufacturing facilities

Education

MBA - 1979, Rensselaer Polytechnic Institute, Troy, NY

MS - Mechanical Engineering, 1976, Rensselaer Polytechnic Institute, Troy, NY

BS - Mechanical Engineering, 1975, Rensselaer Polytechnic Institute, Troy, NY

Professional & Community Activities

Current and Former Community and Professional Board of Directors Positions:

- Board of Directors – MedTech – 2008-2011
- Board of Directors – Center for Economic Growth (CEG), 2003-2009
- Board of Trustees – Adirondack Community College, 2005-2008
- Founding board member, Upstate Venture Association of New York, 2003-2006
- Board of Directors – Albany-Colonie Chamber of Commerce, 2002-2007
- Board of Governors – Glens Falls Hospital, 2000-2006
- Board of Directors – National Ski Patrol, 2005-Present

IBM Management Training – Selected to attend New Managers, Middle Managers, and Advanced Managers schools.

Selected to “Who's Who in Technology”, 1986, 1988, 1991-3

Editorial Positions

1. *International Journal of Technology Transfer and Commercialisation* – Editorial Board Member

Engineering Journal Publications

1. Musits BL, Bargar WL, Carbone EJ. “Image-Driven Robot Assists Surgeons With Total Hip Replacements.” *Industrial ROBOT: An International Journal* , Volume 20, Issue 5, 1994
2. Taylor RH, Mittelstadt BD, Paul HA, Musits BL, Glassman E, Bargar WL. “An Image-Directed Robotic System for Precise Orthopaedic Surgery.” *IEEE Transactions on Robotics and Automation*, Vol. 10, No.3, June 1994
3. Musits BL, Carbone EJ. “Three-Dimensional Imaging and Robotics: A Promising Combination for Surgical Precision.” *IEEE - Virtual Reality Systems*, March, 1994.
4. Mittelstadt BD, Paul HA, Kazanzides P, Zuhars J, Williamson B, Pettitt R, Cain P, Kloth D, Rose L, Musits BL. “Development of a Surgical Robot for Cementless Total Hip Replacement Surgery.” *Robotica – The Journal of the International Federation of Robotics* , 1993.
5. Taylor RH, Musits BL, Paul HA, Cutting CB, Mittelstadt BD, Hanson W, Kazanzides P, Kim YY, Calvin A, Haddad B, Khoramabadi D, Larose D. “Augmentation of Human Precision in Computer-Integrated Surgery.” *Informatique et Technologie en Biologie et Medicine*, 1992.
6. Taylor RH, Musits BL, Paul HA, Mittelstadt BD, Hanson W, Kazanzides P, Zuhars JF, Glassman E, Williamson W, Bargar WL. “An Image-directed Robotic System for Hip Replacement Surgery.” *Journal of the Robotics Society of Japan*, October 1990.

Engineering Symposia Publications

1. Musits BL, Paul HA, Mittelstadt BD, Bargar WL, Taylor Musits BL, Bargar WL, Kazanzides P, Carbone EJ: “Robotics and Medical Imaging Technology: An Integrated System for Cementless Total Hip Replacement Surgery.” *IEEE – Engineering in Medicine and Biology Society*, March, 1995.
2. RH, Kazanzides P, Zuhars JF, Williamson W, Hanson W. “A Surgical Robot for Total Hip Replacement Surgery.” *Proc. IEEE Conference on Robotics and Automation*, Nice, France, May 1992.
3. Musits BL, Paul HA, Bargar WL, Kazanzides P, Zuhars J, Cain PW. “Robotic Execution of a Surgical Plan.” *Proc. IEEE International Conference on Systems, Man and Cybernetics*, 1992.

4. Kazanzides P, Zuhars J, Mittelstadt BD, Musits BL, Williamson B, Cain P, Smith F, Rose L. "Architecture of a Surgical Robot." *Proc. IEEE International Conference on Systems, Man and Cybernetics*, 1992.
5. Taylor RH, Paul HA, Musits BL, Kazanzides P, Mittelstadt BD, Hanson W, Zuhars JF, Williamson W, Glassman E, Bargar WL. "Taming the Bull: Safety in a Precise Surgical Robot." *Proc. Conference on Advanced Robotics*, Pisa, Italy, June 1991.
6. Musits BL, Taylor RH, Paul HA, Mittelstadt BD, Hanson W, Kazanzides P, Zuhars JF, Williamson W, Glassman E, Bargar WL. "An Image-directed Robotic System for Precise Orthopaedic Surgery." *Proc. 12th IEEE Medicine & Biology Conference*, Philadelphia, 1990.
7. Taylor RH, Musits BL, Paul HA, Mittelstadt BD, Glassman E, Bargar WL. "A Robotic System for Cementless Total Hip Replacement Surgery in Dogs." *Proc. Second Workshop on Medical and Healthcare Robotics*, Newcastle-on-Tyne, September, 1989.
8. Taylor RH, Musits BL, Paul HA, Mittelstadt BD, Glassman E, Bargar WL. "Robotic Total Hip Replacement Surgery in Dogs." *Proc. 11th IEEE Engineering in Medicine & Biology Society Conference*, Seattle, 1989
9. Musits BL, Mittelstadt BD, Paul HA, Bargar WL. "Use of Computed Tomography, Modeling and Robotics in Total Hip Replacement Surgery." *Invited Paper, Proc. SPIE Fifth International Meeting on Biostereometrics*, Basel, Switzerland, November 1988.
10. Brennemann AE, Hollis R, Lavin M, Musits BL. "Sensors for Robotic Assembly." *Proc. IEEE International Conference on Robotics and Automation*, April 1988.
11. Musits BL, Brennemann AE, Lavin MA. "Sensors for Electronic Assembly." *IBC Conference on Sensor Technology*, London, England, Jan. 1987.

