Curriculum Vitae

Boris Rubinsky,
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Education

B.Sc., M.E.	Technion, Haifa, Israel, 1971
M.Sc., M.E.	Technion, Haifa, Israel, 1977
Ph.D., M.E.	Massachusetts Institute of Technology, 1981

Professional Academic Experience

1971-1976	Technical Officer, Israeli Army, Corps of Engineers
1976-1977	Instructor, Technion, Haifa, Israel
1977-1980	Research Assistant, Cryogenic Engineering Laboratory, M.I.T.
1980-1984	Assistant Professor, University of California at Berkeley
1984-1989	Associate Professor, University of California at Berkeley
1989 - present	Professor, University of California at Berkeley
1997- 2000	Chancellor's Professor, University of California at Berkeley
2001 - present	Arnold and Barbara Silverman Distinguished Professor of Biomedical Engineering
2005 - present	Professor, Director Center for Bioengineering in the Service of Humanity and Society, Hebrew University of Jerusalem.

Awards and Honors

1979 – 1980	Whitaker Health Sciences and Technology Fund Fellow (MIT) (1979-1980)
1984	American Roentgen Ray Society, Executive Council Award for "*Ultrasonic Monitoring of Hepatic Cryosurgery*,"
1985	ASHRAE Certificate of Appreciation for "*Contributions to Educational Excellence*"
1986	Roscoe E. Miller Award, Society of Gastrointestinal Radiologists
1987	Honorary Mention, North American Radiology Society
1987-8	Fogarty Senior International Fellowship Award, National Institute of Health
1989	Larson Memorial Award from the American Society of Mechanical Engineers for "*outstanding performance within ten to twenty years after graduation*"
1994	Fellow ASME (American Society of Mechanical Engineers),
1994	Certificate of Merit, (*for developing MRI monitored Cryosurgery*), Radiological Soc. of North America, 1994
1994	Best paper Award JSME (Japan Society for Mechanical Engineering)
1995	Japan Society for the Promotion of Science (JSPS) Fellowship
1995-7	President "American College of Cryosurgery"
1995-6	Lady Davis Visiting Professor, Technion, Israel
1996	Fellow AAAS (American Association for the Advancement of Science)
1996	ALCOA Foundation Award for Advancements in Science
1996	Heat Transfer Memorial Award, (ASME)

1996-2000 Chancellor's Professor, University of California at Berkeley
2000 Fellow AIMBE (American Institute of Medical and Biological Engineers)
2000 World-wide coverage by CNN, ABC, CBS, Nature Biotech, New York Times, etc. for the *"creation of the world's first "bionic chip","*
2001 Honorary citation, centurial major contributions in health sciences, U.C.Berkeley,
2001 – present Arnold and Barbara Silverman Distinguished Professor of Biomedical Engineering
2002 R&D 100 Award, for developing "*one of the 100 most technologically significant new product of the year*", *R&D magazine (www.rdmag.com/rd100)*
2003 -2005 Sackler Fellow in Bioengineering , Tel Aviv University
2003 Extensive report and coverage by *Nature, Science Today, CBS, Wired News etc.* for the *"groundbreaking work of cell-based toxicity screening and detection"* http://www.nature.com/nsu/030609/030609-19.html
2003 Elected, "Technology R&D Stars of the Year", Industry Week, 2003 http://www.industryweek.com/CurrentArticles/asp/articles.asp?ArticleId=1528
2004 Invention honored as one of 'The Future of Health', *The NextFest 2004 (*www.nextfest.net*)*
2005 Member Board of Directors "International Society of Cryosurgery"
2007 Gold Award - International Society of Cryosurgery Award
2007 Irreversible electroporation was chosen as a Technology of the Year by NASA. (http://www.techbriefs.com/content/view/2472/36/1/2/)

