

SHERIF D. EL WAKIL

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PERSONAL DATA	<ul style="list-style-type: none">▪ United States Citizen▪ Married with three children▪ Languages: English, German, and Arabic	
EDUCATION	Birmingham University (1972) <i>Doctor of Philosophy in Mechanical Engineering.</i>	Birmingham, England
	Al-Azhar University (1969) <i>Master of Science in Mechanical Engineering.</i>	Cairo, Egypt
	Cairo University (1965) <i>Bachelor of Science in Mechanical Engineering.</i>	Cairo, Egypt
CURRENT STATUS	University of Massachusetts Lowell (January 2019 - Present) <i>Adjunct Professor of Mechanical Engineering.</i>	Lowell, MA
ACADEMIC EXPERIENCE	University of Massachusetts Dartmouth (1995-2018) <i>Chancellor Professor of Mechanical Engineering.</i>	Dartmouth, MA
	University of Massachusetts Dartmouth (1987-1995) <i>Professor of Mechanical Engineering.</i> Undergraduate courses taught: Design for Manufacturing, Manufacturing Process Lab, Dynamics, Mechanics of Materials, Computer-Aided Manufacturing, Materials Science, Materials Science Lab, and the Capstone Senior Design Project. Also taught the following graduate-level courses: Manufacturing Processes (at the University of Massachusetts Lowell), Plasticity & Metal Forming Theory, Elasticity Theory, and Continuum Mechanics. Also served on the following: Committees at the Departmental Level: <ul style="list-style-type: none">▪ Chairman – Curriculum Committee, Department of Mechanical Engineering▪ Laboratory Committee, Department of Mechanical Engineering▪ Faculty Evaluation Committee, Department of Mechanical Engineering▪ Graduate Program Committee, Department of Mechanical Engineering▪ Faculty Search Committee, Department of Mechanical Engineering And at the College Level: <ul style="list-style-type: none">▪ Chairman - College of Engineering Academic Council▪ College of Engineering Outreach Committee▪ College of Engineering Curriculum Committee▪ Co-Chairman – Engineering/Business Programs Development Committee▪ College of Engineering Strategic-Planning Committee▪ Advanced Technology & Manufacturing Center Strategic-Planning Committee▪ Dean of Engineering Industrial Council And at the University Level: <ul style="list-style-type: none">▪ UMass Dartmouth Affirmative Action Committee▪ UMass Dartmouth Council for Diversity & Pluralism▪ Faculty Senate Library Committee▪ Division of Continuing Education Advisory Board	Dartmouth, MA

- Chairman – Search & Screen Committee for the Dean of the College of Engineering (1993-1994)
- Chairman (appointed by the Chancellor) – Faculty Senate Committee for Evaluating the Provost (1997-1998).

Al-Azhar University (1974-1978)

Assistant/Associate Professor of Mechanical Engineering.

Elasticity and Plasticity, and the Capstone Senior Design Project. Also supervised five Masters theses and acquired \$1,000,000 of government funding to equip and develop the Mechanical Engineering laboratories (team effort).

Birmingham University (1970-1973)

Birmingham, England

Graduate Teaching Assistant of Mechanical Engineering.

Taught Materials-Testing Lab and tutored Mechanics of Materials.

Al-Azhar University (1969-1970)

Cairo, Egypt

Graduate Teaching Assistant of Mechanical Engineering.

Taught Machine Shop Technology, Engineering Design Graphics, and Metallurgy Lab.

**ADMINISTRATIVE
EXPERIENCE**

University of Massachusetts Dartmouth (1999-2000)

Dartmouth, MA

Interim Dean of the College of Engineering.

Provided the highest-level of managerial leadership required to organize and efficiently operate the College of Engineering. Duties and achievements include:

- Evaluating faculty for contract renewal, tenure, and promotion.
- Representing the College of Engineering in the Council of Academic Deans as well as in the UMass-System Engineering Deans meetings.
- Promotion and implementation of affirmative action initiative within the College.
- Balancing the budget and strategically allocating monies in order to meet prioritized objectives agreed upon by the College's Departments.
- Daily problem-solving and tending to specific, specialized faculty needs.
- Overseeing and helping improve various specialized Academic Centers and Programs.
- Recruiting and mentoring a number of newly-hired faculty in various Departments.

