

LIST OF PUBLICATIONS AND PATENTS

A. BOOKS

1. D. Prutchi and M. Norris, *Design and Development of Medical Electronic Instrumentation - A Practical Perspective of the Design, Construction and Test of Medical Devices*, 450 pages, John Wiley & Sons, Inc., Hoboken, NJ, November 2004.
2. D. Prutchi and S.R. Prutchi, *Exploring Quantum Physics through Hands-On Projects*, 335 pages, John Wiley & Sons, Inc., Hoboken, NJ, 2012.
 - a. S.R. Prutchi, E.M. Resnick, and D. Prutchi, *Instructors Guide for "Exploring Quantum Physics through Hands-On Projects"*, John Wiley & Sons, Inc., Hoboken, NJ, 2012.
3. D. Prutchi, *Exploring Ultraviolet Photography – Bee Vision, Forensic Imaging, and Other Adventures in Ultraviolet Photography*, Amherst Media, 2017.

B. DISSERTATIONS

- Ph.D. "Relationships between Mechanical and Electrical Activity of Muscle - The 3-D Propagation Pattern of Motor Unit Action Potentials", Tel-Aviv University, 1992.
- M.Sc. "Method to Measure Dynamic Contact Stresses between Flexible Bodies with Applications to Biomechanics", Tel-Aviv University, 1988.

C. JOURNAL PAPERS

1. D. Prutchi and M. Arcan, "Dynamic Contact Stress Analysis Using a Compliant Sensor Array", Invited Paper: *Measurement - Journal of the International Measurement Confederation*, 11, 197-210, 1993.
2. D. Prutchi and A. Sagi-Dolev, "New Technologies for In-Flight Pasteless Bioelectrodes", *Aviation, Space and Environmental Medicine*, 64(6), 552-556, 1993.
3. A. Sagi-Dolev, D. Prutchi and R.H. Nathan, "3-D Current Density Distributions under Surface Stimulation Electrodes", *Medical & Biological Engineering & Computing*, 33, 403-408, 1995.
4. D. Prutchi, "A High-Resolution Large-Array (HRLA) Surface EMG System", *Medical Engineering and Physics*, 17(6), 1350-4533, 1995.
5. T. Fåhræus, L. Stotts, D. Prutchi, S. Maertens, D. Woodson, D. Cooke, "The Patient Alert System - Pilot Study of an Automatic Built-In Warning System for Pacemakers", *PACE*, 21(1) Part II, 256-259, 1998.
6. D. Prutchi, J.L. Prince and L.J. Stotts, "X- and Gamma-Ray Hardness of Floating-Gate EEPROM Technology as Applied to Implantable Medical Devices", *IEEE Transactions on Electronic Components and Packaging Technology*, 22(3), 390-398, 1999.
7. D. Burkhoff, I. Shemer, B. Felzen, J. Shimizu, Y. Mika, M. Dickstein, D. Prutchi, N. Darvish, S. Ben-

Haim, "Electric Currents Applied During the Refractory Period Can Modulate Cardiac Contractility In Vitro and In Vivo", *Heart Failure Review*, 6(1), 27-34, 2001.

8. C. Pappone, G. Vicedomini, A. Salvati, C. Meloni, W. Haddad, R. Aviv, Y. Mika, N. Darvish, Y. Kimchy, I. Shemer, Y. Snir, D. Prutchi, S. Ben-Haim, I. Kronzon, "Electrical Modulation of Cardiac Contractility: Clinical Aspects in Congestive Heart Failure", *Heart Failure Review*, 6(1), 55-60, 2001.
9. C. Pappone, S. Rosanio, D. Burkhoff, Y. Mika, G. Vicedomini, G. Augello, I. Shemer, D. Prutchi, W. Haddad, R. Aviv, Y. Snir, I. Kronzon, O. Alfieri, S. Ben-Haim, "Cardiac Contractility Modulation by Electrical Currents Applied During the Refractory Period in Patients with Heart Failure Secondary to Ischemic or Idiopathic Dilated Cardiomyopathy", *The American Journal of Cardiology*, December 2002.