Medical Journal Publications

1. Paul HA, Bargar WL, Mittelstadt B, Musits B, Taylor RH, Kazanzides P, Zuhars J, Williamson B, Hanson W. "Development of a Surgical Robot for Cementless Total Hip Arthroplasty." *Clinical Orthopaedics and Related Research*, Volume 285, December 1992.
2. Musits BL, Mittelstadt BD, Paul HA, Bargar WL. "Improved Accuracy of Femoral Canal Preparation in Total Hip Replacement Using Advanced CT and Robotic Technology." *Transactions of Orthopaedic Research Society*, 35th Annual Meeting, January 1989
3. Musits BL, Mittelstadt BD, Paul HA, Bargar WL. "Robotic Total Hip Arthroplasty: Accuracy and Feasibility." *Transactions of Orthopaedic Research Society*, 34th Annual Meeting, February 1988

Medical Symposia Publications

1. Musits BL, "Robotic Orthopaedic Surgery: An Update." *Proc. Medicine Meets Virtual Reality III*, January, 1995
2. Musits, BL. "Robotic Orthopaedic Surgery" *Proc. 1994 Clinical Congress, American College of Surgeons*, October, 1994, Chicago, IL.
3. Musits BL, "Surgical Robotics in Orthopaedic Surgery." *Proc. Medicine Meets Virtual Reality II*, February, 1994
4. Paul HA, Mittelstadt BD, Musits BL, Bargar WL. "Improved Femoral Canal Preparation Using Advanced CT Scan and Robotics." *Proc. First International Conference on Custom Prosthesis*, Dusseldorf, Germany, October 1988.

Entrepreneurship Education Publications

1. Musits BL: "Bringing the Classroom into the Real World" Invited Paper, *2nd Annual Conference on Entrepreneurial Education*, York University, Toronto. May, 2001
2. Musits BL: "Education, Research, and Entrepreneurship" Invited Paper, *Meeting the Challenges of the New Economy*, Malaysian Strategic Research Center, Malaysia, April, 2001
3. Musits BL: "Successful Business Incubation" Invited Presentation, *Polytechnic University*, Brooklyn, NY. March 2000

Business Incubation Publications

1. Musits BL: "Making the Grade in University Based Incubation" Invited Paper, *National Governors Conference*, New Orleans, July 2001
2. Musits BL: "Comparison of University Incubation Methodologies" *Proc. National Business Incubation Association Annual Meeting*, San Jose, CA. May, 2001
3. Musits BL: "Incubators: Are We Grown Up Yet?" Invited Paper, *United States Economic Development Association Annual Conference*, Washington, DC, May, 2001
4. Musits BL: "University Based Incubation" *Proc. National Business Incubation Association Annual Meeting*, Cleveland, OH. May 2000
5. Musits BL: "Technology Commercialization: Picking Winners" Invited Presentation, *T.J. Watson Research Center, IBM Research Division*, Yorktown Heights, NY. March, 2000

Non-Journal Publications

1. Musits BL. "When Big Changes Happen to Small Companies," *Inc. Magazine*, August 1994

2. Musits BL, Brennemann AE, Sasson E, Tsai R. "New Assembly Technique for Precise Component Placement." *IBM Technical Disclosure Bulletin*, 1987
3. Musits BL, Batchelder S. "Ganged Micro-Flames for Chip Attachment and Re-Work." *IBM Technical Disclosure Bulletin*, 1985
4. Musits BL, Muir PF. "Process for Using a Local Sensor to Improve the Accuracy of a Manipulator." *IBM Technical Disclosure Bulletin*, 1984
5. Musits BL, Fischer FL, Sharon A. "Control of a Robot Gripper Through Pulsation of a Pneumatic Servo-Valve." *IBM Technical Disclosure Bulletin*, 1984

Patents Issued

1. 4,014,576 Article Carrier, filed June 19, 1975, issued March 29, 1977. This was a result of work I did as a summer employee at IBM. It is a device for transporting silicon wafers.
2. 4,455,044 Tool for picking up and inserting different length bolts, filed May 1981, issued June 1984. Work I did while employed at GE's R&D Center. This is a device used in the automated assembly of electric motors.
3. 4,514,674 Electromagnetic X-Y-Theta positioner, filed December 22, 1983, issued April 30, 1985. Work I did while at IBM Research. Positioning device for a coarse-fine positioning assembly robot.
4. 4,543,032 Robot manipulator with automatically changeable finger tools, filed March 2, 1983, issued September 24, 1985. Work I did at IBM Research in collaboration with IBM Charlotte. Device for quick change robotic grippers.
5. 5,086,401 Image-directed robotic system for precise robotic surgery including redundant consistency checking, filed May 11, 1990, issued February 4, 1992. Work I did at IBM Research. Robotic surgery system using image guidance.
6. 5,299,288 Image-directed robotic system for precise robotic surgery including redundant consistency checking, filed September 18, 1991, issued March 29, 1994. Work I did at IBM Research. Robotic surgery system using image guidance. Derivative of patent 5,086,401
7. 5,408,409 Image-directed robotic system for precise robotic surgery including redundant consistency checking, filed December 20, 1993, issued April 18, 1995. Work I did at IBM Research. Robotic surgery system using image guidance. Derivative of patent 5,086,401