Supervised Students Awards

- American Society of Cryosurgery – Best student paper award 1999 to John Bischof
- ASME – Bioengineering division – Best PhD Paper Award, 2002 to Yong Huang
- ASME – Bioengineering division – Honorary mention, 2003 to Jessica Preciado
- International Engineering Consortium William Everitt Award for Engineering Excellence. 2003 Kishan Gupta
- International Engineering Consortium William Everitt Award for Engineering Excellence. 2003 Candice Tsay

Major Honorary lectures

- Keynote speaker, VIII International Heat Transfer Conference (1986)
- Keynote speaker, XVIII International Congress of Refrigeration (1991)
- Keynote lecture, Japan Society for Mechanical Engineering Centennial Meeting, Tokyo (1997)
- The Hawkins Memorial Lecture in Heat Transfer, Purdue University, 1997.
- Mechanical Engineering Distinguished Lecture Series, University of Minnesota, 1998
- Keynote lecture 5th ASME/JSME Thermal Engineering Joint Conference, San Diego, (1999)
- Distinguished lecture - University of Huston, 2000
- Keynote lecture - *Frontiers of Life; XII Recontres de Blois*, 2000

- Keynote lecture – Gordon Conference – Bioelectrochemistry, Oxford, 2000
- Keynote speaker – International Society for Cryobiology, Beijing, 2004

Professional Affiliations American Society of Mechanical Engineers (ASME) (Fellow), Society for Cryobiology, American College of Cryosurgery (President Emeritus), American Association for the Advancement of Science (AAAS) (Fellow), Society for Bioelectrochemistry., International Society of Cryosurgery.

Professional Business Experience

1987-1993 Co-Founder **Cryomedical Sciences**. The company manufactures and sells cryosurgical equipment for imaging monitored minimally invasive treatment of cancer. It was established on the basis of my patent. During my involvement in the company it became a NASDAQ company.

1992- present Co-Founder **A/F Protein**. The company produces and sells antifreeze proteins. It was established on the basis of my patent.

1992- present **Aqua bounty** is a wholly owned spin-off from **A/F Protein** and has become the first company in the world to produce a transgenic animal for food.

1998–present Major shareholder **Spectros**. The company manufactures and sells biomedical devices that employ light to recognize tissue as a safety feature in surgery. The product of the company is based on a patent I co-invented.

1997-1999 Founding minor partner in "**American Medical Procedures**". Company provides medical services on an ambulatory basis, was purchased on a stock for stock exchange by **Endocare**.

2000-present Co-Founder **"Excellin Life Sciences**". A company in the field of biological microdevices. Based on a patent in which I am the co-inventor.

2003- present Co-Founder "**Oncobionic**" a company in the field of tissue electroporation. Based on a patent in which I am the co-inventor.

2005- present Co-Founder **"MOR Medical Technology"** - a company in the field of bioelectronics. Based on a patent in which I am the co-inventor.

Internet Links

Cryosurgery

http://www.diagnosticimaging.com/specialedition/profile-onik.jhtml

http://www.pbs.org/wgbh/nova/sciencenow/3209/05-cures.html

http://www.sciencedaily.com/releases/2002/05/020515074832.htm

http://www.bizjournals.com/sanjose/stories/2002/06/03/story3.html

http://www.transhuman.de/kryonif4.htm

http://www.el-mundo.es/salud/1998/297/01981.html

http://www.mymedcenter.com/index.cfm?pt=itemDetail&item_id=63815&site_cat_id=2

Organ preservation

http://www.exploratorium.edu/frogs/woodfrog/woodfrog_2.html

http://www.pbs.org/wgbh/nova/sciencenow/3209/05-cures.html

http://news.nationalgeographic.com/news/2005/03/0301_050301_woodfrog.html

http://www.gradewinner.com/p/articles/mi_m1511/is_n8_v15/ai_15589167

Bionic technology

http://online.sfsu.edu/~rone/GEessays/bionicchip.html

http://www.nature.com/nsu/030609/030609-19.html

http://www.sciteclibrary.ru/eng/catalog/pages/5403.html

http://www.wired.com/news/technology/0,1282,59217,00.html

http://www.isa.org/InTechTemplate.cfm?Section=InTech&template=/ContentManagement/ContentDisplay.cfm&ContentID=27057

