

CURRICULUM VITAE**ZIAD NAHAS, M.D., M.S.C.R.****PROFESSIONAL ADDRESS**

University of Minnesota Medical School
 Department of Psychiatry
 Professor
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IDENTIFYING INFORMATION

Degree	Institution	Date Degree Granted
M.D.	Saint Joseph University, Beirut, Lebanon	1985 - 1992
Internship	Hôpital de la Croix Jel ElDib, Department of Psychiatry Lebanon	1992
Internship	Hôpital Charles-Foix, Unite de Psychogeriatrie, Department of Psychiatry, Paris, France	1992 – 1993
Internship	L’Elan, Department of Psychiatry, Paris, France	1992 – 1993
Internship	Baylor College of Medicine, Department of Psychiatry, Houston, TX	1993 - 1994
Residency	Baylor College of Medicine, Department of Psychiatry, Houston, TX	1994 - 1997
Fellowship	Medical University of South Carolina, Department of Psychiatry, Charleston, SC	1997- 1999
M.S.C.R.	Medical University of South Carolina, Department of Biometry, Charleston, SC	2003- 2005

Areas of Specialty Training

Mood disorders, psychopharmacology, neuroimaging, neuromodulation, insight oriented psychodynamic psychotherapy

Certifications, Licenses

Licensure:

Minnesota Board of Medical Practice, License #62880	Expires 06/30/2018
South Carolina Department of Labor, Licensing and Regulation, License #19621	Expires 06/30/2020
DEA #FN7095626	Expires 10/31/2020

Academic Appointments

University of Minnesota, Twin Cities	2017 - present
Department of Psychiatry Professor	2017 - present

Previous Universities

American University of Beirut, Beirut, Lebanon	2016 – 2017
Department of Anatomy, Cell Biology, and Physiology Professor	

Department of Psychiatry 2011 – 2017
Professor, with tenure

Medical University of South Carolina, Charleston, NC	2017 – present
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Department of Psychiatry	
Adjunct Professor	2017 – present
Adjunct Associate Professor	2011 – 2017
Associate Professor, with tenure	2007 – 2011
Associate Professor	2005 – 2007
Assistant Professor	2000 – 2005
Research Associate	1999 – 2000

Department of Physiology and Neuroscience Adjunct Associate Professor, with tenure	2008 – 2011
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Academic Administrative Appointments

Vice Chair for Clinical Affairs	2017 – present
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Chair of Psychiatry American University of Beirut	2011 – 2017
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Director, Mood Disorders Program Medical University of South Carolina	2007 – 2011
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Clinical/Hospital Appointments

Medical Director, Brain Stimulation Laboratory Medical University of South Carolina	1999 – 2011
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Current Membership and Offices in Professional Organizations

American College of Neuropsychopharmacology, Fellow	2001 – present
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American Psychiatric Association, Member	1999 – present
Society of Biological Psychiatry, Member	1999 – present
International Society of Electroconvulsive Therapy and Neuromodulation, Member	2006 – present
Other professional employment, including military service	
President and co-founder of Embrace (no salary), Beirut, Lebanon https://www.embracefund.org	2013 – present

**HONORS AND AWARDS FOR RESEARCH WORK, TEACHING, PUBLIC ENGAGEMENT,
AND SERVICE**

External Sources

Accreditation Council of Graduate Medical Education (ACGME-I) American University of Beirut Medical Center Psychiatry Residency Training Program	2016
Top 10 Research Developments for 2009 NARSAD	2010
Independent Investigator Award NARSAD	2006
Health Science Research Foundation Developing Scholar Award MUSC	2005
American College of Neuropsychopharmacology Memorial Travel Award	2004
Health Emotion Research Institute Travel Award	1999
Fellow Award – The 7 th World Congress of Biological Psychiatry	1999
Colloquium for Young Investigators – Neuroimaging Annual Meeting of the American Psychiatric Association in Toronto	1998
The Texas Psychiatric Physicians Association – Best Resident’s Paper Award	1997