D. OTHER PUBLICATIONS

(a) Papers Presented at Scientific Meetings

1. D. Prutchi and M. Arcan, "A Method to Measure Contact Stresses between Flexible Bodies in a Dynamic Environment", *Proceedings of the 9th International Conference on Experimental Mechanics*, 1, 112-121, Copenhagen, 1990.
2. D. Prutchi and M. Arcan, "From Non-Invasive Contact Stress Analysis to Human Body Protection", *First World Congress of Biomechanics*, I-61, San Diego, 1990.
3. D. Prutchi and M. Arcan, "A New Approach to Array EMG Signal Analysis: High-Resolution Multidimensional Spectral Estimation", *IX International Congress of Electromyography and Clinical Neurophysiology*, Jerusalem, 1992.
4. D. Prutchi, "DSP Methods for Frequency-Wavenumber Analysis of the Array Surface Electromyogram", *5th International Conference on Signal Processing Applications and Technology*, 177-182, Dallas, 1994.
5. T. Fåhræus, L. Stotts, D. Prutchi, S. Maertens, D. Woodson, D. Cooke, "The Patient Alert System - Pilot Study of an Automatic Built-In Warning System for Pacemakers", *PACE*, 20(4), 1064, *Meeting of the North American Society of Pacing and Electrophysiology*, New Orleans, 1997.
10. R. Chirife, D.C. Deno, D.F. Ortega, D. Prutchi and A. Vautravers, "New Method for the Evaluation of Cardiac Function by Implantable Devices through Impedance Volumetry" (Spanish), *Argentinean Congress of Cardiology*, 1997.
11. D. Prutchi, Y. Mika, Y. Snir, J. Ben-Arie, N. Darvish, Y. Kimchy, S. Ben-Haim, "An Implantable Device to Enhance Cardiac Contractility through Non-Excitatory Signals", *Circulation*, 100 Supp.1:1, 122, *72nd Scientific Sessions of the American Heart Association*, Atlanta, 1999.
12. C. Pappone, G. Vicedomini, M. Loriccio, C. Meloni, A. Salvati, Y. Kimchy, W. Haddad, R. Aviv, I. Shemer, Y. Snir, Y. Mika, D. Prutchi, N. Darvish, S. Ben-Haim, "Application of Non-Excitatory Electrical Signals with Biventricular Pacing Improves Hemodynamics Parameters in Heart Failure Patients beyond the Improvement Achieved by Biventricular Pacing Alone", *PACE*, 23(4), 590, *Meeting of the North American Society of Pacing and Electrophysiology*, Washington DC, 2000.

13. J. Shimizu, D. Prutchi, Y. Kimchy, Y. Mika, N. Darvish, D. Burkhoff, "Non-Excitatory Electrical Currents Enhance Cardiac Contractility by Increasing Peak Calcium Transients in Ferret Hearts", *PACE*, 23(4), 707, *Meeting of the North American Society of Pacing and Electrophysiology*, Washington DC, 2000.
14. R. Aviv, Y. Kimchy, W. Hadad, I. Shemer, Y. Snir, Y. Mika, D. Prutchi, N. Darvish, S. Ben-Haim, "Potential Gain in Left Ventricular Contractility with Non-Stimulatory Signals On Top of Biventricular Pacing", *Journal of Cardiac Failure*, Supplement 2, 6(3), 13, *Meeting of the Heart Failure Society of America*, 2000.
15. Y. Kimchy, W. Haddad, R. Aviv, I. Shemer, Y. Snir, Y. Mika, D. Prutchi, B. Felsen, O. Glasberg, N. Darvish, S. Ben-Haim, "Application of Non-Excitatory Electrical Signals in Multisite Locations Improves Left Ventricular Contractility in Pigs Beyond the Improvement Achieved with Single Site Application", *Circulation*, 102(18), II-534, *Meeting of the American Heart Association*, October, 2000.
16. R. Tzafiriri, L. Bailey, J.H. Keating, P.M. Markham, D. Prutchi, E.R. Edelman, "Preclinical Safety And Efficacy of a Novel Multielectrode Bipolar/Unipolar Over-the-Wire Renal Denervation RF Catheter", (Presented at CRT 2015: Cardiovascular Research Technologies, February 2015), *JACC: Cardiovascular Interventions*, 8(2), Supplement S, S47, 2015.
17. R. Tzafiriri, L. Bailey, J.H. Keating, P.M. Markham, K. Regan, D. Prutchi, E.R. Edelman, "Safety and Biomarker Effects of a Novel Multi-electrode Over-the -Wire Renal Denervation RF Catheter in a Porcine Model", *EuroPCR*, Paris, May 2015.
18. R. Tzafiriri, L. Bailey, J.H. Keating, F. Garcia-Polite, P.M. Markham, D. Prutchi, E.R. Edelman, "Enhanced Circumferential Ablation using a Multi-electrode Bipolar/Unipolar Over-the -Wire Renal Denervation RF Catheter System with Closed Loop Sensing", *TCT*, San Francisco, October 2015.