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http://www.paginadigital.com.ar/articulos/2004/2004prim/tecnologia1/sica28-1pl.asp

http://www.ecplanet.com/canale/salute-7/cellule-67/0/0/7705/it/ecplanet.rxdf

Irreversible electroporation

http://videolectures.net/medicon07_rubinsky_teoie/

http://news.moneycentral.msn.com/ticker/article.asp?Feed=BW&Date=20061017&ID=6112260&Symbol=US:ANGO

http://www.techbriefs.com/content/view/2472/36/1/2/

Business

http://www.afprotein.com/management.htm

http://www.industryweek.com/ReadArticle.aspx?ArticleID=1356

http://www.asme.org/honors/ms71/saa/heat.html

http://www.asme.org/honors/ms71/gaa/larson.html

http://www.spectros.com/Spectros_Management.htm

http://www.nature.com/nbt/journal/v24/n7/full/nbt0706-735.html

PATENTS

P1 B. Rubinsky, Directional solidification for controlled freezing of biomaterials, U.S. Patent #4531373, July 30 1985.
P2 B. Rubinsky, G. Onik, JJ Finkelstein, D. Neu and S Jones, Cryosurgical system for destroying tumors by freezing, U.S Patent # 5334181, Aug 2 1994.
P3 B. Rubinsky, A. DeVries, A Arav "Interaction of thermal hysteresis proteins with cells and cell membranes and associated applications, U.S Patent # 5358931, Oct. 25 1994.
P4 B. Rubinsky, J Gilbert, S Wong, M Roos, G Pease. Magnetic Resonance Imaging Assisted Cryosurgery US Patent # 5433717, July 18, 1995
P5 B. Rubinsky, H. A. Koushafar. Tissue destruction in cryosurgery by use of thermal hysteresis proteins. US Patent # 5654279, Aug. 5, 1997
P 6 Rubinsky, Boris, Onik; Gary, Finkelstein; J. J., Neu; Dan, Jones; Steve, Cryosurgical instrument and system and method of cryosurgery US Patent # 5674218 : Oct. 7 , 1997
P7 B. Rubinsky, J. Gilbert, S. Wong, M. Roos, G. Pease., Magnetic resonance imaging assisted cryosurgery, US patent # 5,706,810, Jan 13, 1998
P8 D. Benaron, B. Rubinsky. Device and method for detection, localization, and characterization of inhomogeneities in turbid media , US Patent # 5746210, May 5 , 1998
P9 D. Benaron, B. Rubinsky. Device and method for detection, localization, and characterization of inhomogeneities in turbid media , US Patent # 5752519, May 19 , 1998
P10 D., Benaron, B., Rubinsky, B., Device and method for classification of tissue. US Patent # 598736, Nov 16, 1999
P11 B Rubinsky Use of cryoprotective agent compounds during cryosurgery, US Patent #6041787, March 28, 2000.

P12 B. Rubinsky "Freezing method for controlled removal of fatty tissue by liposuction", US patent # 06032675 March 7, 2000.
P13 B. Rubinsky, Y Huang. "Controlled electroporation and mass transfer across cell membranes US patent #6300108, Oct 9, 2001
P14 B. Rubinsky, Y. Huang. "Electrical Impedance Tomography to control electroporation" US patent#6,387,671, May 14, 2002.
P15 B. Rubinsky, Y Huang. "Controlled electroporation and mass transfer across cell membranes US patent #6403,348, June, 11, 2002
P16 B. Rubinsky, Y. Huang "Cell/tissue analysis via controlled electroporation US patent #6,487,619. Nov 19. 2002
P 17 B. Rubinsky, Y. Huang "Controlled electroporation and mass transfer across cell membranes" US patent #6562604, May 13, 2003.
P 18 Benaron David A, Rubinsky Boris. "Device and method for classification of tissue" US Patent # 6594518 July 15, 2003
P 19 Rubinsky, B., Otten, D., "Method and apparatus for remote imaging of biological tissue by electrical impedance tomography through a communication network" US Patent # 6725087, April 20, 2004.
P 20 Rubinsky B., Huang, Y. " Cell viability detection using electrical measurements" US patent # 6,927,049, Aug. 9 2005
P21 Rubinsky, B. Huang, Y. "Controlled electroporation and mass transfer across cell membranes in tissues" US patent # 7,053,063 B2, May 30, 2006