RESEARCH AND SCHOLARSHIP

Grants and Contracts

Current External Sources

Past External Sources

Role: PI
 Agency: AUBMC Intramural Funds
 Title: “Attitude and Knowledge About Mental Health in Lebanese Adults”
 Dates: September 2015

Role: PI
Agency: National Council for Scientific Research
Title: “Neurogenesis with Dep Brain Stimulation.”
Dates: August 2013 – July 2015

Role: PI
Agency: AUBMC Intramural Funds
Title: “Suicide Prevalence Rates in Lebanon.”
Dates: September 2014

Role: PI
Agency: AUBMC Farouk Jaber Award
Title: “Modeling ECT Brain’s Effects.”
Dates: January 2013

Role: PI
Agency: Pfizer
Title: “Validation of IDS in Arabic”
Dates: November 2012

Role: PI
Agency: AUBMC Intramural Funds
Title: “Focally Electrically Administered Seizure Therapy (FEAST) for Depression.”
Dates: September 2012

Role: PI
Agency: NARSAD Independent Investigator Award
Title: “Safety and Efficacy Study of Epidural Prefrontal Cortical Stimulation (EpCS) in Severe Treatment-Resistant Depression.”
Dates: September 2010 – August 2012

Role: Mentor
Grant Number: 5 r25 DA020537-03
Agency: NIH/NIDA
Title: “Drug Abuse Training Research (DART) Program.”
Dates: May 2006- April 2011
Effort: 5%

Role: PI
Agency: Hope for Depression Research Foundation
Title: “Using Neuroimaging, Quantitative EEG and Genetics to Diagnose Depression.”
Dates: January 2009 – December 2010

Role: PI
Agency: MECTA Inc.
Title: “Focally Electrically Administered Seizure Therapy (FEAST) for Depression”
Dates: September 2010

Role: PI
Agency: SCTR Discovery Grant

Title: "Deep Brain Stimulation Meditated Interactions between Antiparkinsonian Drugs and ABCB1/Pglycoprotein."

Dates: July 2009- June 2010

Effort: 5%

Role: PI

Grant Number: K08 MH070615-01A1

Agency: NIMH

Title: "DBS and Rodent Antidepressant- Screen Models."

Dates: July 2005- June 2009

Effort: 75%

Role: PI

Agency: Hope for Depression Research Foundation

Title: "Oxytocin fMRI in Depression."

Dates: January 2007 – December 2008

Role: PI

Agency: Stanley Foundation/1996 Research Awards

Title: "Serial fMRI Perfusion Scans in Rapid-cycling Bipolar Affective Disorder Subjects: A Pilot Study Using a Novel NonInvasive tool to Longitudinally Examine Regional Brain Activity Changes as a Function of Mood and Disease Progression."

Dates: January 2007 – December 2008

Role: PI

Agency: NARSAD Independent Investigator Award

Title: "A Pilot Safety and Efficacy Study of Epidural Prefrontal Cortical Stimulation (EpCS) in Severe Treatment-Resistant Unipolar Depression."

Dates: September 2006 – August 2008

Role: PI

Agency: Neuronetics Inc.

Title: "A Randomized Parallel-Group, Sham-Controlled, Multicenter Study to Evaluate the Efficacy and Safety of Repetitive Transcranial Magnetic Stimulation (RTMS) in Patients with Major Depression."

Dates: December 2003 – December 2007

Role: Co-Investigator

Agency: Cyberonics, Inc.

Title: "fMRI OF Vagus Nerve Stimulation in Patients with Depression."

Dates: May 1999 – February 2006

Role: Co-Investigator

Agency: Cyberonics, Inc.

Title: "A Study of Vagus Nerve Stimulation in Patients with Depression (A-01): Open Study."

Dates: July 2000 – 2009

Role: Co-Investigator

Agency: Cyberonics, Inc.

