## Curriculum Vitae

## Gad Alon, Ph.D., PT

## Emeritus Associate Professor

Department of Physical Therapy & Rehabilitation Sciences

## University of Maryland School of Medicine

## Date: April 19, 2023

## Contact Information

## University of Maryland School of Medicine,

## Department of Physical Therapy & Rehabilitation Science

## 100 Penn Street

## Baltimore, MD 21201

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## Fax: (410) 706-6387

## Email: galon@som.umaryland.edu

## Foreign Languages: Hebrew (native)

## Education

## Undergraduate:

## 1968 Certificate in Physical Therapy, Wingate Institute, Israel.

## 1972 University of Maryland, Collage Park, MD

## Graduate:

## 1975 M.S. Medical College of Virginia, Richmond, VA

## 1979 Ph.D. University of Maryland, Collage Park, MD

## Post Graduate Education and Training

## 1977 Lower Limb Prosthetics, New York University, NY

## 1978 Biofeedback, Emory University, Atlanta, GA

## 1979 Neuro‑Developmental Treatment (NDT) for Adult Hemiplegia, Washington, D.C.

## Medical Licensures

## 2014-2016 Physical Therapy, State of Maryland

## Employment History

## Faculty Appointment

## 1975‑1978 Instructor, Department of Physical Therapy, University of Maryland School of Medicine

## 1978‑1980 Assistant Professor, Department of Physical Therapy, University of Maryland School of Medicine,

## 1980-1981 Acting Chairman, Physical Therapy School Chaim Sheba Medical Center, Tel‑Hashomer, Israel

## 1983‑1988 Assistant Professor, Department of Physical Therapy, University of Maryland School of Medicine,

## 1988-2011 Associate Professor, Department of Physical Therapy & Rehabilitation Science, University of Maryland School of Medicine

2012 Emeritus Associate Professor, Department of Physical Therapy & Rehabilitation Science, University of Maryland School of Medicine

## Clinical Appointment

## 1968-1970 Staff Physical Therapist, Leowinstein Rehabilitation Center University of Tel‑Aviv, Raanana, Israel

## 1970‑1972 Chief Physical Therapist, "Gapim" Prosthetic Center, Tel‑Aviv, Israel

## 1972‑1977 Staff Physical Therapist (part-time), Fairfax Hospital, Falls Church, VA

## 1981-1983 Deputy Director, Lewis National Prosthetic Institute, Tel-Hashomer, Israel

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## Professional Memberships

## 1985-present Member American Physical Therapy Associat­ion

## 1983-present International Society Electrophysiological Kinesiology

## 2006-present World Federation for Neurorehabilitation

## 2008-present International Functional Electrical Stimulation Society (BOD)

## Honors and Awards

## 1985 Faculty of the Year Award, University of Maryland School of Medicine, Department of Physical Therapy

## 1993 Faculty of the Year Award, University of Maryland School of Medicine, Department of Physical Therapy

## 2000 Faculty of the Year Award, University of Maryland School of Medicine, Department of Physical Therapy

## 2000 Award of Excellence Electrophysiology Section, American Physical Therapy Association

1. Faculty of the Year Award, University of Maryland School of Medicine,

Department of Physical Therapy

## 2004 Faculty of the Year Award, University of Maryland School of Medicine,

## Department of Physical Therapy & Rehabilitation Science

2005 Member, Phi Kappa Phi, University of Maryland teacher award

## 2010 Faculty of the Year Award, University of Maryland School of Medicine,

## Department of Physical Therapy

2012 Associate Professor, Emeritus, University of Maryland, School of Medicine

2014 APTA the John H. P. Maley lecture award

2020 APTA Academy of Clinical Electrophysiology & Wound management Excellence

In Research Award

## Administrative Service

## Institutional Service

## 1983-1986 Education Committee, Department of Physical Therapy

## 1986-1987 Admissions Committee, Department of Physical Therapy

## 1987-1991 Chair, Admissions Committee, Department of Physical Therapy

## 1991-1994 Chair, Education Committee, Department of Physical Therapy

## 1992-1997 Chair, Search Committee, Department of Physical Therapy

## 1994-1995 Chair, Admissions Committee, Department of Physical Therapy

## 1995-1999 Research Committee, Department of Physical Therapy

## 1995-1999 Ph.D. Committee, Department of Physical Therapy

## 1999-2001 PPDPT Committee, Department of Physical Therapy

## 2001-2003 Alternate member School of Medicine Council, University of Maryland

## 2003-2009 Admission coordinator, DscPT program, Department of Physical Therapy

## 2003-2006 Member School of Medicine Council, University of Maryland

## 2005-2011 Chair, Admission committee, DPT program, Department of Physical Therapy & Rehabilitation Science

## Local Service

## National Service

## 1986-1992 APTA - Advisory Committee - Section of Electrophysiology

## 1989-1999 Editorial Board, Journal of Clinical Electrophysiology

## 1991-1994 Editorial Board, Physical Therapy Practice

## 1992-present Reviewer, Journal of Sports Physical Therapy

## 1994-present Reviewer, Physical Therapy journal

## 1993-2000 Association for the Advancement of Medical Instrumentation (AAMI) - TES Subcommittee

## 1996-2000 APTA Committee for Screening Proposals/Abstracts

## 1998-present Reviewer, Journal of Athletic Training

## 2000-present Reviewer, Archives Physical Medicine Rehabilitation

## 2001-present Reviewer, Journal Research Development Rehabilitation

2004-present Reviewer, Developmental Medicine Child Neurology

2005-present Reviewer, Journal Sports Science & Medicine

2006-present Reviewer, Neurorehabilitation & Neural repair

2007-present Reviewer, Stroke

2007-present Reviewer, IEEE Eng Med Biol Soc

2007-present Reviewer, American Journal Physical Medicine Rehabilitation

2016-present Reviewer, Medical Engineering & Physics

2016-present Reviewer, Journal Physical Medicine

## Teaching Service (all 3 credits unless indicated otherwise)

1983-1993 Theory & Practice III (PTAB 343), 14 weeks, 68 students, Lecture/lab

1983-1993 Amputee/Prosthetics (PTAB 462), 14 weeks, 68 students, Lecture/lab

1983-1990 Gait Analysis (PTAB 322), 14 weeks, 68 students, Lecture/lab (1 credit)

1984-1991 Therapeutic Exercise I (PTAB 344), 14 weeks, 68 students, Lecture/lab

1986-1993 Burn/Dermatology (PTAB 452), 14 weeks, 68 students, Lecture/lab

(1 credit)

1994-2003 Management of Limb Amputation (PTAB 502), 14 weeks, 48 students, Lecture/lab (2 credits)

1994-2002 Electrotherapy/Testing (PTAB 443), 14 weeks, 48 students, Lecture/lab

1995-2003 Pathokinesiology (PTAB 571), 8 weeks, 56 students, Lecture/lab

2002-2009 Management of Pathological Movements (DPTP 545), 7 weeks, 16-18 students, Distant Learning + weekend Seminar

2003-2011 Basic Science III (DPTE 514), 12 weeks, 38 students, Lecture/lab

2003-2011 Musculoskeletal I (DPTE 522), 1 day, 46 students, Lecture/lab

2004-2011 Medical Issues II (DPTE 521), 3 weeks, 44 students, Lecture/lab

Neuromuscular I (DPTE 524), 1 day, 53 students, lecture/lab

2005-2011 Neuromuscular II (DPTE 527), 1 day, 46 students, lecture/lab

2007-2011 Musculoskeletal II (DPTE 525), 1 day, 53 students, Lecture/lab

2013 Electrophysiology Fundamentals: Independent study for the Ph.D. Program (one student)

## Mentoring

1996-1997 Dissertation advisory committee Joan Denise Kramer (School of Nursing)