Patent applications

	PUB. APP. NO.	Title
1	20070156135	System and methods for treating atrial fibrillation using electroporation (Rubinsky, Boris; Mikus, Paul) July 5, 2007
2	20070043345	Tissue ablation with irreversible electroporation
3	20070042337	Isochoric method and device for reducing the probability of ice nucleation during preservation of biological matter at subzero centigrade temperatures
4	20060293731	Methods and systems for treating tumors using electroporation
5	20060293730	Methods and systems for treating restenosis sites using electroporation
6	20060293725	Methods and systems for treating fatty tissue sites using electroporation
7	20060293713	Methods and systems for treating BPH using electroporation
8	20060264752	Electroporation controlled with real time imaging
9	20060121610	Controlled electroporation and mass transfer across cell membranes
10	20050282284	Controlled electroporation and mass transfer across cell membranes in tissue
11	20050171574	Electroporation to interrupt blood flow
12	20050171523	Irreversible electroporation to control bleeding
13	20030194808	Controlled electroporation and mass transfer across cell membranes
14	20030166181	Controlled electroporation and mass transfer across cell membranes

15 20020137121 Cell viability detection using electrical measurements

16 20010051366 Controlled electroporation and mass transfer across cell membranes

17 20010046706 Controlled electroporation and mass transfer across cell membranes

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1) B. Rubinsky and A. Shitzer, "Analysis of a Stefan-Like Problem in a Biological Tissue Around a Cryosurgical Probe," ASME Trans., *J. of Heat Transfer*, **98**, pp. 514-519, August 1976.

2) B. Rubinsky and A. Shitzer, "Analytic Solutions of the Heat Equation Involving a Moving Boundary with Application to the Change of Phase Problem (the Inverse Stefan Problem)," ASME Trans., *J. of Heat Transfer*, **100**, pp. 300-304, May 1978.

3) B. Rubinsky and E.G. Cravalho, "The Determination of the Thermal History in a One-Dimensional Freezing System by a Perturbation Method," ASME Trans., *J. of Heat Transfer*, pp. 326-330, May 1979.

4) B. Rubinsky and E.G. Cravalho, "Analysis for the temperature Distribution During the Thawing of a Frozen Biological Organ," *A.I.Ch.E. Symposium Series*, **75**, 81-88, 1979 (Proc.).

5) B. Rubinsky and E.G. Cravalho, "An Analytical Prediction of the Local Concentration of Cryophylactic Agents in Perfused Organs," *Cryobiology*, **16**, pp. 362-371, August 1979.

6) B. Rubinsky, E.G. Cravalho and B. Mikic, "Thermal Stresses in Frozen Organs," *Cryobiology*, **17**, pp. 66-74, 1980.

7) B. Rubinsky and E.G. Cravalho, "A Finite Element Method for the Solution of One-Dimensional Phase Change Problems," *Int. J. of Heat and Mass Transfer*, **24**, pp. 1987-1989, 1981.

8) B. Rubinsky, "Thermal Stresses During Solidification Processes," ASME Trans., *J. of Heat Transfer*, **104**, pp. 196-199, 1982.

9) B. Rubinsky and E.G. Cravalho, "Transient Mass Transfer Processes During the Perfusion of a Biological Organ with a Cryophylactic Agent Solution," *Cryobiology*, **19**, pp. 70-82, 1982.

10) B. Rubinsky, "Solidification of a Conglomerate of Particles," ASME Trans., *J. of Heat Transfer*, **104**, pp. 193-196, 1982.