(b) Major Research Reports

1. D. Prutchi, T. Brosh, I. Zanger, and M. Arcan, "Development of a Methodology for the Biomechanical Analysis of the Pilot Seat for Modern High-Performance Aircraft", Research Supported by the Israel Ministry of Defense, 1988/1989.
2. M. Arcan, T. Brosh, I. Zanger, D. Prutchi, and S. Comisioneru, "Development of Composite Seating Cushions for Heavy Military Vehicles", Research Supported by the Israel Ministry of Defense, 1989.
3. D. Prutchi and A. Sagi-Dolev, "Development of an Active Electrode Array for the In-Flight Measurement of Biopotentials", Joint Research: TAU Biomechanics / Israel Air Force, Aeromedical Center, R&D Department, 1990/1991.
4. _____ "Natural Activation of a Powered Exoskeleton - Deriving High-Resolution Control Schemes of Voluntary Muscle Control Principles (VMCP)", Research Supported by the Israel Ministry of Defense, 1991-93
 - 4.1 D. Prutchi and M. Arcan, "Development of a High-Resolution Large-Array (HRLA) Surface EMG System for Powered Exoskeleton Control", 1993.
 - 4.2 D. Prutchi, A. Smilovich, O. Maimon and M. Arcan, "Remote Measurement of Human-Body/Exoskeleton Kinematics", 1993.

- 4.3 D. Prutchi, "Transputer Add-In Board for the IBM PC", 1993-rpt.10.1989, 1993.
- 4.4 D. Prutchi, J. Rosen, and M. Arcan, "Natural Activation of a Powered Exoskeleton - Development of a Predictive Myoprocessor based on Voluntary Muscle Control Principles (VMCP)", 1993.

(c) Articles

- 1. D. Prutchi, "Designing Printed Circuit Boards for High-Speed Logic", *CCI - The Computer Applications Journal*, Issue #42, 38-44, January 1994.
- 2. D. Prutchi, "Spectral Analysis: FFTs and Beyond", *CCI - The Computer Applications Journal*, Issue #52, 2-17, November 1994.
- 3. D. Prutchi, "Design of Battery-Operated Power Supplies", *CCI - The Computer Applications Journal*, Issue #55, 36-48, February 1995.
- 4. D. Prutchi, "Hot-Swapping on the PC: An Active Extender Card for the PC-ISA Bus", *CCI - The Computer Applications Journal*, Issue #62, 62-71, September 1995.
- 5. D. Prutchi, "Parallel Processing with Transputers", *CCI - The Computer Applications Journal*, Issue #64, 20-35, November 1995.
- 6. D. Prutchi, "LPT:Analog!, A 12-bit A/D Converter Printer Port Adapter", *CCI - The Computer Applications Journal*, Issue #67, 26-33, February 1996.
- 7. D. Prutchi, "Sniffing EMI in the Near-Field", *CCI - The Computer Applications Journal*, Issue #71, 30-41, June 1996.
- 8. D. Prutchi, "Designing Medical Electronic Device Prototypes. Part 1 - Design for Electrical Safety", *CCI - The Computer Applications Journal*, Issue #74, 26-40, September 1996.
- 9. D. Prutchi, "Designing Medical Electronic Device Prototypes. Part 2 - Testing for Electrical Safety", *CCI - The Computer Applications Journal*, Issue #75, 28-37, October 1996.
- 10. D. Prutchi, "Digital Generation of High-Frequency Waveforms", *CCI - The Computer Applications Journal*, Issue #84, 12-21, July 1997.
- 11. D. Prutchi, "The Laser Billboard - A Low-Cost Laser Image Projection System", *CCI - The Computer Applications Journal*, Issue #86, 28-35, September 1997.
- 12. D. Prutchi, "A Universal Sensor Interface for the PC", *Popular Electronics*, 16(6), 39-46, 75-77, June 1999.
- 13. D. Prutchi and M. Norris, "VCO Transforms PC Sound Card into Precision DC-Coupled A/D", *Ideas for Design, Electronic Design*, 59-60, August 19, 2002.
- 14. D. Prutchi and M. Norris, "Converting the PC Sound Card into a Precision DC-Coupled Arbitrary Waveform Generator", *CCI - The Computer Applications Journal*, Issue #147, 52-56, October 2002.