2000-2004 Mentor (Keith S. McBride MPT -research therapist)

2002-2009 Academic Advisor (Joseph Antonio Roche - Ph.D. candidate)

2007-2008 Research Mentor to DscPT students: Amy Jones, Lee Miller, Paul Lastova, Tomoko Kim

2008 Doctoral Examination Committee Graduate school representative Tesng Shih-Chiao

2008-2009 Research Mentor to DscPT students: Jeremy Alter

2008-2011 Research Mentor to DscPT students:Kim Mcgarry, Allison Fender, Stephanie McQuen, Heather McCormack

## Grant Support

9/1/2020–8/31/2025 Zhang Li-Qun (PI), Alon G (Co-I)

NIDILRR Rehabilitation Engineering Research Project (90REMM0001-01-00)

Rehabilitation Interventions Based on Accurate Assessments with Combined Home-Hospital Rehabilitation

Total Cost: $4.625 million

**Completed Grant Funding**

1989-1990 Alon Gad, Tepper Steven (Co-PI).

The Effect of Neuromuscular Stimulation on Body Metabolism. UMAB P.T. Alumni Association Grant.

Total Direct Cost: $3,500.00

1990-1991 Alon Gad (PI, 25%)

The Effect of Pulsatile Current on Pressure Ulcers Healing.

Agency: Industry supported: Stayodynamics Corp. Inc.

Total Direct Cost: $74,512.00

1990-1991 Alon Gad (PI, 25%)

Threshold Excitation of Human Sensory and Motor Nerves.

Agency: Food and Drug Administration.

Total Direct Cost: $15,000.00

1991-1992 Alon Gad (PI, 25%)

The Effects of Electrode Size on Threshold Excitation of Human Sensory and Motor Nerves.

Agency: Food and Drug Administration.

Total Direct Cost: $20,000.00

1992-1993 Alon Gad (PI, 25%)

Transformation of the Latisimus Dorsi to a slow twitch fiber muscle.

Agency: Food and Drug Administration.

Total Direct Cost: $10,000.00.

1993-1994 Alon Gad (PI, 25%)

Tolerance and Conditioning As a Prerequisite for the Evaluation of Transcutaneous Neuromuscular Electrical Stimulation Devices.

Agency: Food and Drug Administration.

Total Direct Cost $15,000.00

1995-1996 Alon Gad (PI, 25%)

Antibiotics enhancement by Transcutaneous Electrical Stimulation.

Agency: Industry supported: Stayodynamics Corp. Inc.

Total Direct Cost: $35,400.00

1997-1998 Alon Gad (Co-Inv, 10%; PI – J. Magaziner)

Effect of exercise on recovery of function following hip fracture.

Agency: Claude D. Pepper Older American Independence Center, Pilot Project.

Total Direct Cost: $20,000.00

1997-1998 Alon Gad (Co-Inv, 5%; PI – A. Goldberg)

Electromagnetic Motor Evoked Potentials (MEPs) as a prognostic measure of functional outcomes in stroke patients.

Agency: Claude D. Pepper Older American Independence Center, Pilot Project.

Total Direct Cost: $15,000.00

1998-1999 Alon Gad (Co-Inv, 5%; PI – J. Magaziner)

Exercise rehabilitation in a community-dwelling older population.

Agency: Claude D. Pepper Older American Independence Center, Pilot Project.

Total Direct Cost: $10,000.00

1999-2000 Alon Gad (Co-Inv, 5%; PI – J. Magaziner)

Pilot study to identify functional limitations of patients recovering from hip fracture.

Agency: Claude D. Pepper Older American Independence Center, Pilot project.

Total Direct Cost: $4,100.00

1999-2000 Alon Gad (PI, 25%)

Training contract: Evaluation and Implementation of research protocols for C5 SCI and Stroke rehabilitation.

Agency: Industry supported: NESS Ltd.

Total Direct Cost: $72,304.00

2000-2001 Alon Gad (PI, 25%)

The Handmaster for providing active range of motion and hand function in stroke patients.

Agency: Industry supported: NESS Ltd.

Total Direct Cost: $90,745.00

2001-2002 Alon Gad (Co-I), 10%; PI – A. Goldberg

Pilot Project The construct of a hip fracture-specific functional tests and the feasibility of a new training program.

Agency: The Claude D. Pepper Older Americans Independence – Research Development Core (NIH P60 AG12583)

Total Direct Cost: $25,000.00

2002-2003 Alon Gad (PI, 30%)

The Handmaster for providing active range of motion and hand function in stroke patients.

Agency: Industry supported: NESS Ltd.

Total Direct Cost: $38,412.00 (Extension)

2003-2004 Alon Gad (PI, 30%)

The Handmaster for providing active range of motion and hand function in stroke patients.

Agency: Industry supported: NESS Ltd.

Total Direct Cost: $76,824.00 (Extension)

09/01/04 – 10/31/05 Gad Alon (PI, 30%)

Electrical stimulation and upper limb recovery in stroke. A Pilot study.

Agency: Industry supported, Bioness Inc.

Annual Direct Costs: $83,333

Total Direct Costs: $100,000

11/01/05 – 10/31/06 Gad Alon (PI, 30%)

Functional Electrical Stimulation (FES) Contribution to the Recovery of Ambulation Following Stroke: A Pilot Study.

Agency: Industry supported, Bioness Inc.

Annual Direct Costs: $86,736

Total Direct costs: $106,736

07/01/07 – 07/23/08 Gad Alon (PI, 30%)

FES Based Motorized Cycle Effects On Chronic Stroke: A Feasibility Study.

Agency: Industry supported Restorative Therapies Inc.

Annual Direct Costs: $60,574

Total Direct Costs: $74,967

06/01/10 – 10/05/11 Gad Alon (PI, 30%)

Can transcranial direct current stimulation (tDCS) modulate protective stepping and gait performance of people with Parkinson’s disease.

Agency: Industry supported Fischer-Wallace Inc.

Annual Direct Costs: $27,273

Total Direct Costs: $ 30,000

09/20/14 – 02/30/16 Gad Alon (Co-I) (15%)

NIH R21 “saving Life and Limb Electrical Stimulation for Elderly with PAD”

Total Direct Cost: $175,000

## Grant Consultant

* 1. American Heart Association (0575060) “Electrical stimulation dosing and neural mechanisms of recovery in subacute stroke” Stephen J. Page, PI.

2007-2012 NIH R01 CA120950-01A1 “Efficacy of electrical stimulation for dysphagia in Head & Neck cancer patients”. Susan E. Langmore, PI.

2016-2018 NIH (1 R21 AG050890-01) “Rehabilitation, NMES and High Protein to Reduce Post ICU Syndrome in the Elderly”. Verceles, Avelino Catalino, MD, PI.