Title: "A Study of Vagus Nerve Stimulation in Patients with Depression (D-01): A Pilot and Efficacy Study."

Dates: May 1998 – February 2006

Role: Co-Investigator

Agency: Cyberonics, Inc.

Title: “A Study of Vagus Nerve Stimulation in Patients with Depression (D-02): Multicenter Study.”

Dates: June 2000 – February 2006

Role: PI

Agency: Eli Lilly

Title: “Olanzapine for the Treatment of Borderline Personality Disorder: A Multisite Treatment Trial.”

Dates: December 2003 – November 2005

Role: PI

Grant Number: R21 MH065630-01

Agency: NIMH

Title: “Interleaved Prefrontal TMS/fMRI in Schizophrenia.”

Dates: December 2002- November 2005

Effort: 40%

Role: Co-Investigator

Agency: Defense Advanced Research Projects Agency

Title: “Creating a Man-Portable Transcranial Magnetic Stimulation (TMS) System to Improve War-Fighter Performance.”

Dates: June 2002 – December 2004

Role: PI

Agency: Neotonus, Inc.

Title: “rTMS for Treatment of Depression in Schizophrenia”

Dates: March 2000 – April 2004

Role: Co-I

Grant Number: R01 NS40956-01

Agency: NINDS

Title: “Mood Effects of Deep Brain Stimulation in Parkinson Disease. A combined DBS and MRI Study.”

Dates: December 2000- November 2003

Effort: 75%

Role: PI

Agency: Swiss Foundation for Research in Borderline Personality Disorders

Title: “Using Interleaved TMS/fMRI to Understand Brain Circuits Involved in Borderline Personality Disorder.”

Dates: January 2000 – January 2003

Role: Co-Investigator

Agency: Janssen Research Foundation

Title: “Volumetric and Functional (Perfusion) MRI Scanning in Schizophrenia Patients Before, During, and After Treatment with Donepezil: Using Imaging to Prospectively Identify Responders.”

Dates: November 1997 – June 2001

Role: PI

Agency: NARSAD

Title: “Combining TMS with Echoplanar BOLD fMRI to Determine Optimum Treatment Parameters for Depression.”

Dates: September 1998 – September 2000

Role: PI

Agency: SmithKline Beecham

Title: “Emotional Incontinence and its Response to Paroxetine”

Dates: July 1998 – July 2000

Role: Co-Investigator

Agency: DuPont Pharma

Title: “Neurolite SPECT Imaging of Rcbf as a Predictor of Response to Antidepressant Activity (Transcranial Magnetic Stimulation).”

Dates: June 1996 – June 1998

Role: PI

Agency: Stanley Foundation 1998 Research Awards

Title: “Prefrontal transcranial Magnetic Stimulation for the Treatment of Depression in Bipolar Affective Disorder: A Pilot Study of Acute Efficacy and Preventive Maintenance.”

Dates: July 1996 – June 1998

Role: PI

Agency: Unfunded

Title: “Depression in Demented Patients.”

Dates: July 1996 – June 1997

Role: PI

Agency: Unfunded

Title: “Personality Disorders in Dementia.”

Dates: July 1996 – June 1997

Publications

Impact Analytics

<i>h</i> -Index	<i>h(fl)</i> -Index	Total Publications	First/Last Author Publications	Total Citations	First/Last Author Citations
58	23	153*	42	14202	3125

**1 publication is listed as Chapters in Books below*

Peer-Reviewed Publications

1. Ghossoub E; Adib S; Maalouf F; El-hajj Fuleihan G; Tamim H; **Nahas Z** Association between Substance Use Disorders and Self- and Other-Directed Violence: An Integrated Model Approach. Social Psychiatry and Psychiatric Epidemiology (under