15. D. Prutchi, "Rainbow LED Indicates Voltage with Color", Design Idea, *EDN*, 106, December 7, 2004.
16. D. Prutchi, "Passive-Detector Receiver Keeps You Informed, Entertained During Flights", Design Idea, *EDN*, 98-99, May 12, 2005.

(d) White Papers

1. S.R. Prutchi and D. Prutchi, *Experiment Note: Exploring Compton Scattering Using the Spectrum Techniques Universal Computer Spectrometer*, Commissioned by Spectrum Techniques, LLC, January 2012.
2. D. Prutchi and S.R. Prutchi, *A Low-Cost, Super-Sensitive Scintillation Probe for the Prutchi CDV700-Pro Counter using a Surplus Philips XP5312/SN PMT*, www.diyPhysics.com Technical Note 2013-1, January 2013.
3. D. Prutchi and S.R. Prutchi, *Low-Cost Scintillation Probe Based on a Surplus XP3312 PMT for Ludlum Ratemeters and the Prutchi CDV700-Pro Radiation Counter*, www.diyPhysics.com Technical Note 2013-2, February 2013.
4. D. Prutchi, *A Do-It-Yourself Cooled PMT Probe Enclosure – Results, Lessons Learned, and Recommendations for Future Development*, www.diyPhysics.com Technical Note 2013-3, March 2013.
5. D. Prutchi, *Using Surplus Philips XP2422/SN PMTs in Scintillation Probes*, www.diyPhysics.com Technical Note 2013-4, April 2013.
6. D. Prutchi, P.R. Spehr, E. Haluska, P.V. Goode, "Analysis of Temperature Increase at the Device/Tissue Interface for Implantable Medical Devices Dissipating Endogenous Heat", 2011, online at www.implantable-device.com.
7. D. Prutchi, *DOLPi – A Low-Cost, RasPi-based Polarimetric Camera*, 2015 Hack-a-Day Prize 5th Place Winner, 2015. Available at www.diyPhysics.com, 2015
8. D. Prutchi, *diy Shortwave UV Image Converters for Solar-Blind and RUVIS Imaging*, www.UVIRimaging.com Technical Note 2016-1, June 2016.
9. D. Prutchi, *Black & White CCD Video Cameras for Near-UV Viewing*, www.UVIRimaging.com Technical Note 2016-2, July 2016.
10. D. Prutchi, *A DIY Long-, Medium-, and Short-Wave Ultraviolet Lamp for Fluorescence Photography*, www.UVIRimaging.com Technical Note 2016-3, October 2016.
11. D. Prutchi, *diy "Macro" and "Telephoto" Converter Lenses for Thermal Cameras*, www.UVIRimaging.com Technical Note 2018-1, March 2018.
12. D. Prutchi, *DIY Image Intensifier for Quantum Physics Experiments and other Feeble-Light Observations*, diyPhysics.com Technical Note 2018-1, March 2018.
13. D. Prutchi, *Converting a 1980s Video Camera into a Real-Time Polarimetric Imager*, diyPhysics.com

- Technical Note 2018-2, April 2018. First Prize Winner in Instructables' "Trash-to-Treasure" Contest.
14. D. Prutchi, J. Meyers, EmotiGlass – the First "Modulated-Emotion Reality" Device, 2015 Hack-a-Day Prize 4th Place Winner, 2018. Available at www.diyPhysics.com, 2018.