## Publications

## Journals (Peer Reviewed)

1. Hanson CT, Joslow B, Danoff JV, **Alon G**. Electromyographic response of the elbow flexors to a changing, dislocating force. Arch Phys Med Rehabil 1981;62(12):631-4.
2. **Alon G,** Allin J, Inbar GF. Optimization of pulse duration and pulse charge during transcutaneous electrical nerve stimulation. Australian J Physiotherapy 1983;29:195-201.
3. **Alon G.** High voltage stimulation. Effects of electrode size on basic excitatory responses. Phys Ther 1985;65(6):890-5.
4. **Alon G,** McCombe SA, Koutsantonis S, Stumphauzer LJ, Burgwin KC, Parent MM, Bosworth RA. Comparison of the Effects of Electrical Stimulation and Exercise on Abdominal Musculature, J Orthop Sports Phys Ther 1987;8:567-573.
5. Venable M, Collins M, O'Bryant H, Denegar C, Sedivec M, **Alon G**: Effect of Transcutaneous Stimulation on the Development of Strength, Vertical Jump Performance, Power and Time to Peak Power. J App Sports Sci Res 1991;5:139-143.
6. Cosgrove KA, **Alon G**, Bell SF, Fischer SR, Fowler NR, Jones TL, et al. The electrical effect of two commonly used clinical stimulators on traumatic edema in rats. Phys Ther 1992;72(3):227-233.
7. **Alon G,** Frederickson R, Gallager L, Rehwoldt CT, Guillen M, Pement ML, et al. Electrical stimulation of the abdominals: The effects of three versus five weekly treatments. J Clin Electrophysiology 1992;4:5-11.
8. Gentzkow, GO, **Alon, G**, Taler GA, Eltorai IM, Montroy RE. Healing of refractory Stage III and IV pressure ulcers by a new electrical stimulation device. Wounds 1993;5:160-172.
9. Rolle WC, **Alon G**, Nirschl RP, Sobel J.Comparison of subliminal and placebo stimulation in the management of elbow tendinitis. J Clin Electrophysiol 1994; 6: 4-9.
10. **Alon G,** Kantor G, Ho HS. Effects of electrode size on basic excitatory responses and on selected stimulus parameters. J Orthop Sports Phys Ther 1994;20(1):29-35.
11. Kantor G, **Alon G,** Ho HS. The effects of selected stimulus waveforms on pulse and phase characteristics at sensory and motor thresholds. Phys Ther 1994;7:951-962.
12. **Alon G,** Kantor G, Ho HS. The effect of three types of surface electrodes on threshold excitation of human motor nerve. J Clin Electrophysiology 1996;8:2-8.
13. **Alon G,** Taylor DJ. Electrically elicited minimal visible tetanic contraction and its effect on abdominal muscles strength and endurance. Eur J Phys Med Rehabil 1997;7:2-6.
14. Fisher WW, Bowman LG, Thompson RH, Contrucci SA, Burd L, **Alon G.** Reductions in self-injury produced by transcutaneous electrical nerve stimulation. J Appl Behav Anal 1998;31(3):493-496.
15. **Alon G,** Dar A, Katz-Behiri Dea. Efficacy of a hybrid upper limb neuromuscular electrical stimulation system in lessenning selected impairments and dysfunctions consequent to cerebral damage. J Neuro Rehabil 1998;12:73-80.
16. **Alon G,** Syron SC, Smith GV. Is transcranial electrical stimulation (TCES) a safe intervention for children with cerebral palsy? J Neuro Rehabil 1998;12:65-72.
17. **Alon G**, Kantor G, Smith GV. Peripheral nerve excitation and plantar flexion force elicited by electrical stimulation in males and females. J Orthop Sports Phys Ther 1999;29(4):208-214; discussion 215-217.
18. Targan RS**, Alon G**, Kay SL. Effect of long-term electrical stimulation on motor recovery and improvement of clinical residuals in patients with unresolved facial nerve palsy. Otolaryngol Head Neck Surg 2000;122(2):246-252.
19. Laufer Y, Ries J, Leininger P, **Alon G**. Comparison of Quadriceps Femoris Muscle Torque and Fatigue Generated by Neuromuscular Electrical Stimulation with Three Different Waveforms. Phys Ther 2001;81:1307-1316.
20. **Alon G,** McBride S, Ring H. Improving selected hand functions using upper extremity noninvasive neuroprosthesis in persons with chronic stroke. J Stroke & Cerebrovascular Disease 2002;11:99-106.
21. **Alon G**, McBride S. Selected functional gains for subjects with C5 tetraplegia using the NESS Handmaster neuroprosthesis. Arch Phys Med Rehabil 2003;84:119-124.
22. Smith GV, **Alon G**, Roys SR, Gullapalli RP. Functional MRI determination of a dose-response relationship to lower extremity neuromuscular electrical stimulation in healthy subjects. Exp Brain Res 2003;150(1):33-9.
23. **Alon G,** Stibrant-Sunnerhagen K, Geurts ACH, Ohry A. A home-based, self-administered stimulation program to improve selected hand functions of chronic stroke. NeuroRehabilitation 2003;18:215-225.
24. **Alon G**, Ring H. Gait and hand function enhancement following training with a multi-segment hybrid-orthosis stimulation system in stroke patients. J Stroke & Cerebrovascular Disease 2003;12(5):209-216.
25. **Alon G.** Training dosage and timing of electrical stimulation may be the key for maximizing the effects of NMES in neuro-rehabilitation. In: Soroker N, Ring H, editors. Advances in Physical and Rehabilitation Medicine: Monduzzi Editore; 2003. p. 441-447.
26. Gullapalli RP, Maitra R, Roys SR, Smith GV, **Alon G,** Greenspan J. Reliability estimation of grouped functional imaging data using penalized maximum likelihood. Magn Reson Med 2005;53:1126-1134.
27. **Alon G,** Smith GV. Tolerance and conditioning to neuro-muscular electrical stimulation within and between sessions and gender. Journal Sports Science & Medicine 2005;4:395-405.
28. **Alon G**, Levitt AF, McCarthy PA. Functional electrical stimulation (FES) enhancement of upper extremity functional recovery during ischemic stroke rehabilitation: A pilot study. Neurorehabil Neural Repair 2007;21:207-215.
29. Benjamin SJ, Flood JN, Bechtel R, **Alon G**. Measurement of soft tissue temperature and impedance following the application of transdermal direct current. Physiotherapy 2007;93:114-120.
30. **Alon G**, Levitt AF, McCarthy PA. **Functional Electrical Stimulation (FES) May Modify the Poor Prognosis of Stroke Survivors with Severe Motor Loss of the Upper Extremity: A Preliminary Study. Amer J Physical Med Rehabil 2008;87:627-636.**
31. **Alon G.** Defining and measuring residual deficits of the upper extremity following cerebral vascular accident (CVA): A new perspective. Top Stroke Rehabil 2009; 16:167-76.
32. Kim T, Gordes KL, **Alon G**. Utilization of Physical Therapy in Home Health Care Under the Prospective Payment System. Journal geriatric Physical Therapy 2010;33:2-9.
33. Embrey DG, Holtz SL, **Alon G,** Westcott-McCoy S, Brandsma BA. Functional Electrical Stimulation to Dorsiflexors and Plantar Flexors during Gait to Improve Walking in Adults with Chronic Hemiplegia. Arch Phys Med Rehabil 2010;91:687-696.
34. **Alon G,** Conroy V, Donner T. Intensive training of subjects with chronic hemiparesis on a motorized cycle combined with functional electrical stimulation (FES): A feasibility and

safety study. Physiother. Res. Int. 2011;16**:**81–91. Online. [www.interscience.wiley.com](http://www.interscience.wiley.com) DOI: 10.1002/pri.475