- review). *Journal Impact Factor: 2.53; Citations: 0; Role: Senior Advisor on Master's Thesis.*
2. Karamah F, **Nahas Z**. Predicting Effective Connectivity within Brain Dynamical Subnetworks: A Blind Module Identification Approach. *Brain Topography* (in press). *Journal Impact Factor: 2.7; Citations: 0; Role: Senior Investigator and co-awardee of grant funding.*
 3. Atoui M, El Jamil F, El Khoury J, Doumit M, Syriani N, Khani M, **Nahas Z**. The relationship between clinical insight and cognitive and affective empathy in schizophrenia. *Schizophr Res Cogn*. 2018 May 14;12:56-65. doi: 10.1016/j.scog.2018.02.004. eCollection 2018 Jun. PMID: 29928598. *Journal Impact Factor: 0.67; Citations:0; Role: Senior Investigator.*
 4. Chamaa F, Bahmad HF, Makkawi AK, Chalhoub RM, Al-Chaer ED, Bikhazi GB, **Nahas Z**, Abou-Kheir W. Nitrous Oxide Induces Prominent Cell Proliferation in Adult Rat Hippocampal Dentate Gyrus. *Front Cell Neurosci*. 2018 May 17;12:135. doi: 10.3389/fncel.2018.00135. eCollection 2018. *Journal Impact Factor: 4.3; Citations:0; Role: Senior Investigator and Originator of study idea and design.*
 5. Williams NR, Bentzley BS, Hopkins T, Pannu J, Sahlem GL, Takacs I, George MS, **Nahas Z**, Short EB. Optimization of epidural cortical stimulation for treatment-resistant depression. *Brain Stimul*. 2017. Epub 2017/09/19. doi: 10.1016/j.brs.2017.09.001. PubMed PMID: 28918944. *Journal Impact Factor: 6.087; Citations:0; Role: Guarantor of integrity of entire study.*
 6. Zaylaa AJ SS, Karamah FN, **Nahas Z**, Bouakaz A. Cascade of nonlinear entropy and statistics to discriminate fetal heart rates. *Advances in Computational Tools for Engineering Applications (ACTEA), 2016 3rd International Conference on IEEE*. 2016:152-7. *Journal Impact Factor: n/a; Citations: n/a; Role: Guarantor of integrity of entire study.*
 7. Williams NR, Short EB, Hopkins T, Bentzley BS, Sahlem GL, Pannu J, Schmidt M, Borckardt JJ, Korte JE, George MS, Takacs I, **Nahas Z**. Five-Year Follow-Up of Bilateral Epidural Prefrontal Cortical Stimulation for Treatment-Resistant Depression. *Brain Stimul*. 2016;9(6):897-904. Epub 2016/07/23. doi: 10.1016/j.brs.2016.06.054. PubMed PMID: 27443912. *Journal Impact Factor: 6.087; Citations: 4 ; Role: Guarantor of integrity of entire study.*
 8. Sawaya H, Atoui M, Hamadeh A, Zeinoun P, **Nahas Z**. Adaptation and initial validation of the Patient Health Questionnaire - 9 (PHQ-9) and the Generalized Anxiety Disorder - 7 Questionnaire (GAD-7) in an Arabic speaking Lebanese psychiatric outpatient sample. *Psychiatry Res*. 2016;239:245-52. Epub 2016/04/01. doi: 10.1016/j.psychres.2016.03.030. PubMed PMID: 27031595. *Journal Impact Factor: 2.528; Citations: 3 ; Role: Guarantor of integrity of entire study.*
 9. Sahlem GL, Short EB, Kerns S, Snipes J, DeVries W, Fox JB, Burns C, Schmidt M, **Nahas ZH**, George MS, Sackeim HA. Expanded Safety and Efficacy Data for a New Method of Performing Electroconvulsive Therapy: Focal Electrically Administered Seizure Therapy. *J ECT*. 2016;32(3):197-203. Epub 2016/07/06. doi:

- 10.1097/YCT.0000000000000328. PubMed PMID: 27379790; PMCID: PMC5058644. *Journal Impact Factor: 2.447; Citations: 5 ; Role: Developed study design, manuscript editing and review.*
10. Mokdad AH, Forouzanfar MH, Daoud F, El Bcheraoui C, Moradi-Lakeh M, ...**Nahas Z**...et al. Health in times of uncertainty in the eastern Mediterranean region, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet Glob Health*. 2016;4(10):e704-13. Epub 2016/08/29. doi: 10.1016/S2214-109X(16)30168-1. PubMed PMID: 27568068. *Journal Impact Factor: 17.686; Citations: 16 ; Role: Manuscript editing and review.*
 11. Chamaa F, Sweidan W, **Nahas Z**, Saade N, Abou-Kheir W. Thalamic Stimulation in Awake Rats Induces Neurogenesis in the Hippocampal Formation. *Brain Stimul*. 2016;9(1):101-8. Epub 2015/10/16. doi: 10.1016/j.brs.2015.09.006. PubMed PMID: 26460201. *Journal Impact Factor: 6.087; Citations: 2 ; Role: Developed study design, manuscript editing and review.*
 12. Zaylaa AJ HA, Khatib FI, **Nahas Z**, Karameh FN. Entropy complexity analysis of electroencephalographic signals during pre-ictal, seizure and post-ictal brain events. 2015 International Conference on Advances in Biomedical Engineering (ICABME). 2015:134-7. *Journal Impact Factor: n/a; Citations: n/a; Role: Guarantor of integrity of entire study.*
 13. Vos TB, Ryan M.; Bell, Brad; Bertozzi-Villa, Amelia; Biryukov, Stan; Bolliger, Ian...**Nahas, Ziad**...et al. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2015;386(9995):743-800. Epub 2015/06/13. doi: 10.1016/s0140-6736(15)60692-4. PubMed PMID: 26063472; PMCID: PMC4561509. *Journal Impact Factor: 44.002; Citations: 608 ; Role: Data acquisition, manuscript editing and review.*
 14. Sawaya H, Johnson K, Schmidt M, Arana A, Chahine G, Atoui M, Pincus D, George MS, Panksepp J, **Nahas Z**. Resting-state functional connectivity of antero-medial prefrontal cortex sub-regions in major depression and relationship to emotional intelligence. *The international journal of neuropsychopharmacology*. 2015;18(6). Epub 2015/03/07. doi: 10.1093/ijnp/pyu112. PubMed PMID: 25744282; PMCID: PMC4438550. *Journal Impact Factor: 4.009; Citations: 8 ; Role: Guarantor of integrity of entire study.*
 15. **Nahas Z**. Epidural Cortical Stimulation. *Brain Stimulation, Methodologies and Interventions*. 2015:255-69. *Journal Impact Factor: n/a; Citations: n/a*
 16. Farhat H KF, **Nahas Z**. Reduction of stimulus artifacts in Ictal EEG recordings during electroconvulsive therapy. 2015 International Conference on Advances in Biomedical Engineering (ICABME). 2015:138-41. *Journal Impact Factor: n/a; Citations: n/a; Role: Guarantor of integrity of entire study.*
 17. Collaborators GBDRF, Forouzanfar MH, Alexander L, Anderson HR, Bachman VF, Biryukov S, Brauer M, ...**Nahas Z**...et al. Global, regional, and national comparative

- risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2015;386(10010):2287-323. Epub 2015/09/15. doi: 10.1016/S0140-6736(15)00128-2. PubMed PMID: 26364544; PMCID: PMC4685753. *Journal Impact Factor: 44.002; Citations: 574 ; Role: Data acquisition, manuscript editing and review.*
18. Yehia F, **Nahas Z**, Saleh S. A roadmap to parity in mental health financing: the case of Lebanon. *J Ment Health Policy Econ*. 2014;17(3):131-41. Epub 2014/12/30. PubMed PMID: 25543116. *Journal Impact Factor: 1.406; Citations: 3 ; Role: Developed study design and Guarantor of integrity of entire study.*
 19. Tavitian LR, Ladouceur CD, **Nahas Z**, Khater B, Brent DA, Maalouf FT. Neutral face distractors differentiate performance between depressed and healthy adolescents during an emotional working memory task. *Eur Child Adolesc Psychiatry*. 2014;23(8):659-67. Epub 2013/11/20. doi: 10.1007/s00787-013-0492-9. PubMed PMID: 24248754. *Journal Impact Factor: 3.295; Citations: 4 ; Role: Manuscript editing and review.*
 20. Karameh FN, Awada, M., Mourad, F., Zahed, K., Abou-Faycal, I. C., & **Nahas, Z**. Modeling of Neuronal Population Activation under Electroconvulsive Therapy. *BIOSIGNALS*. 2014:229-38. *Journal Impact Factor: n/a; Citations: n/a; Role: Guarantor of integrity of entire study.*
 21. Chahine G, Short B, Spicer K, Schmidt M, Burns C, Atoui M, George MS, Sackeim HA, **Nahas Z**. Regional cerebral blood flow changes associated with focal electrically administered seizure therapy (FEAST). *Brain Stimul*. 2014;7(3):483-5. Epub 2014/05/06. doi: 10.1016/j.brs.2014.02.011. PubMed PMID: 24795198. *Journal Impact Factor: 6.087; Citations: 5 ; Role: Developed study design and guarantor of integrity of entire study.*
 22. Zeinoun P, Bawab S, Atwi M, Hariz N, Tavitian L, Khani M, **Nahas Z**, Maalouf FT. Validation of an Arabic multi-informant psychiatric diagnostic interview for children and adolescents: development and Well Being Assessment-Arabic (DAWBA-Arabic). *Compr Psychiatry*. 2013;54(7):1034-41. Epub 2013/06/15. doi: 10.1016/j.comppsy.2013.04.012. PubMed PMID: 23763871. *Journal Impact Factor: 2.194; Citations: 5; Role: Manuscript editing and review.*
 23. Talih F, **Nahas Z**. How to assess the role of transcranial magnetic stimulation in nicotine addiction. *Biol Psychiatry*. 2013;73(8):702-3. Epub 2013/04/02. doi: 10.1016/j.biopsych.2013.02.023. PubMed PMID: 23540351. *Journal Impact Factor: 44.002; Citations: ; Role: Data acquisition, manuscript editing and review.*
 24. Schmidt M, Sofronescu A, Short B, **Nahas Z**, Zhu Y. Increased prolactin concentrations in a patient with bipolar disorder. *Clin Chem*. 2013;59(3):473-5. Epub 2013/03/02. doi: 10.1373/clinchem.2011.176925. PubMed PMID: 23449699. *Journal Impact Factor: 8.008; Citations: ; Role: Guarantor of integrity of entire study.*
 25. **Nahas Z**, Short B, Burns C, Archer M, Schmidt M, Prudic J, Nobler MS, Devanand DP, Fitzsimons L, Lisanby SH, Payne N, Perera T, George MS, Sackeim HA. A