(e) Invited Talks

1. D. Prutchi, "A Practical Perspective on Developing Novel Commercial Active Implantable Medical Devices", Plenary Lecture, IEEE Summer School on the Design of Active Implantable Medical Devices, Bogota, Colombia, July 2013.
2. D. Prutchi, "Electroceuticals - Replacing Drugs by Devices Enabled through Advanced VLSI Technologies", Plenary talk, IEEE VLSI-DAT 2014, Hsinchu, Taiwan, April 2014.
3. D. Prutchi, "Implantable Sensors for Closed-Loop Electroceutical Devices", Keynote Lecture, Sensors Applications Symposium (SAS), 13-15, Rowan University, Glassboro, NJ, March, 2017.

E. PATENTS

1. D. Prutchi, U.S. Patent No. 5,431,772, *Rate Responsive Cardiac Pacemaker with Filtered Impedance Sensing and Method*, July 2, 1996.
2. L. Stotts, P. Paul and D. Prutchi, U.S. Patent No. 5,549,653, *Muscle Stimulation Electrode for Implantable Cardiac Stimulation Device with Warning System*, August 27, 1996.
3. D. Prutchi and P. Paul, U.S. Patent No. 5,556,421, *Implantable Medical Device with Enclosed Physiological Parameter Sensors or Telemetry Link*, September 17, 1996.
4. D. Prutchi, U.S. Patent 5,578,064, *Rate Responsive Pacemaker with Impedance Sensing*, November 26, 1996.
5. P. Paul and D. Prutchi, U.S. Patent 5,607,459, *Implantable Cardiac Stimulation Device with Time-of-Day Warning System*, March 4, 1997.
6. R. Sanders, P. Paul and D. Prutchi, U.S. Patent 5,609,615, *Implantable Device with Warning System and Electrode Tie Point*, March 11, 1997.
7. L. Stotts, P. Pauls and D. Prutchi, U.S. Patent 5,609,614, *Implantable Medical Device with Warning System with Automatic Regulation of Stimulation Strength*, March 11, 1997.
8. P. Paul and D. Prutchi, U.S. Patent 5,628,776, *Implantable Lead with Warning System*, May 13, 1997.
9. D. Prutchi, P. Paul, L. Stotts, U.S. Patent 5,630,838, *Muscle Stimulation Electrode for Implantable Cardiac Stimulation Device with Warning System*, May 20, 1997.
10. D. Cooke, D. Prutchi and P. Paul, U.S. Patent 5,643,328, *Implantable Cardiac Stimulation Device with Warning System Having Elongated Stimulation Electrode*, July 1, 1997.

11. P. Paul and D. Prutchi, European Patent Office Publication 9,712,645, *Feedthrough Assembly with Transient Voltage Suppressor and EMI Filter for Implantable Medical Devices*, September 4, 1997.
12. D. Prutchi and P. Paul, World Intellectual Property Organization Publication 9,743,003, *Implantable Medical Device with Confirmation of Patient Activation*, November 20, 1997.
13. P. Paul and D. Prutchi, U.S. Patent 5,697,958, *Electromagnetic Noise Detector for Implantable Medical Devices*, December 16, 1997.
14. D. Prutchi and P. Paul, U.S. Patent 5,709,712, *Implantable Medical Device with Enclosed Physiological Parameter Sensors or Telemetry Link*, January 20, 1998.
15. D. Prutchi, P. Paul and D. Genzer, U.S. Patent 5,722,998, *Apparatus and Method for the Control of an Implantable Medical Device*, March 3, 1998.
16. E. Schroepfel, D. Prutchi and A. Routh, U.S. Patent 5,749,900, *Implantable Medical Device Responsive to Heart Variability Analysis*, May 12, 1998.
17. D. Prutchi and R. Simmons, U.S. Patent 5,701,895, *Subcutaneous Electrical Data Port*, December 30, 1997.
18. P. Paul, D. Prutchi and D.C. Deno, U.S. Patent 5,713,935, *Method and Apparatus for Monitored Biphasic Cardiac Impedance Sensing*, February 2, 1998.
19. P. Paul and D. Prutchi, U.S. Patent 5,735,883, *Implantable Cardiac Stimulator with Impedance Based Autothreshold*, April 7, 1998.
20. D. Prutchi and P. Paul, U.S. Patent 5,718,720, *Implantable Cardiac Stimulator with Capture Detection and Impedance Based Autotuning of Capture Detection*, February 17, 1998.
21. P. Paul and D. Prutchi, U.S. Patent 5,713,931, *Method and Apparatus for Detecting Amplitude Loss in Cardiac Pacing Pulses*, February 2, 1998.
22. D. Prutchi and P. Paul, U.S. Patent 5,735,880, *Method and Apparatus for Reliably Producing Pacing Pulse Trains*, April 7, 1998.
23. P. Paul and D. Prutchi, U.S. Patent 5,709,712, *Implantable Cardiac Stimulation Device with Warning System*, January 20, 1998.
24. W. Rottenberg, D. Prutchi and P. Paul, U.S. Patent 5,735,882, *Cardiac Stimulator with Backup-Mode Self-Recovery*, April 7, 1998.
25. D. Prutchi, E. Schroepfel and A. Routh, World Intellectual Property Organization Publication 9,815,317, *Controllable Drug Injection Electrode*, April 16, 1998.
26. D. Prutchi and P. Paul, U.S. Patent 5,873,733, *Training Unit for the Pacemaker Emergency Intervention System Using Magnetic Entry Code*, February 23, 1999.
27. D. Prutchi and P. Paul, U.S. Patent 5,987,357, *Cardiac Stimulator having Stackable Microelectronic*