University of Massachusetts Dartmouth (1995-1999)

Dartmouth, MA

Chairman of the Department of Mechanical Engineering.

Administered the daily routine of the Department and provided the required faculty leadership and mentoring, thus resulting in the following achievements:

- Directed the efforts of the department to prepare for the visit of the ABET Accreditation Team in October 1998. This included attending the relevant ABET Conferences in Washington D.C. and San Diego and providing detailed guidance and instruction to the Department faculty, technicians, and secretary regarding what should be implemented.
- With the help of the Department faculty, responded to the Self-Study Questionnaire (Volume II) for review of Engineering programs for ABET. The visit was a great success, and the Department received the best Program Deficiency Report (PDR) of all programs in the entire College of Engineering as well as a letter of praise from the visitor.
- Prepared consolidated stages I and II proposal for establishing a Mastes Program in Mechanical Engineering. Defended the proposal at all levels, including the College Curriculum Committee, Campus Curriculum Committee, Provost's and Chancellor's Offices, the President's Office, the Academic Affairs

Committee, a Committee of Off-campus Consultants, the Board of Trustees, and the Board of Higher Education. The program was successfully launched and it is now in running.

- Prepared the Self-Study Report of the Mechanical Engineering Program as a part of the University Program Review. The Department's views were accepted by campus administration.

Administered the phase-out process of the Mechanical Engineering Technology Program and ensured that the program would be accredited until graduation of the last student.

**CONSULTING
WORK**

- Resolute Racing Shells, Bristol, RI
- Composites Development Corporation, Wareham, MA
- Acushnet Rubber Company, New Bedford, MA
- Aerovox Company, New Bedford, MA
- Digital Interface Systems, Inc., MI
- Caterpillar Tractor Company, Peoria, IL
- MASCO Corporation, MI
- Morton Metal Craft Company, IL
- Molten Metal Corporation, Fall River, MA
- Ministry of Electricity and Energy, Cairo, Egypt
- Expert witness in five cases, including two depositions,

**GRANTS
AWARDED**

- Internal Research Grant (2009) \$50,000
- National Science Foundation (2002) \$54,560
- National Science Foundation Equipment Grant (1994)..... \$107,560
- TRP Grant (member of a team) (1993) \$2,850,000
- Society of Manufacturing Engineers Lab-Development Grant (1990)..... \$14,000
- Society of Manufacturing Engineers Lab-Development Grant (1988)..... \$26,000
- Society of Manufacturing Engineers Lab-Development Grant (1986)..... \$8,350

**BOOKS
AUTHORED**

- EL WAKIL, S.D. "Processes and Design for Manufacturing." 3rd edition, CRC Press, 2019
https://www.amazon.com/Processes-Design-Manufacturing-Third-Sherif/dp/1138581089/ref=sr_1_2?keywords=process+and+design+for+manufacturing+3rd+edition&qid=1555786828&s=gateway&sr=8-2
- Machining Technology for Composite Materials. Woodhead publishing company Cambridge, U.K, 2011. Chapter 3, Grinding Processes for Polymer Matrix Composites, by Sherif D. El Wakil.
- EL WAKIL, S.D..." Process and Design for Manufacturing.", in Korean, Thomson, Singapore,2008.
- EL WAKIL, S.D. "Processes and Design for Manufacturing." 2nd edition, 2nd Printing, Waveland Press, 2001.
- EL WAKIL, S.D. "Processes and Design for Manufacturing." 2nd edition, PWS-Kent, 1998.
- EL WAKIL, S.D. "Laboratory Manual for Materials Science and Engineering." PWS-Kent, 1993.
- EL WAKIL, S.D. "Processes and Design for Manufacturing." Prentice Hall, 1989.