1. **Alon G,** Roys SR, Gullapalli RP, Greenspan JD. Non-invasive electrical stimulation of the brain (ESB) modifies the resting-state network connectivity of the primary motor cortex. Brain Res. 2011;1403:37-44.
2. Linkov G, Branski RC, Amin M, Chernichenko N, Chen C-H, **Alon G**, Langmore S, Richard Wong R, Kraus D. A murine model of neuromuscular electrical stimulation on subcutaneous squamous cell carcinoma: Potential implications for dysphagia therapy. [Head Neck.](http://www.ncbi.nlm.nih.gov/pubmed/22083666) 2012;34:1428-1433.
3. **Alon G**, Yungher DA, Shulman LM, Rogers MW. Safety and immediate effect of non-invasive transcranial pulsed current stimulation (tPCS) on gait and balance in Parkinson’s disease. Neurorehabilitation & Neural Repair. 2012;26:1089-1095.
4. **Alon G,** Embrey DG, Brandsma BA, Stonestreet J. Comparing four electrical stimulators with different pulses properties and their effect on the discomfort and elicited Dorsiflexion. International J Physiotherapy Res 2013;1:122-129.
5. **Alon G.** Functional Electrical Stimulation (FES): Transforming Clinical Trials to Neuro-Rehabilitation Clinical Practice- A Forward Perspective. J Novel Physiotherapies 2013: <http://dx.doi.org/10.4172/2165-7025.1000176>.
6. Sours C, **Alon G**, Roys S, Gullapalli RG. Modulation of Resting State Functional Connectivity of the Motor Network by Transcranial Pulsed Current Stimulation (tPCS). Brain Connectivity. 2014;4(3):157-165.
7. Alon G. Loss of upper Extremity Motor Control and Function affects Women more than Men. J Nov Physiother Phys Rehabil 2014;1:104-107.
8. Embrey DG, **Alon G**, Brandsma BA, Vladimir F, Silva A, Pflugeisen BM, Amoroso PJ. Functional electrical stimulation improves quality of life by reducing intermittent claudication. International Journal Cardiology 2017;243:454-459 <http://dx.doi.org/10.1016/j.ijcard.2017.05.097>.
9. **Alon G.** Functional Electrical Stimulation (FES): Clinical successes and failures to date. J Nov Physiother Rehabil 2018; 2: 080-086. <https://doi.org/10.29328>.
10. Motavalli G, McElroy J, **Alon G.** An exploratory electrical stimulation protocol in the management of an infant with spina bifida: a case report. Child Neurology Open 2019;6:1-6.
11. Rodgers MM, **Alon G**, Pai VM, Conroy RS. Wearable technologies for active living

and rehabilitation: Current research challenges and future opportunities. Journal of Rehabilitation and Assistive Technologies Engineering. 2019;6:1-9.

46. **Alon G.** Obstetric Brachial Plexus Injury (OBPI): Is Functional Electrical Stimulation (FES)

a Viable Intervention Option? J. Novel Physiotherapies 2019;9:5-6

47. **Alon G**. A new paradigm is needed to guide the utility of functional electrical stimulation in

rehabilitation medicine. J Nov Physiother Phys Rehabil 2020;7:45-48.

48. Chieh-ling Yang, **Alon G**, Creath RA, Magder L, Rogers MW, McCombe Waller S.

Effects of transcranial direct current stimulation (tDCS) on posture, movement planning,

and execution during standing voluntary reach following stroke. J. NeuroEngineering and

Rehabilitation 2021;18: <https://doi.org/10.1186/s12984-020-00799-8>

49. Burgess LC, Venugopalan L, Badger J, Street T, **Alon G**, Jarvis JC, Wainwright TW,

Everington T, Taylor P, Swain ID. Could neuromuscular electrical stimulation improve the

recovery of people with Covid-19 who require care in the intensive care unit? A narrative

review. J Rehabil Med 2021; 53: jrm00164.

50. Verceles A, Alon G, et al. Combining Exercise, Protein Supplementation and Electric

Stimulation to Mitigate Muscle Wasting and Improve Outcomes for Survivors of Critical

Illness - The ExPrES Study. Heart and Lung J. 2023;58: 229-235.

## Books

1. **Alon G**, DeDomenico G. High Voltage Stimulation: An Integrated Approach to Clinical Electrotherapy, Chattanooga, TN: Chattanooga Corporation, 1987.

## Book Chapters

1. **Alon G**. High Voltage Stimulation, Chattanooga, TN: Chattanooga Corporation, 1984.
2. **Alon G**. Principles of Electrical Stimulation. In: Nelson RM, and Currier DP. (eds): Clinical Electrotherapy. Connectic­ut: Appleton & Lange, 1987.
3. **Alon G**. Electro-orthopedics: A Review of Present Electrophysiological Responses and Clinical Efficacy of Transcutaneous Stimulations. In Grana WA (ed); Advances in Sports Medicine and Fitness. Chicago: Year Book Vol 2, 1989. pp. 295-323.
4. **Alon G**. Principles of Electrical Stimulation. In: Nelson RM, and Currier DP. (eds.): Clinical Electrotherapy, 2nd Ed. Connecticut: Appleton & Lange, 1991, pp. 35-103.
5. **Alon, G**., Evaluation of Clinical Stimulators In: Physical Therapy Practice, Guest Editor, Andover Medical Publishers, Inc., Stoneham, MA 02180, 1992; Vol 1, pp. 7-19.
6. **Alon G**. Principles of Electrical Stimulation. In: Nelson RM, Hayes KW, Currier DP. (eds): Clinical Electrotherapy, 3nd Ed. Connecticut: Appleton & Lange, 1999, pp. 55-139.
7. Gorman PH, **Alon G,** Peckham, PH. Functional Electrical Stimulation in Neurorehabilitation. In: Selzer ME, Clark S, Cohen L, Duncan P, Gage F: Neural Repair and Rehabilitation. Cambridge University Press, Volume II, Chapter 9, 2006, pp.119-135.
8. Gorman PH, **Alon G,** Kornhauser SH. Electrotherapy: Medical Treatment Using Electrical Currents. In O’Young BJ, Young MA, Stiens SA: Physical Medicine & Rehabilitation Secrets, 3rd ed. Mosby-Elsevier, 2007, pp.226-232.
9. **Alon G,** Grant RA, Vivekanandan S, Slotkin JR. Physical Medicine & Rehabilitation Secrets, 4th ed. Chapter 21 Electrotherapy: Medical Treatments Using Electricity. Elsevier Health 2023, pp.153-158