Components with Self-Addressing Scheme, November 16, 1999.

28. D. Prutchi and P. Paul, U.S. Patent 5,978,710, *Implantable Cardiac Stimulator with Safe Noise Mode*, November 2, 1999.
29. D. Prutchi and P. Paul, U.S. Patent 5,978,713, *Implantable Device with Digital Waveform Telemetry*, November 2, 1999.
30. D. Prutchi, U.S. Patent 6,022,322, *Non-Invasive Cardiorespiratory Monitor with Synchronized Bioimpedance Sensing*, February 8, 2000.
31. P. Paul and D. Prutchi, U.S. Patent 5,944,744, *Implantable Cardiac Stimulator with Automatic Electrogram Profiling*, August 31, 1999.
32. E. Schroepfel, D. Prutchi and A. Routh, U.S. Patent 6,035,335, *Implantable Medical Device Responsive to Heart Variability Analysis*, March 7, 2000.
33. D. Prutchi, P. Paul, G. Martin, U.S. Patent 6,141,585, *Implantable Cardiac Stimulator with Electrode-Tissue Interface Characterization*, October 31, 2000.
34. P. Paul and D. Prutchi, U.S. Patent 6,112,121, *Implantable Medical Device with Positive Indication of Lead Connection and Connector Therefor*, August 29, 2000.
35. D. Prutchi, World Intellectual Property Organization Publication 27,465-A1, *Output Circuit for Cardiac Control*, May 18, 2000.
36. E. Schroepfel, D. Prutchi and A. Routh, U.S. Patent 6,144,878, *Implantable Medical Device Responsive to Heart Variability Analysis*, November 7, 2000.
37. D. Prutchi, U.S. Patent 6,152,882, *Apparatus and Method for Chronic Measurement of Monophasic Action Potentials*, November 28, 2000.
38. D. Prutchi and P. Paul, U.S. Patent 6,198,968, *Implantable Cardiac Stimulator with Safe Noise Mode*, March 6, 2001.
39. D. Prutchi and P. Paul, U.S. Patent 6,208,579, *Cardiac Stimulator having Stackable Microelectronic Components with Self-Addressing Scheme*, March 27, 2001.
40. Y. Mika, D. Prutchi, Z. Belsky, A. Routh, U.S. Patent 6,223,072, *Apparatus and Method for Collecting Data Useful for Determining the Parameters of an Alert Window for Timing Delivery of ETC Signals to a Heart under Varying Cardiac Conditions*, April 24, 2001.
41. D. Prutchi, N. Darvish, A. Routh, E. Haluska, Z. Belsky, World Intellectual Property Organization Publication 130,436-A2, *Device for Cardiac Therapy*, May 3, 2001.
42. Y. Mika, D. Prutchi, Z. Belsky, A. Routh, U.S. Patent 6,233,487, *Apparatus and Method for Setting the Parameters of an Alert Window used for Timing the Delivery of ETC signals to a Heart under Varying Cardiac Conditions*, May 15, 2001.