11) K.K. Kellogg, B. Rubinsky and R. Greif, "The Effect of Orientation on the Heat Transfer from a Flat Surface in an Air Fluidized Bed," *Int. J. Heat and Mass Transfer*, **26**, No. 1, pp. 151-153, 1983.

12) J.F. Raymond and B. Rubinsky, "A Numerical Study of Thawing Process of a Frozen Coal Particle," ASME Trans., *J. of Heat Transfer*, **105**, pp. 197-200, 1983.

13) B. Rubinsky, "Solidification Processes in Saline Solutions," *J. of Crystal Growth*, **62**, pp. 513-522, August, 1983.

14) J.J. Neff and B. Rubinsky, "The Effect of a Magnetic Field on the Heat Transfer Characteristics of an Air Fluidized Bed of Ferromagnetic Particles," *Int. J. of Heat and Mass Transfer*, **26**, No. 12, pp. 1185-1189, 1983.

15) B. Rubinsky and G.L. Sterns, "Experimental Comparison of Heat Transfer Data with Flow Visualization of a Flat Surface in a Fluidized Bed," ASME Trans., *J. of Heat Transfer*, **105**, No. 4, pp. 809-816, November, 1983.

16) J.M. Chen and B. Rubinsky, "Morphological Stability Analysis on a Solid-Liquid Interface During Solidification of Binary Alloys" ASME Paper #83-HT-24, 1983.

17) B. Rubinsky and E.G. Cravalho, "An Analytical Method to Evaluate Cooling Rates During Cryopreservation Protocols for Organs," *Cryobiology*, **21**, pp. 303-320, 1984.

18) G. Onik, C. Cooper, H.I. Goldenberg, A.A. Moss, B. Rubinsky, and M. Christianson, "Ultrasonic Characteristics of Frozen Liver," *Cryobiology*, **21**, pp. 321-328, 1984.

19) M.A. Katz and B. Rubinsky, "An Inverse Finite Element Technique to Determine the Change of Phase Location in One-Dimensional Melting Problems," *Num. Heat Transfer*, **7**, pp. 269-283, 1984.

20) H.L. Tsai and B. Rubinsky, "A Numerical Study Using `Front Tracking' Finite Elements on the Morphological Stability During Transient Solidification Processes," *J. Crystal Growth*, **69**, pp. 29-46, 1984.

21) H.L. Tsai and B. Rubinsky, "A Front Tracking Finite Element Study on Change of Phase Interface Stability During Solidification Processes in Solutions," *J. Crystal Growth*, **70**, pp. 56-63, 1984.

22) J. O'Neal, B. Rubinsky, and R.H. Phibbs, "A Standard Experimental Procedure for the Evaluation of Incubators," ASME Paper #84-WA/C-8, 1984

23) J.C. Gilbert, G.M. Onik, W. Haddick, and B. Rubinsky, "The Use of Ultrasound Imaging for Monitoring Cryosurgery," *Proceedings 6th Annual Conference, IEEE Engineering in Medicine and Biology*, 107-112, 1984; J.C. Gilbert, G.H. Onik, W.K. Haddick, and B. Rubinsky, "The Use of Ultrasonic Imaging for Monitoring Cryosurgery," *IEEE Trans. of Biomed. Eng.*, BME-31, No. 8, 563, 1984

24) B. Rubinsky and M. Ikeda, "A Cryomicroscope Using Directional Solidification for the Controlled Freezing of Biological Material," *Cryobiology*, **22**, pp. 55-68, 1985.

25) G. Onik, J. Gilbert, W.K. Haddick, R.A. Filly, P.W. Collen, B. Rubinsky, and L. Farrel, "Sonographic Monitoring of Hepatic Cryosurgery, Experimental Animal Model," *American J. of Roentgenology*, May 1985, pp. 1043-1047.

26) D.B. Moog and B. Rubinsky, "An Analytical Model of Thermal and Vapor Diffusion in Freezing of Wet Coal," ASME Trans., *J. of Heat Transfer*, **107**, pp. 5-11, April, 1985.