**REFEREED
RESEARCH
PAPERS**

- S. D. El Wakil, and Matt Pladsen, "Minimizing the Drilling Damage in Graphite-Epoxy Composites", S. D. El Wakil, and Matt Pladsen " , International Journal of Materials and Metallurgical Engineering, Vol :11, No: 12, 2017.
- S. D. El Wakil, "The Frontiers in Materials Processing, Keynote Speech, 19th International Conference on Materials and Materials Processing, Boston, MA 2017.
- S. D. El Wakil, "Metallurgy of Friction Welding of Porous Stainless Steel-Solid Iron Billets", International Journal of Materials and Metallurgical Engineering, Vol:10, No: 12, 2016.
- El Wakil, S.D., Rice, J.," Computation and Validation of the Stress Distribution around a Circular Hole in a Slab Undergoing Plastic Deformation", International Journal of Mechanical and Mechatronics Engineering, Vol:9, No :9, 2015.
- El Wakil, S.D.," Friction Welding of Sintered-Iron Compacts to Wrought Iron", International Journal of Powder Metallurgy 50/4 Fall 2014, p.55- 59.
- Bender, S., Chaliventra, V.B., Rahbar, N., El Wakil, S.D., "Mechanical Characterization and Modeling of Graded Porous Stainless-Steel Specimens for Possible Bone Implant Applications", International Journal of Engineering Science 53, p. 67-73, 2012.
- Bender, S., El Wakil, S.D., Chaliventra, V.B., "Fabrication and Characterization of Powder Metallurgy Parts Having Porosity Gradient", Powder Metallurgy, 54(5), p 599-603, 2011.
- Bender, S., El Wakil, S.D., Chaliventra, V.B., Rahbar, N., Bhowmick S., "Fabrication and Characterization of Novel Graded Implant Material", Proceedings of SEM Annual Conference on Experimental and Applied Mechanics, Indianapolis, June 7-10, 2010.
- El Wakil, S.D., Srinagesh K., "Effect of the Physical and Mechanical properties of Composites on Their Grinding Characteristics", High Performance Structures and Materials, Vol. IV, p.149-155, 2008.
- El Wakil, S.D., Azzab, N., "Effect of Process Parameters on The Grinding of Polymeric Composites " , 13th European Conference on Composite Materials, June 2008, Stockholm, Sweden, (www.swereasicomp.se).
- El Wakil, S.D., Fares, G. "The Grinding of Epoxy-Graphite Composites." *the 9th International AVK Conference*, Essen, Germany, p.A10,1-6, September 2006.
- Laoulache, R.N., El Wakil, S.D. "The Grinding of FRP Composites." *Proceedings of the 6th MDCP International Conference*, Cairo, Egypt, vol. I, p. 134-142, February 2002.
- El Wakil, S.D. "Permanent Joining of Ceramic Parts." *International Conference of Non-metallic Materials*, Zenica, Bosnia, April 2000.
- El Wakil, S.D. "Extrusion of P/M Metallic Composites in their Semi-Solid State." *International Journal of Powder Metallurgy*, p 175-182, April 1992.
- El Wakil, S.D. "An Upper-Bound Analysis for the Extrusion of Sintered Billets." *Advanced Technology of Plasticity*, Vol. II, p.927-932, 1990.
- El Wakil, S.D. "A Modified Slip-Line Field Theory for Sintered Porous Metals." *Advanced Technology of Plasticity*, Vol. II, p.977-983, 1987.
- El Wakil, S.D. "Analytical Predictions of the Deformation and Densification Behavior of Sintered Porous Materials." *Proceedings of the 25th International Machine Tool Design and Research Conference*, Birmingham, p.443-447, 1985.
- El Wakil, S.D. "Determination of the Mean Coefficient of Friction in Forward Extrusion." *Western Michigan University Conference Proceedings*, p.200, October 1984.
- El Wakil, S.D. "A Model Study for Metal Forming in the Mushy State." *Advanced Technology of Plasticity*, Vol. I, p.45, 1984.