43. Y. Mika, D. Prutchi, Z. Belsky, Y. Kimchy, World Intellectual Property Organization Publications 57,952C1, 1,171,199-A1, *Apparatus and Method for Timing the Delivery of Non-Excitatory ETC Signals to a Heart*, May 25, 2001.
44. E. Schroepel, D. Prutchi, German Patent DE69,612,628, *Implantierbare, Medizinische Vorrichtung zur Analyse von Herzrhythmusabweichungen*, May 31, 2001.
45. Y. Mika, D. Prutchi, Z. Belsky, U.S. Patent 6,263,242, *Apparatus and Method for Timing the Delivery of Non-Excitatory ETC Signals to a Heart*, July 17, 2001.
46. D. Prutchi, M. Norris, U.S. Patent 6,335,538, *Electro-Optically Driven Solid State Relay System*, January 1, 2002.
47. D. Prutchi, U.S. Patent 6,529,778, *Fluid Phase Electrode Lead*, March 4, 2003.
48. Y. Kimchi, D. Prutchi, I. Shemer, U.S. Patent 6,360,123, *Mechanical Property of an Organ or Body Cavity by Impedance Determination*, March 19, 2002.
49. Y. Mika, D. Prutchi, U.S. Patent 6,360,126, *Apparatus and Method for Controlling the Delivery of Contractility Modulating Non-Excitatory Signals to the Heart*, March 19, 2002.
50. D. Prutchi, U.S. Patent 6,370,424, *Non-Invasive Cardiorespiratory Monitor with Synchronized Bioimpedance Sensing*, April 9, 2002.
51. Y. Mika, D. Prutchi, Z. Belsky, Y. Kimchy, U.S. Patent 6,424,866, *Apparatus and Method for Timing the Delivery of Non-Excitatory ETC Signals to a Heart*, July 23, 2002.
52. Y. Mika, D. Prutchi, Z. Belsky, A. Routh, U.S. Patent 6,459,928, *Apparatus and method for collecting data useful for determining the parameters of an alert window for timing delivery or ETC signals to a heart under varying cardiac conditions*, October 1, 2002.
53. D. Prutchi, P. Paul, G. Martin, U.S. Patent 6,473,648, *Implantable Cardiac Stimulator with Electrode-Tissue Interface Characterization*, October 29, 2002.
54. S. Policker, Y. Mika, D. Prutchi, I. Shemer, U.S. Patent 6,480,737, *Field Delivery Safety System using Detection of Atypical ECG*, November 12, 2002.
55. D. Prutchi and P. Paul, U.S. Patent 6,507,759, *Implantable Device with Digital Waveform Telemetry*, January 14, 2003.
56. Y. Mika, D. Prutchi, U.S. Patent 6,522,904, *Bipolar Sensor for Muscle Tissue Action Potential Duration Estimation*, February 18, 2003.
57. D. Prutchi and P. Paul, U.S. Patent 6,525,986, *Cardiac Stimulator having Stackable Microelectronic Components with Self-Addressing Scheme*, February 25, 2003.
58. D. Prutchi, P. Paul, G. Martin, U.S. Patent 6,564,099, *Implantable Cardiac Stimulator with Electrode-Tissue Interface Characterization*, May 13, 2003.