## Abstracts/Proceedings

## 

1. **Alon G.** Electromyographic Comparison of Muscular Activity During Normal and Reverse Actions," In: Hobart DJ, Simard TG, Danoff JV. (Editors) Proceedings: International Society of Electrophysiological Kinesiology, North American Regional Meeting. Baltimore, MD, 1978.
2. Danoff JV, **Alon G.** The Effect of Electronic Processing on the Quantitative EMG Signal. Proceedings: International Society of Electrophysiological Kinesiology, Boston, MA, 1979.
3. **Alon G**, Lamb RL, Hobart DJ. Electromyographic Analysis of Acquisition of a Novel Closed Motor Skill. Proceedings: International Society of Electrophysiological Kinesiology, Boston, MA, 1979.
4. **Alon G**, Danoff JV. Relationship between Torque and Muscle EMG at the Elbow Joint, Proceedings: Annual Meeting of American Alliance of Health, Physical Education and Recreation, Detroit, MI: 1980.
5. **Alon G**, Bainbridge J, Croson G. High Voltage Pulsed Direct Current Effects on Peripheral Blood Flow, Phys Ther 1981; 61:734.
6. **Alon G.** The Effect of High Voltage Pulsed Direct Current on Kidney Function, Proceedings: The IX: International Congress of World Confederation for Physical Therapy, Stockholm, Sweden, 1982.
7. **Alon G**, Bosworth RA, Burgwin K.D, McComb SA. A Comparison of the effects of Electrical Stimulat­ion and Exercise on Abdominal Musculatu­re. Phys Ther 1985;65: 683.
8. **Alon G**, Bass DL, Leclerc PL. Correlation Between Musculoskeletal Symptoms and Auricular Skin Resistance, Phys Ther 1986;66:814.
9. **Alon G**, Azaria M, Stein H. Diabetic Ulcer Healing Using High Voltage TENS, Phys Ther 1986; 66: 775.
10. Hayden VL, Bathurst BJ, Clark MC, Milbauer LM, Pfeifer LM, **Alon G**. Pulse Rate and its Effects on Maximal Volitional Contraction of the Erector Spinae Muscle Group, Proceedings: International Society of Electrophysiological Kinesiology, North American Regional Meeting, Baltimore, MD: 1987.
11. **Alon G**. The Effect of Electrode Size on Phase Charge and its Density. Proceedings: Engineering in Medicine and Biology Society IX Annual Conference, Boston, MA, 1987.
12. Kantor G, **Alon G**, Ho HS. Threshold Excitations of Sensory and Motor Nerves Using Different Biphasic Pulse Bursts. Proceedings: IEEE Eng. in Med. and Biology X Annual Conference, New Orleans LA. 1988.
13. Kantor G, **Alon G**, Ho H.S. Charges Associated with Threshold Excitation of Peripheral Nerves Using Various Waveforms. Proceedings: IEEE/EMBS XI Annual conference, Washington DC, 1989.
14. Kantor G, **Alon G**, Ho H.S. Threshold Excitation Study of Peripheral Nerves with Human Subjects. Proceedings: IEEE/EMBS XII Annual International Conference, San Diego, CA 1990.
15. **Alon G**, DeSales-Schroen M, Conner PG. The Effects of Monophasic Pulsatile Current on Pressure Ulcers Healing Process. Proceedings: IEEE-EMBS, XIII Ann Int. Conference, Orlando, FL 1991.
16. **Alon G**, Kantor G, Ho HS. Magnitude Differences During Threshold Excitation of Forearm and Leg peripheral Nerves. Proceedings: Electromyographical Kinesiology, Anderson DA, Hobart DH, Danoff JV. Editors, New York, Excerpta Medica, 1991; 379-382.
17. Kantor G, **Alon G**, Ho HS. Intra and Inter Electrode Charge Distribution and Their effects on Threshold Excitation of Human Peripheral Motor Nerve. Proceedings IEEE-EMBS XIII Ann. Int. Conference, Orlando, FL 1991.
18. Rolle WC, **Alon G**, Nirsche RP. Comparison of Subliminal and Placebo Stimulation in the Management of Elbow Epicondylitis. Phys Ther (Suppl) 1991; 71:S115.
19. Cosgrove KS, **Alon G**, Bell SF. The Electrical Effect of Two Commonly Used Clinical Stimulators on Traumatic Edema. Phys Ther (Suppl) 1991; 71:S116.
20. Mott KG, **Alon G**, Bechtel RH. Reaction Time and Stepping Performance of Patients with Sprained Ankles. Phys Ther (Suppl) 1992;72:577.
21. Anderson PA, **Alon G**, Hege-Maisel TY, Smith GV. Stepping Performance of Healthy Subjects on the Motionspec Balance and Motor Control System. Phys Ther (Suppl) 1992;72:592.
22. Anderson PA, Smith GV, **Alon G**. Postural Reaction and Recovery Times in Normal Subjects and Subjects with Multiple Sclerosis. Phys. Ther. (Suppl) 1992;72:563.
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33. **Alon G**, Johnson TJ. Tolerance and conditioning to electrical stimulation within and between sessions and gender. Phys Ther (Suppl) 1998;78:S58.
34. **Alon G**, Smith GV. Local anesthetic and alteration of sensory perception induced by standard, and a new anesthetic TENS. Phys Ther (Suppl) 1998;78:S58.
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36. **Alon G**, McBride SK. Selected Functional Gains for Subjects with C5 Tetraplegia Using the NESS Handmaster Neuroprosthesis. Proceedings: International Society of Physical and Rehabilitation Medicine. Peek WJ, Lankhorst GJ. Editors. Amsterdam, July 7-13, 2001. pp. 571-577.
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38. **Alon G**, Ring H. Gait and hand function of stroke survivors following training with the NESS neuroprosthesis stimulation system: A controlled, analyst blind prospective study. Platform presentation, 3rd World Congress in Neurological Rehabilitation, Venice, Italy Aril 2-6, 2002.
39. **Alon G**, Regev R. Functional performance of children with cerebral palsy following training with the NESS children system: A matched-controlled, analyst-blind, prospective study. Phys Ther (www.ptjournal.org/abstractsPt2002) PL-RR-196-F, 2002.
40. **Alon G**, McBride SK, Ring H. Improving hand functions using the NESS Handmaster™ neuroprosthesis in persons with chronic hemiparesis. Poster 3rd World Congress in Neurological Rehabilitation, Venice, Italy Aril 2-6, 2002.
41. Smith GV, **Alon G**, Estrada LM, Lewis M, Gullapalli RP. Dose-response relationship between peripheral nerve stimulation and fMRI data of selected brain loci. Poster 3rd World Congress in Neurological Rehabilitation, Venice, Italy Aril 2-6, 2002.
42. **Alon G**, McBride SK. The effects of the Handmaster™ neuroprosthesis on hand function in persons with chronic hemiparesis. Phys Ther (www.ptjournal.org/abstractsPt2002) PL-RR-160-F, 2002.
43. **Alon G.** Improving gait and hand function in chronic stroke after training with the Ness stimulation system: A controlled prospective study. WCPT 14TH International Congress, Barcelona, Spain, June 7-12, 2003.
44. **Alon G,** Estrada L, Lewis M, Smith GV. Gender and Dose-response relations between neuro-muscular electrical stimulation (NMES) and activation of brain loci subserving the locomotor system. 14th International Congress, World Confederation for Physical Therapy, Barcelona, Spain. June 7-12, 2003.
45. **Alon G.** A home-based, self-administered stimulation program to improve selected hand functions of chronic stroke. 14th International Congress, World Confederation for Physical Therapy, Barcelona, Spain. June 7-12, 2003.
46. **Alon G,** McBride K, Levitt AF. Exploratory data in support of the upper limit values and reproducibility of the Box & Block and Jebsen-Taylor tests following stroke. 9th Annual Conference of the International FES Society, Bournemouth, UK Sept 6-9, 2004.
47. Alon G, McBride K, Levitt AF. Feasibility of randomised clinical trial of early initiation and prolonged, home‑based FES training to enhance upper limb functional recovery following stroke. 9th Annual Conference of the International FES Society, Bournemouth, UK Sept 6-9, 2004.
48. **Alon G,** Levitt AF. Upper limb functional and motor control deficits following task-specific training during the acute/subacute rehabilitation phase of ischemic stroke survivors: A pilot study. Annual meeting Isreali PM&R society, Tel-Aviv, December 15-16, 2005.
49. **Alon G,** Levitt AF. Is There Credible Medical Evidence to Delay Functional Electrical Stimulation (FES) in Stroke Rehabilitation? ACMR-ASNR annual meeting, Chicago, September 28 October 1, 2005.
50. **Alon G,** McCarthy P, Levitt AF. Upper limit values and reproducibility of the Box & Block and Jebsen-Taylor tests following stroke. ACMR-ASNR annual meeting, Chicago, September 28 October 1, 2005.
51. **Alon G**, Levitt AF, McCarthy PM. Acute stroke survivors’ residual deficits of upper limb function following 12 weeks of physical rehabilitation training and FES. 4th World Congress for NeuroRehabilitation 12-16 February, Hong Kong 2006.
52. **Alon G**, Levitt AF, McCarthy PM. Compliance of acute/subacute stroke survivors with a 12-week FES training of the paretic upper limb. 4th World Congress for NeuroRehabilitation 12-16 February, Hong Kong 2006.
53. **Alon G**, Levitt AF, McCarthy PM. Functional Electrical Stimulation Enhancement of Upper Extremity Functional Recovery During Stroke Rehabilitation: A Pilot Study. 4th World Congress International Society of Physical & rehabilitation Medicine, Seoul, Korea June, 2007.
54. **Alon G,** Roys S, Gullapalli RP. Can non-invasive electrical stimulation of the brain (ESB) modify the resting-state functional connectivity of the motor cortex? A proof of concept fMRI study. 14th Annual conference, International FES Society, September 13-17, Seoul, South Korea, 2009.
55. **Alon G,** Roys S, Gullapalli RP. Can non-invasive electrical stimulation of the brain (ESB) modify the resting-state functional connectivity of the motor cortex? A proof of concept fMRI study. 14th Annual conference, International FES Society, September 13-17, Seoul, South Korea, 2009.
56. **Alon G,** Conroy VM, Donner TW. Intensive training of chronic stroke on a motorized cycle combined with functional electrical stimulation (FES): A feasibility and safety study. 14th Annual conference, International FES Society, September 13-17, Seoul, South Korea, 2009.
57. **Alon G,** Embrey DG. Functional Electrical Stimulation to Dorsiflexors and Plantar Flexors during Gait to Improve Walking in Adults with Chronic Hemiplegia. 2ed Asia-Oceanian conference of Physical and Rehabilitation Medicine, April 29-May 2, Taipei, Taiwan, 2010.
58. **Alon G**, Roys, SR, Gullapalli RP. Can transcranial direct current stimulation (tDCS) modify the resting-state functional connectivity of the motor cortex? A proof of concept fMRI study. 2ed Asia-Oceanian conference of Physical and Rehabilitation Medicine, April 29-May 2, Taipei, Taiwan, 2010.
59. **Alon G.** Functional Electrical Stimulation (FES): Transforming Clinical Trials to Clinical Practice- A Forward Perspective. Meeting FESAiR Blusson Spinal Cord Centre, Vancouver, British Columbia, Canada, 2011.
60. Alon G, Rogers M. Safety and immediate effect of non-invasive transcranial pulsed current stimulation (tPCS) on gait and balance in Parkinson’s disease. XIX Biennial Conference of the International Society of Electrophysiology and Kinesiology Brisbane, Australia July 19-21, 2012.