27) M.W. Chaw and B. Rubinsky, "Cryomicroscopic Observation on Directional Solidification in Onion Cells," *Cryobiology*, **22**, pp. 392-399, 1985.

28) J.C. Gilbert, G.M. Onik, W. Haddick, and B. Rubinsky, "Real Time Ultrasonic Monitoring of Hepatic Cryosurgery," *Cryobiology*, **22**, pp. 319-330, 1985.

29) J.C. Gilbert, B. Rubinsky, and G.M. Onik, "Solid-Liquid Interface Monitoring with Ultrasound During Cryosurgery," ASME Paper #85-WA/HT-83, 1985

30) B. Rubinsky, "Cryosurgery Imaging with Ultrasound," *Mechanical Engineering*, vol 108. No.3 pp. 48-51, 1986.

31) J. Yoo and B. Rubinsky, "A Finite Element Method for the Study of Solidification Processes in the Presence of Natural Convection," *Int. J. for Numerical Methods in Engineering*, **23**, pp. 1785-1805, 1986.

32) B. Rubinsky, "Recent Advances in Cryopreservation of Biological Organs and in Cryosurgery," *Proceedings of the VIII International Heat Transfer Conference*, 307-315, 1986 (keynote paper).

33) R. Jennings and B. Rubinsky, "A Finite Element Study of a Coplanar Electrode Josephson Junction with Respect to Electrical Potential and Temperature," *Int. Communications in Heat and Mass Transfer*, **13**, No. 1, pp. 55-65, 1986.

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35) Y.F. Hsu, B. Rubinsky and K. Mahin, "An Inverse Finite Element Method for the Analysis of Stationary Arc Welding Processes," ASME Trans., *J. of Heat Transfer*., **108**, pp. 734-740, 1986.

36) J.C. Gilbert, G.M. Onik, W.K. Haddick, B. Rubinsky, and L.D. Farrell, "Ultrasound Monitored Hepatic Cryosurgery: Longevity Study on an Animal Model," *Cryobiology*, **23**, pp. 277-285, 1986.

37) G. Onik, R. Kane, G. Steele, W. McDermoth, U. Khettry, B. Cady, R. Jenkins, M. Clouse, B. Rubinsky, and B. Chase, "Monitoring Hepatic Cryosurgery," *American J. of Roentgenology*, pp. 665-669, October 1986.

38) Y.F. Hsu and B. Rubinsky, "Transient Melting of a Metal Plate by a Penetrating Plasma Arc," ASME Trans., *J. of Heat Transfer*, **109**, No. L, pp. 463-469, 1987.

39) B. Rubinsky, "Heat Transfer During Cryopreservation by Perfusion Through the Vascular System," *Cryobiology*, **24**, pp. 537-541, 1987.

40) B. Rubinsky, C.Y.C. Lee, J. Bastacky, and T.L. Hayes, "The Mechanism of Freezing in Biological Tissue: The Liver," *Cryo-Letters*, **8**, pp. 370-381, 1987.

41) Y.F. Hsu and B. Rubinsky, "Two-Dimensional Heat Transfer Study on the Keyhole Plasma Arc Welding Process," *Int. J. Heat Mass Transfer*, **31**, No. 7, pp. 1409-1421, 1988.