59. E. Schroepfel, D. Prutchi and A. Routh, U.S. Patent 6,571,121, *Implantable Medical Device Responsive to Heart Variability Analysis*, May 27, 2003.
60. E. Schroepfel, D. Prutchi and A. Routh, U.S. Patent 6,571,122, *Implantable Medical Device Responsive to Heart Variability Analysis*, May 27, 2003.
61. D. Prutchi, Y. Mika, Z. Belsky, U.S. Patent 6,587,721, *Trigger-Based Regulation of Excitable Tissue Control of the Heart*, July 1, 2003.
62. D. Prutchi, U.S. Patent 6,647,289, *Non-Invasive Cardiorespiratory Monitor with Synchronized Bioimpedance Sensing*, November 11, 2003.
63. D. Prutchi, U.S. Patent 6,662,055, *Multi-Electrode Intravascular Lead*, December 9, 2003.
64. D. Prutchi, Y. Mika, U.S. Patent 6,675,043, *Sensor-Based Regulation of Excitable Tissue Control of the Heart*, January 6, 2004.
65. D. Prutchi, P. Paul, G. Martin, U.S. Patent 6,788,972, *Implantable Cardiac Stimulator with Electrode-Tissue Interface Characterization*, September 7, 2004.
66. D. Prutchi and P. Paul, U.S. Patent 6,959,213, *Implantable Device with Digital Waveform Telemetry*, October 25, 2005.
67. A.G. Routh, E. Haluska, N. Darvish, D. Prutchi, Z. Belsky, U.S. Patent 6,993,385, *Cardiac Contractility Modulation Device Having Anti-Arrhythmic Capabilities and a Method of Operating Thereof*, January 31, 2006.
68. D. Prutchi, N. Darvish, A. Routh, E. Haluska, Z. Belsky, U.S. Patent 7,027,863, *Device For Cardiac Therapy*, April 11, 2006
69. S. Ben-Haim, S. Policker, D. Prutchi, B. Rousso, J. Sholder, World Intellectual Property Organization WO06087712A2, *Charger with Data Transfer Capabilities*, August 24, 2006.
70. S. Policker, D. Prutchi, O. Bitton, B Rousso, O. Glassberg, Y. Mika, T. Harel, W. Haddad, L. Milman, World Intellectual Property Organization WO06129321A2, *GI Lead Implantation*, September 28, 2006.
71. D. Prutchi, P. Paul, G. Martin, U.S. Patent 7,200,441, *Implantable Cardiac Stimulator with Electrode-Tissue Interface Characterization*, April 3, 2007.
72. A.G. Routh, E. Haluska, N. Darvish, D. Prutchi, Z. Belsky, U.S. Patent 7,647,102, *Cardiac Contractility Modulation Device Having Anti-Arrhythmic Capabilities and a Method of Operating Thereof*, January 12, 2010.
73. B. Rousso, N. Eizenberg, D. Prutchi, Y. Mika, Y. Snir, U.S. Patent 7,966,067, *Apparatus and Method for Delivering Electrical Signals to a Heart*, June 21, 2011.
74. S. Policker, D. Prutchi, O. Bitton, B Rousso, O. Glassberg, U.S. Patent 8,265,758, *Wireless Leads for Gastrointestinal Tract Applications*, September 11, 2012.

75. B. Rouso, E. Lebanony, D. Prutchi, O. Bitton, U.S. Patent 8,406,864, *Assessing Cardiac Activity*, March 26, 2013.
76. S. Ben-Haim, D. Prutchi, World Intellectual Property Organization 2013136287 A1, *Gyroscopic Apparatuses and Methods of Using Same*, September 19, 2013.
77. B. Rouso, Y. Mika, S. Ben-Haim, D. Burkhoff, D. Prutchi, U.S. Patent 8,706,230, *Implantable lead connector*, April 22, 2014.
78. D. Prutchi, World Intellectual Property Organization WO/2014/118734, *Unipolar and/or Bipolar Ablation Catheter*, August 7, 2014.
79. D. Prutchi, World Intellectual Property Organization WO/2014/118733, *Ablation Catheter with Insulation*, August 7, 2014.
80. D. Prutchi, P. Spehr, U.S. Patent 8,901,878, *Transcutaneous Charging Device*, December 2, 2014.
81. S. Ben-Haim, D. Prutchi, Y. Ben-Haim, U.S. Patent App. 15/190,451, *Simple Control of Complex Bio-Implants*, February 2019.

E. PUBLISHED PHOTOGRAPHY

1. D. Prutchi, First Atomic Pacemaker, in *Guinness World Records 2013 Book*, Page 38.
2. D. Prutchi, Balsa Muisca, in J. Retana, *Un Día, Una Historia – Memoria de los Hitos más Relevantes de España*, 384 pages, Sekotia, 2015.

F. DISCOGRAPHY

1. Additional Vocals in “Rescue” by Jenny Polotsky (Music and Lyrics: Ronen Blonder; Produced, Arranged and Recorded by Twelve Eyes Music Productions)