## Brief communications

1. **Alon G,** DeDomenico G. Clinical Note: The problem of electrode placement. Aust J Physiother 1983;29:148.
2. **Alon G.** Interferential current news [letter]. Phys Ther 1987;67(2):280-1.
3. **Alon G**. (Guest Editor) Physical Therapy Practice, 1992 vol. 1, No. 2 Andover Medical Publishers, Inc. Stoneham, MA 02180.
4. **Alon, G**., Subliminal, Non-perceived Electrical Stimulation Sports Medicine Update 1993;I: 8-11.
5. **Alon G**. "Microcurrent" Stimulation: A progress report 1998. Athletic Ther Today 1998;Nov,1-3.
6. **Alon G.** (Guest Editor) Use of neuromuscular electrical stimulation in neurorehabilitation: A challenge to all. J Rehabil Res Dev 2003;40(6):ix-xii.
7. **Alon G.** Functional Electrical Stimulation Brings Technology to the Patient. Biomechanics Magazine, [www.biomech.com](http://www.biomech.com/), August 2004.
8. **Alon G.** (Invited commentary) Electrical stimulation in cerebral palsy: are we asking clinically relevant questions? Developmental Medicine & Child neurology 2006;48:868-868.

## Published Multimedia

1. **Alon G.** Videotapes. High Voltage Simulation. Chattanooga, TN: Chattanooga Corporation, Vol. 1‑8, 1984.
2. **Alon G**. Videotapes. Clinical Application of Electrical Stimulation, Chattanooga, TN: Chattanooga Corporation, 1985.
3. **Alon G**. Videotapes. Pain Management. Chattanooga, TN: Chattanooga Corporation, 1986.
4. **Alon G**. Videotapes. Orthopedic Clinic. Chattanooga, TN: Chattanooga Corporation, 1986.
5. **Alon G**. CD-ROM v.1. Pathological Movements. Analyses and Intervention Options. 2002.
6. **Alon G.** CD-ROM v.2. Pathological Movements. Analyses and Intervention Options. 2003.
7. **Alon G.** CD-ROM v.3. Pathological Movements. Analyses and Intervention Options. 2004.
8. **Alon G.** CD-ROM v.4. Pathological Movements. Analyses and Intervention Options. 2005.

###### Major Invited Presentations

1. **Alon G.** Key note presentation: Training dosage and timing of electrical stimulation may be the key for maximizing the effects of NMES in neuro-rehabilitation. 2nd World Congress, International Society Physical and Rehabilitation Medicine, Prague, Czech Republic, May 18-22, 2003.
2. **Alon G.** Key note presentation:Functional Electrical Stimulation (FES) Innovations for Upper Extremity and Locomotion. Annual Meeting, Israeli PM&R Conference, Tel-Aviv, Israel, December, 2007.
3. **Alon G.** Key note presentation: Functional Electrical Stimulation (FES): Transforming Clinical Trials to Clinical Practice- A Forward Perspective. 2nd Annual Conference of the International Functional Electrical Stimulation Society (UK and Ireland Chapter), University College Dublin, March, 2011.
4. **Alon G**. Looking forward: Functional Electrical Stimulation in Orthopedic and Cardio-vascular rehabilitation. University of Haifa, school of Physical Therapy conference, Israel, December 2012.
5. **Alon G.** Invited presenter: Functional Electrical Stimulation (FES): Transforming Clinical Trials to Clinical Practice in Neuro-Rehabilitation. Annual meeting of the Dutch society of neuro-rehabilitation, Nijmegen, Netherlands, 2013.
6. **Alon G.** John H.P. Maley Lecture: “Wearable Therapeutic Technologies: On the Road to Personalized Intervention in Physical Rehabilitation Focusing on Functional Electrical Stimulation.” National Harbor, Maryland, 2015.
7. **Alon G.** Workshop leader: Functional Electrical stimulation principles: Electrical parameters, electrophysiological correlates, electrodes management. IFESS meeting La Grande Motte, France, June 7-10, 2016.
8. **Alon G.** Invited presenter: Functional Electrical Stimulation (FES): The science is strong, the clinical practice not yet- A review of evidence. Annual conference of French PM&R physicians (SOFMER), Saint Etienne, France, October, 2016.
9. **Alon G.** Invited presenter: IFESS workshop: Functional Electrical Stimulation (FES): On the Road to Personalized Intervention, RehabWeek, London, July 17-20, 2017.
10. **Alon G.** Embery, DE. Presenters: Therapeutic Technologies: Peripheral Arterial Disease and Diabetes Mellitus. APTA, CSM, San Antonio, February 15-18, 2017.
11. **Alon G.** Presenter: Functional Electrical Stimulation (FES) in Pediatrics: The science is strong, the clinical practice not yet. APTA, CSM, New Orleans, February 21-24, 2018.
12. Wells, CN, Verceles, AC, **Alon, G.** Management of patients admitted to Pulmonary Intensive care unit using FES. APTA, CSM, New Orleans, February 21-24, 2018.
13. **Alon G.** Invited faculty and presenter: Functional Electrical Stimulation (FES) in Pediatrics: The science is strong, the clinical practice not yet. 10th World congress for Neurorehabilitation, Mumbai, India, February 7-10, 2018.
14. **Alon G**. Invited faculty and presenter of two workshops titled: “Functional Electrical Stimulation (FES): On the Road to Personalized Intervention” and “tDCS and tPCS neuromodulation advantages and limitations”. AOCNR, Nanjing, China, April 2019