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Graduate Students

MSc

1) C.-F.Chen, "A Study for the Mass Transfer Process During the Perfusion of a Biological Organ with a Semi-Permeable Substance, M.Sc., September, 1981.
2) R.A. Browning, "Nuclear Lifetime Evaluation Methodology of a Control Blade," M.Sc., December, 1981, (General Electric outside student).
3) K.P.Kellogg, "The Effect of Orientation on the Heat Transfer from a Flat Surface in an Air Fluidized Bed," M.Sc., December, 1981.
4) J.F. Reynolds, "A Numerical Study of the Thawing Process of a Frozen Coal Particle," M.Sc., January, 1982.
5) G.L. Starnes, "The Effect of Orientation on the Heat Transfer from an Immersed Flat Surface in a Two-Dimensional Air Fluidized Bed," M.Sc., June, 1982.
6) L. Nguyen, "The Thawing Process of a Conglomerate Coal Particle in an Enclosure," M.Sc., June, 1982.
7) J. Neff, "The Effect of a Magnetic Field on the Heat Transfer Characteristics of an Air Fluidized Bed of Ferromagnetic Particles," M.S., August, 1982.
8) J. Chen, "Morphological Stability Analysis on a Solid-Liquid Interface," M.Sc., September, 1982.
9) G. Graham, "Energy Storage Using Organic Polyols," M.Sc.I., 1983.
10) R. Jennings, "Numerical Analysis for Temperature Distribution in Josephson Junctions," M.Sc.I., 1983.
11) D. Moog, "Freezing Process in Moist Coal," M.Sc.I., 1984.
12) J. O'Neel, "A Standard Experimental Procedure for Evaluation of Incubators," M.Sc.I., 1984.
13) M. Ikeda, "Experimental Study on Dendritic Solidification," M.Sc.I., 1984.
14) R.S. Lee, "Solid to Solid Phase Transformation Materials and Flow Visualization about a Horizontal Cylinder," M.Sc.I., 1984.
15) M. Chaw, "Cryomicroscopic Studies on Solidification Processes," M.Sc.I., 1985.
16) C. Lee, "Transcapillary Processes During the Perfusion of a Biological Organ with a Semipermeable Non-Electrolyte Solution," M.Sc.I., 1985.
17) F.M. Gee, "A Finite Element Code for the Solution of a New 3-D Bioheat Equation with Direct Modelling of Large Blood Vessels," M.Sc.II., 1985.
18) G.Y. Lee, "A Finite Element Analysis of the Stability of the Solid-Liquid Interface During Directional Solidification of a Saline Solution," M.Sc.II., 1985.
19) M. Smidebush, "A Finite Element Analysis of the Feeding Process for Crystal Growth by the Horizontal Bridgmon Method," M.Sc.II., 1985.
20) C.A. Rivera, "On the Stability of the Ice-Water Interface During Directional Solidification," M.Sc.II., 1985.
21) K. Atagi, "Crystal Growth Modeling of a Radiatively and Conductively Participating Medium," M.Sc.II., 1987.
22) K. Davoudpour, "An Analytical Study on Solidification Processes in Saline Solutions," M.Sc.II., 1987.
23) B. Leichting, "Finite Element Study on Plasma Arc Welding," M.Sc.II., 1987.

24) S.M. Haile, "Vitrification as a Viable Alternative for Freezing in the Cryopreservation of Organs," M.Sc. (Material Science), 1988.
25) N. Merry, "Heat Transfer in Fluidized Beds or Organic Polyols," M.Sc., 1988.
26) K. Eto, "Freezing Processes During Cryosurgery," M.Sc., 1989.
27) J. Bischof, "Freezing Processes in the Kidney," M.Sc., 1989.
28) P. Kwa, "Energy Storage in Fluidized Beds of Organic Polyols," M.Sc, 1990.
29) G. Yen "Cryosurgery in the brain". MSc, 1991 (Vice President for research "Venus" Biotech company)
30) G. Alvarado, "Intravascular MRI-Compatible Cryoprobe: A feasability study, M.Sc. 1993
31) Oleg Ovruck " Thermoelectric Temperature Stage" MSc 1994.
32) Rafael Davalos, "An evolutionary-genetic approach to heat transfer analysis" MSc, 1995 (LLNL)
33) James Hammonds, " Evolutionary Genetics analysis of heat transfer" MSc, 1997
34) Titilayo Melissa Masha "The effect of Surface tension on final drop diameter of spots using a contact printing pen" MSc, 1999
35) Mustafa Kiral "The effect of freezing on liver tissue of Rana Sylvatica (wood frog). MSc 2000.
36) Jose Rivera, “A business plan for distributed medical imaging system for the detection of cancer” MSc 2002
37) Jessica Armendariz Preciado, “ Radiative properties of polar bear hair” MSc 2003
38) Sebastien Payen “Dynamics of Electroporation” MSc 2003-05-22
39) Fanny Augais “ Electrical properties of Frozen tissues” M Sc 2003
40) Stephanie Szobota “Isochoric cryopreservation” MSc 2005
41) Yuval Millo “"Location of Biomedical Tools in an Electric Field"” MSc Hebrew University, 2007