- feasibility study of a new method for electrically producing seizures in man: focal electrically administered seizure therapy [FEAST]. *Brain Stimul.* 2013;6(3):403-8. Epub 2013/03/23. doi: 10.1016/j.brs.2013.03.004. PubMed PMID: 23518262. *Journal Impact Factor: 6.087; Citations: 33 ; Role: Guarantor of integrity of entire study.*
26. Martin L, Borckardt JJ, Reeves ST, Frohman H, Beam W, **Nahas Z**, Johnson K, Younger J, Madan A, Patterson D, George M. A pilot functional MRI study of the effects of prefrontal rTMS on pain perception. *Pain Med.* 2013;14(7):999-1009. Epub 2013/05/08. doi: 10.1111/pme.12129. PubMed PMID: 23647651. *Journal Impact Factor: 2.243; Citations: 15 ; Role: Manuscript editing and review.*
 27. Johnson KA, Baig M, Ramsey D, Lisanby SH, Avery D, McDonald WM, Li X, Bernhardt ER, Haynor DR, Holtzheimer PE, 3rd, Sackeim HA, George MS, **Nahas Z**. Prefrontal rTMS for treating depression: location and intensity results from the OPT-TMS multi-site clinical trial. *Brain Stimul.* 2013;6(2):108-17. Epub 2012/04/03. doi: 10.1016/j.brs.2012.02.003. PubMed PMID: 22465743; PMCID: PMC3573221. *Journal Impact Factor: 6.087; Citations: 28 ; Role: Developed study design, oversaw analyses and guarantor of integrity of entire study.*
 28. Hariz N, Bawab S, Atwi M, Tavitian L, Zeinoun P, Khani M, Birmaher B, **Nahas Z**, Maalouf FT. Reliability and validity of the Arabic Screen for Child Anxiety Related Emotional Disorders (SCARED) in a clinical sample. *Psychiatry Res.* 2013;209(2):222-8. Epub 2013/01/15. doi: 10.1016/j.psychres.2012.12.002. PubMed PMID: 23312477. *Journal Impact Factor: 2.194; Citations: 6 ; Role: Manuscript editing and review.*
 29. Borckardt JJ, **Nahas ZH**, Teal J, Lisanby SH, McDonald WM, Avery D, Durkalski V, Pavlicova M, Long JM, Sackeim HA, George MS. The painfulness of active, but not sham, transcranial magnetic stimulation decreases rapidly over time: results from the double-blind phase of the OPT-TMS Trial. *Brain Stimul.* 2013;6(6):925-8. Epub 2013/06/19. doi: 10.1016/j.brs.2013.04.009. PubMed PMID: 23769413; PMCID: PMC3819406. *Journal Impact Factor: 6.087; Citations: 8 ; Data acquisition, manuscript editing and review.*
 30. Mantovani A, Pavlicova M, Avery D, **Nahas Z**, McDonald WM, Wajdik CD, Holtzheimer PE, 3rd, George MS, Sackeim HA, Lisanby SH. Long-term efficacy of repeated daily prefrontal transcranial magnetic stimulation (TMS) in treatment-resistant depression. *Depress Anxiety.* 2012;29(10):883-90. Epub 2012/06/13. doi: 10.1002/da.21967. PubMed PMID: 22689290; PMCID: PMC4413472. *Journal Impact Factor: 5.004; Citations: 25 ; Role: PI for local site, manuscript editing and review.*
 31. **Nahas Z**, Anderson BS. Brain stimulation therapies for mood disorders: the continued necessity of electroconvulsive therapy. *J Am Psychiatr Nurses Assoc.* 2011;17(3):214-6. Epub 2011/06/10. doi: 10.1177/1078390311409037. PubMed PMID: 21653491. *Journal Impact Factor: 0.773; Citations: ; Role: Lead, manuscript editing and review.*