###### Other Invited Presentations

1. **Alon G.** Biofeedback. Virginia Chapter APTA, Falls Church, VA, 1974.
2. **Alon G.** Biofeedback. Maryland Chapter APTA, Columbia, MD, 1975.
3. **Alon G.** Gait Analysis. Maryland Chapter APTA, Baltimore, MD, 1976.
4. **Alon G.** Gait Analysis. Chapter, APTA, Washington, DC, 1977.
5. **Alon G.** Lower Extremity. Maryland Chapter APTA, Baltimore, MD, 1977.
6. **Alon G.** Clinical Electrotherapy - A Teaching Model. University of West Virginia, Morgantown, WV, 1985.
7. **Alon G.** Biomechanics and Amputee Gait Analysis. Montebello Rehabilitation Hospital, Baltimore, MD, 1986.
8. **Alon G.** Clinical Electrotherapy - A Teaching Model. University of West Virginia, Morgantown, WV, 1986.
9. **Alon G.** Electrical Stimulation for Wound and Ulcers", Montebello Rehabilitation Hospital, Baltimore, MD, 1987.
10. **Alon G.** Utilizing Electrical Stimulation in Treating Orthopedic Signs and Symptoms in the Home /Health Care Setting. APTA, Combine Sections meeting, Atlanta, GA, 1987.
11. **Alon G.** Advances in Clinical Electrotherapy. Central Toronto District, Canadian P.T. Association, Toronto, Ontario, Canada, 1988.
12. **Alon G.** Advances in Clinical Electrotherapy, Connecticut Physical Therapy State Meeting, Hartford, CT, 1988.
13. **Alon G.** Advances in Clinical Electrotherapy. Oregon Physical Therapy State Meeting, Portland, OR, 1988.
14. **Alon G.** Advances in Clinical Electrotherapy. Organization of Chartered Physiotherapists in Private Practice, London, England, 1989.
15. **Alon G.** High Voltage in Clinical Electrotherapy. International Symposium of Electrotherapy/Electrophysiolgy for Physical Therapy Educators and Clinicians, Burlington, VT, 1990.
16. **Alon G.** Electrotherapy in Sports Medicine. Joe King Orthopedic Institute, Houston, TX, 1990.
17. **Alon G.** Electrical Stimulation in Neurological Rehabilitation. Greater Washington Rehabilitation Center, Silver Spring, MD, 1990.
18. **Alon G.** Advances in Clinical Electrotherapy" Physical Therapy Iowa Chapter Meeting, Mason City, Iowa, 1991.
19. **Alon G.** Subliminal Stimulation. Department of Rehabilitation Medicine, NIH, Bethesda, MD, 1991.
20. **Alon G.** Electro-Orthopedics. The Valley Hospital Sports Institute, Ridgewood, NJ, 1992.
21. **Alon G.** Advances in Clinical Electrotherapy. Physical Therapy South Dakota Chapter meeting, Vermillion, SD, 1992.
22. **Alon G.** Advances in Clinical Electrotherapy. Physical Therapy Michigan State Chapter meeting, Detroit, MI, 1992.
23. **Alon G.** Subliminal Stimulation. Joe King Orthopedic Institute, Houston TX, 1992.
24. **Alon G.** Electrical Stimulation to the CNS Involved Patient. Symposium of the American Physical Therapy Association, Cincinnati, OH, 1993.
25. **Alon G.** Electro-Orthopedics. Annual Regional Meeting of the American Association of Trainers, Dayton, OH, 1993.
26. **Alon G.** Modalities in the Management of Spinal Dismobility. The Valley Hospital Sports Institute, Ridgewood, NJ, 1993.
27. **Alon G.** High voltage PC for Pain Management. Symposium of the Electro physiological Section of the American Physical Therapy association, Milwaukee, WI, 1995.
28. **Alon G.** Electrotherapy Devices - Electrodes and Tolerance to Electrical Stimulation. Symposium of the Electro physiological Section of the American Physical Therapy association, Milwaukee, WI, 1995.
29. **Alon G.** Transcutaneous Electrical Nerve Stimulation: From Physical Rehabilitation to Other Clinical Application. 21st Annual Convention, Association For Behavior Analysis, Washington DC, 1995.
30. **Alon G.** Management of Inflammation. National Athletic Trainer Association Annual Convention, Orlando, FL, 1996.
31. **Alon G.** Wound care and electrical stimulation" Bon Secour Nursing Center, Baltimore, MD, 1996.
32. **Alon G.** Clinical Electrotherapy. New Jersey Physical Therapy Chapter meeting, Englewood NJ, 1996.
33. **Alon G.** The efficacy of transcranial electrical stimulation in managing behavioral and cognitive dysfunctions. 22nd Annual Convention, Association for Behavior Analysis, San Francisco, CA, 1996.
34. **Alon G.** Trends and Treatments & Evaluations of Chronic Wounds. Electrical Stimulation in Wound Healing. Greater Baltimore Medical Center, Baltimore, MD, 1997.
35. **Alon G.** Electrotherapy in Sports Medicine. Xavier University, Cincinnati, OH, 1997.
36. **Alon G.** Future Directions in Wound Healing. Symposia, APTA Scientific Meeting, San Diego, CA, 1997.
37. **Alon G.** Wound care and electrical stimulation. Doctors Memorial Hospital, Laplada, MD, 1997.
38. **Alon G.** Electro-Pediatrics. Schneider Children’s Hospital, New York, NY, 1998.
39. **Alon G.** Electrotherapy in Orthopedics Annual conference Washington State Physical Therapy Association, Seattle, WA, 1998.
40. **Alon G.** Electrical Stimulation in Wound Healing. Surgical Grand Rounds Greater Baltimore Medical Center, Baltimore, MD, 1998.
41. **Alon G.** Electrotherapy for the CNS involved patient. Good Samaritan Hospital, Baltimore, MD, 1999.
42. **Alon G.** Electro-Geriatrics. Burke Rehabilitation Hospital, White Plains, NY, 1999.
43. **Alon G.** Electro-Pediatrics. Children’s Hospital, Miami, FL, 1999.
44. **Alon G.** Electro-Pediatrics. Children’s Hospital, Cincinnati, OH, 1999.
45. **Alon G.** Electro-Sports Medicine. Fifth Annual Sports Medicine Symposium, Sports Medicine Institute, The Christ Hospital, Cincinnati, OH, 1999.
46. **Alon G.** Electrotherapy in the new millennium. Combined Sections Meeting, APTA, New Orleans, LA, 2000.
47. **Alon G.** Electro-Pediatrics. Virginia Physical Therapy Association annual conference, Williamsburg, VA, 2001.
48. **Alon G.** Electro-Clinic. Shenandoah University Winchester, VA, 2002.
49. **Alon G.** Electrotherapy in Neuro-Rehabilitation: Evidence-Based Approaches. Florida APTA annual conference, Ft. Meyers, FL, 2002.