PhD

1) Hai-Lin .S. Tsai, "A Study of Transport Phenomena and Interface Stability During Solidification of Binary Solutions," Ph.D., 1984. (Professor, University of Missouri-Roulla)
2) Jaisuk. Yoo, "Studies on Heat Transfer and Fluid Flow During Solidification Processes," Ph.D., 1984. (Professor and Dean, Anjo University, Korea)
3) John. C. Gilbert, "Ultrasonic Imaging of Cryosurgery," Ph.D., 1985.
4) Y.F. Hsu, "Numerical Studies on Heat Transfer and Fluid Flow During Plasma-Arc and GTA Metalwork Processes," Ph.D., 1986.
5) I. Kececioglu, "A Variational Deforming Finite Element Method for Computing the Propagation of Freezing Fronts in Porous Media as a Coupled Heat Fluid Flow and Species Transport Process," Ph.D., 1987.
6) C. Lee, "Heat and Mass Transfer Processes in Biological Organs," Ph.D., 1989. (Associate Professor, U of N Carolina at Charlotte)
7) J. Bischof, "The Effects of Low Temperature on Biological Materials," Ph.D. (Bioengineering), 1992. (Professor, University of Minnesota)

8) R. Keanini, "Numerical Studies on Heat Transfer with Phase Transformation," Ph.D., 1992.(Professor, University of N. Carolina at Charlotte)
9) R. Coger, "Thermodynamics of crystal growth with antifreeze proteins and vitrification" M.Sc. 1991, PhD 1993 (Professor, University of N. Carolina at Charlotte)
10) M. Shannon, "Laser surface interaction" MSc, 1992, PhD, 1993 (Professor, University of Illinois at Urbana Champaign)
11) JS Hong, "Studies on the use of freezing for controlled destruction and preservation of tissue" PhD, 1993 (Professor and Department Chairman, National Chi-Nan University, Taiwan)
12) Kurt Eto "Response of biological systems to low temperatures" PhD,1994
13) Grant R. Pease "Magnetic Resonance Image-Guided Control of Cryoablation" PhD, 1995 (Research, Hewlett Packard, Corvallis Oregon)
14) Lars Chapsky, " Ice growth inhibition by antifreeze proteins", PhD, 1997
15) Kristine Tatustani, " The mechanism of freezing damage in prostate cryosurgery" PhD. 1998
16) Linda Diem-Tuyet Pham " Antifreeze protein modified ice crystallization in cryosurgery" PhD 1999
17) Kelvan Patrick Howard, "The development of a microfabricated experimental technique for the study of cellular dehydration toxicity and viability" PhD, 1999.
18) David Otten, "Cryosurgical imaging using visible light imaging and electrical impedance tomography- a feasibility study" PhD 2000.
19) Yong Huang " Micro-electroporation for Genetic Engineering" PhD 2001.
20) Rafael Davalos “Real Time Imaging for Molecular Medicine through Electrical Impedance Tomography of Electroporation”, PhD 2002 (Assistant Professor, Virginia Tech)
21) Phil Tsourkas “ Genetic Algorithms” PhD 2004
22) Ruben Diez “Fundamentals of electroporation” PhD 2005 (Assistant professor, Marquette University, Puerto Rico)
23) Jon Edd “ Electrical impedance tomography of electroporation” PhD 2005
24) Gabriel Amir (Tel Aviv University) High Subzero Cryopreservation of Harvested Hearts for Transplantation Using Thermal Hysteresis Proteins", PhD 2005
25) Pedro Alejandro Perez “ Isochoric Cryopreservation”, PhD 2006