- E Wakil, S.D. "On the Work-Hardening of Sintered Porous Materials." *The XII NAMRC*, Houghton, Michigan, p.86-89, May 1984.
- El Wakil, S.D., T. BARTON, "The Production of Foamed Metals by Powder Metallurgy." *Proceedings of the PEDAC International Conference*, Alexandria, Egypt, p. 1, December 1983.
- El Wakil, S.D. "A Yield Criterion and Its Associated Flow Rule for Sintered Porous Materials." *XI NAMRC*, Madison, Wisconsin, p.166-171, May 1983.
- El Wakil, S.D., H. KHALIFA, "The Cold Formability of Billets Prepared by Loose Sintering." *International Journal of Powder Metallurgy and Powder Technology*, January 1983, p. 21.
- El Wakil, S.D. "The Production of High-Quality Billets by Cropping." *X NAMRC*, McMaster University, May 1982, p. 186.
- El Wakil, S.D. et. al. "The Mechanics of the Square Box Drawing Operation of Aluminum Blanks." *Society of Manufacturing Engineering Conference*, Cleveland, Ohio, April 1980.
- El Wakil, S.D. "A Plane-Strain Analogue for the Extrusion of Sintered Billets." *Proceedings of the 20th International Machine Tool Design and Research Conference*, Birmingham, England, 1979, p. 229.
- El Wakil, S.D., El Sabbagh. "Properties of Extruded Composite Al-Cu Mixtures." *Proceedings of the 18th International Machine Tool Design and Research Conference*, London, England, 1977, p. 69.
- El Wakil, S.D. "Deformation in Bar Cropping," *Mechanical Working Technology*, Vol. I, No. 1, July 1977, p. 85.
- Davies, R, and El Wakil, S.D. "A Comparison of Slow Speed, High Speed and Multi-Blow Compaction of Ferrous Powders." *Proceedings of the 17th International Machine Tool Design and Research Conference*, Birmingham, England, 1976, p. 483.
- Abd El Latif, El Wakil, S.D. "The Effect of Molybdenum on the Mechanical Properties of Sintered and Heat-Treated Steel Compacts." *Powder Metallurgy International*, Vol. 8, No. 2, May 1976, p. 88.
- El Wakil, S.D. and, R. Davies, "Lubrication Effects in the Compaction of Sponge-Iron Powder at Low and High Speeds." *Powder Metallurgy*, spring 1973, No. 31, Vol. 16, p. 72.
- El Wakil, S.D. and, R. Davies, "Speed Effects in the Compaction of Copper Powders." *International Conference on the Use of High Energy Rate Methods for Forming, Welding, and Compaction*, Leeds, England, 1973, p. 161.
- El Wakil, S.D. and , R. Davies, "High Speed Compaction of Metal Powders." *Proceedings of the 13th International Machine Tool Design and Research Conference*, Birmingham, England, 1972, p. 435.

PRESENTATIONS

- El Wakil, S.D. "Extrusion of Porous Metals." *WPI Seminars*, 1999.
- El Wakil, S.D. "Plastic Behavior of Porous Metals." *URI Seminars*, 1998.
- El Wakil, S.D. "The Semi-Sold Forming of Alloys." *Northeastern University Seminars*, 1997.
- El Wakil, S.D. "Semi-Sold Forming of Metallic Composites." *Wright-Patterson Air Force Base Materials Laboratory*, 1990.
- Over one-hundred other presentations at various Universities, Colleges, and Institutions.

AWARDS

- SME President's Award for Professional Excellence, 1986 and 2006.
- Outstanding Recognition Award- Division of Continuing Education, UMass Dartmouth, 1995
- Life membership of SME In 2014.

**PROFESSIONAL
SOCIETIES**

- United States Air Force (USAF) Summer Faculty Fellowship, 1990.
- Elected Senior Member of the North American Manufacturing Research Institute of SME (NAMRI). 1985
- Senior Member – North American Manufacturing Research Institution (NAMRI)
- Life Member – Society of Manufacturing Engineers (SME).
- Member – Japan Society for Technology of Plasticity (JSTP).
- Member – American Society for Engineering Education (ASEE).
- Chairman (1986) – Scientific Program Committee and Member of the Board (1986) – Local SME Chapter. Kalamazoo, MI.
- Representing the SME in the Energy Assessment Center (DOC) of the Northeast 2014