50. **Alon G.** Electrotherapy in Neuro-Rehabilitation: Evidence-Based Approaches. Annual Midwest Stroke Rehabilitation Conference, Minneapolis, MN, 2002.
51. **Alon G.** New Approaches to the Management of Common Back Syndromes. APTA of Maryland, St. Agnes, Baltimore, MD, 2002.
52. **Alon G.** Electrical Stimulation in Neuro-rehabilitation. Conference on Movement analysis and therapy of upper limb after central nervous damage. Sicily, Italy, 2003.
53. **Alon G.** Pediatric Electrical Stimulation. Shriners’ Hospital for Children, Louisville, KY, 2003.
54. **Alon G.** Clinical Advancements in Electrical Stimulation. University of Michigan, Medical Center, Ann Arbor, MI, 2003.
55. **Alon G.** Pediatric Electrical Stimulation. Easter Seal, Peoria, IL, 2004.
56. **Alon G.** Pediatric Electrical Stimulation. Hospital for Children, Louisville, KY, 2004.
57. **Alon G.** Functional electrical stimulation in Neuro-rehabilitation. Meeting of the Dutch Society of Rehabilitation Medicine, Utrecht, Netherlands, 2004.
58. **Alon G.** Electro-Pediatrics. Shriner Hospital, St. Louis MO, 2005.
59. **Alon G.** Therapeutic Technologies and the management of upper limb function and locomotion deficits. Annual Conference & Exposition of the American Physical Therapy Association Boston, MA, 2005.
60. **Alon G.** Are we ready to advance our clinical practice? The latest advancement in selected therapeutic technologies, and their implementation to maximize upper limb function and locomotion. Annual meeting Isreali PM&R society, Tel-Aviv, Israel, 2005.
61. **Alon G.** Evidence-based use of neuromuscular electrical stimulation in pediatric Rehabilitation, South American congress of rehabilitation Medicine, Buenos Aires, Argentina, 2006.
62. **Alon G.**Electro-Pediatrics. San Francisco School system, San Francisco, CA, 2006.
63. **Alon G.** Electro-Pediatrics. Cincinnati Children’s Medical Center, Cincinnati, OH, 2006.
64. **Alon G.** Electro-Pediatrics. Texas Children’s Hospital Physical Medicine & Rehabilitation, Houston, TX, 2006.
65. **Alon G.** Functional Electrical Stimulation (FES) During the Acute Phase of Stroke Rehabilitation. Department of Physical Medicine & Rehabilitation University of Cincinnati, OH, 2006.
66. **Alon G.** Management of Low Back Pain and Upper Extremity Musculo-Skeletal Impairments, Gundersen Lutheran Medical Foundation, La Crosse, WI, 2006.
67. **Alon G.** Functional Electrical Stimulation (FES) in the Management of Upper limb and Locomotor Deficits of Adult Stroke survivors. Annual Meeting, Neuro-developmental Treatment Association (NDTA), 2006.
68. **Alon G.** Electrotherapy in the management of Brachial Plexus Injury. University of Michigan, Department of Neurosurgery, Ann Arbor, MI, 2007.
69. **Alon G.** How to best manage low or upper back impairments using the latest in therapeutic technologies. 2008 Sports Medicine Spring Symposium, Medical University of South Carolina, Charleston, SC, 2008.
70. **Alon G.** Therapeutic Technologies in the management of musculo-skeletal impairments: What is the evidence of efficacy? Sports Medicine Spring Symposium, Medical University of South Carolina, Charleston, SC, 2008.
71. **Alon G.** The Oxford debate team leader. PT 2008: Annual Conference & Exposition of the American Physical Therapy Association, San Antonio, TX, 2008.
72. **Alon G.** Therapeutic technologies in the management of musculo-skeletal impairments: What is the evidence of efficacy? Keynote presentation, Sports Medicine annual meeting, Birmingham, AL, 2008.
73. **Alon G.** Bridging the gap between scientific evidence and clinical implementation of non-invasive electrical stimulation in the field of rehabilitation, Grand Round NIH, Rehabilitation Medicine Department, Bethesda, MD, 2008.
74. **Alon G.** Functional Electrical Stimulation (FES) in Stroke Rehabilitation, Grand Round Johns Hopkins Department of Physical Medicine & Rehabilitation, Baltimore MD, 2009.
75. **Alon G.** Functional Electrical Stimulation (FES) and Non-Invasive Electrical Brain Stimulation (ESB): On the Road to Personalized Intervention in Neuro-Rehabilitation. 33rd Annual International IEEE EMBS Conference, Boston, MA, 2011.
76. **Alon G**. PTRS Alumni Day: Functional E
77. lectrical Stimulation (FES): A forward looking Perspective, Baltimore, MD, 2011.
78. **Alon G**.Wearable Functional Electrical Stimulation (FES) and Non-Invasive Electrical Brain Stimulation (ESB) effects on locomotion. Pre-Conference workshop, IFESS annual meeting Banff, Canada September 10-13, 2012.
79. **Alon G**, Caulfield B.Wearable Functional Electrical Stimulation (FES) and Non-Invasive Electrical Brain Stimulation (ESB): On the Road to Personalized Intervention in Physical Rehabilitation. Pre-Conference workshop, IFESS annual meeting San Sebastian, Spain June 5-8, 2013.
80. **Alon G.**  Functional Electrical Stimulation (FES): On the Road to Personalized Intervention. American Congress Rehabilitation Medicine, Chicago, Il 2016.
81. **Alon G.** Functional Electrical Stimulation (FES): The science is strong, the clinical practice not yet,-A review of evidence. Annual meeting, French society of Rehabilitation Medicine Physician, St Attien, France 2016.
82. **Alon G,** et al. Workshop: Functional Electrical Stimulation (FES): How to best utilize it in clinical practice. IFESS meeting, Montpellier, France, 2016.
83. **Alon G,** Embrey, D. Therapeutic Technologies: Peripheral Arterial Disease and Diabetes Mellitus, APTA combined section meeting, San Antonio, TX 2017.
84. **Alon G.** Functional Electrical Stimulation (FES): On the Road to Personalized Intervention. Workshop presented at the RehabWeek, London UK, July 17-20, 2017.
85. Verceles AC, Serra M, Wells CL, Davis D, Parker E, **Alon G**, et al. Exercise, Protein and Neuromuscular Electrical Stimulation Reduces ICU Associated Sarcopenia in Older Patients. A poster presented at the American Geriatric meeting, San Francisco, 2017.