32. McDonald WM, Durkalski V, Ball ER, Holtzheimer PE, Pavlicova M, Lisanby SH, Avery D, Anderson BS, **Nahas Z**, Zarkowski P, Sackeim HA, George MS. Improving the antidepressant efficacy of transcranial magnetic stimulation: maximizing the number of stimulations and treatment location in treatment-resistant depression. *Depress Anxiety*. 2011;28(11):973-80. Epub 2011/09/08. doi: 10.1002/da.20885. PubMed PMID: 21898711; PMCID: PMC4413508. *Journal Impact Factor: 5.004; Citations: 39 ; Role: PI for local site, manuscript editing and review.*
33. Li X, Large CH, Ricci R, Taylor JJ, **Nahas Z**, Bohning DE, Morgan P, George MS. Using interleaved transcranial magnetic stimulation/functional magnetic resonance imaging (fMRI) and dynamic causal modeling to understand the discrete circuit specific changes of medications: lamotrigine and valproic acid changes in motor or prefrontal effective connectivity. *Psychiatry Res*. 2011;194(2):141-8. Epub 2011/09/20. doi: 10.1016/j.psychres.2011.04.012. PubMed PMID: 21924874. *Journal Impact Factor: 2.194; Citations: 18 ; Role: Data acquisition, manuscript editing and review.*
34. Kozel FA, Johnson KA, **Nahas Z**, Nakonezny PA, Morgan PS, Anderson BS, Kose S, Li X, Lim KO, Trivedi MH, George MS. Fractional anisotropy changes after several weeks of daily left high-frequency repetitive transcranial magnetic stimulation of the prefrontal cortex to treat major depression. *J ECT*. 2011;27(1):5-10. Epub 2010/06/19. doi: 10.1097/YCT.0b013e3181e6317d. PubMed PMID: 20559144; PMCID: PMC2975808. *Journal Impact Factor: 2.477; Citations: 16 ; Role: Developed study design, data acquisition, manuscript editing and review.*
35. Herbsman T, **Nahas Z**. Anatomically based targeting of prefrontal cortex for rTMS. *Brain Stimul*. 2011;4(4):300-2. Epub 2011/10/29. doi: 10.1016/j.brs.2011.01.004. PubMed PMID: 22032746; PMCID: PMC3204190. *Journal Impact Factor: n/a; Citations: n/a; Role: Guarantor of integrity of entire study.*
36. Hadley D, Anderson BS, Borckardt JJ, Arana A, Li X, **Nahas Z**, George MS. Safety, tolerability, and effectiveness of high doses of adjunctive daily left prefrontal repetitive transcranial magnetic stimulation for treatment-resistant depression in a clinical setting. *J ECT*. 2011;27(1):18-25. Epub 2011/02/24. doi: 10.1097/YCT.0b013e3181ce1a8c. PubMed PMID: 21343710. *Journal Impact Factor: 2.477; Citations: 60 ; Role: Developed study design, manuscript editing and review.*
37. Pincus D, Kose S, Arana A, Johnson K, Morgan PS, Borckardt J, Herbsman T, Hardaway F, George MS, Panksepp J, **Nahas Z**. Inverse effects of oxytocin on attributing mental activity to others in depressed and healthy subjects: a double-blind placebo controlled fMRI study. *Front Psychiatry*. 2010;1:134. Epub 2010/01/01. doi: 10.3389/fpsy.2010.00134. PubMed PMID: 21423444; PMCID: PMC3059627. *Journal Impact Factor: 3.532; Citations: 47 ; Role: Guarantor of integrity of entire study.*
38. O'Reardon JP, Solvason HB, Janicak PG, Sampson S, Isenberg KE, **Nahas Z**, McDonald WM, Avery D, Fitzgerald PB, Loo C, Demitrack MA, George MS, Sackeim HA. Reply regarding "efficacy and safety of transcranial magnetic

- stimulation in the acute treatment of major depression: a multisite randomized controlled trial". *Biol Psychiatry*. 2010;67(2):e15-7. Epub 2009/11/17. doi: 10.1016/j.biopsych.2009.06.027. PubMed PMID: 19914602. *Journal Impact Factor: 11.212; Citations: 944 ; Role: Study site PI, took active role in study design development.*
39. **Nahas Z**, Anderson BS, Borckardt J, Arana AB, George MS, Reeves ST, Takacs I. Bilateral epidural prefrontal cortical stimulation for treatment-resistant depression. *Biol Psychiatry*. 2010;67(2):101-9. Epub 2009/10/13. doi: 10.1016/j.biopsych.2009.08.021. PubMed PMID: 19819427; PMCID: PMC2863140. *Journal Impact Factor: 11.212; Citations: 60 ; Role: Guarantor of integrity of entire study.*
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Chapters in Books

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Presentations

Invited Oral Presentations at International Professional Meetings, Conferences, etc.

1. **Nahas, Z.** Lateral and Medial prefrontal stimulation for Treatment Resistant Depression, *49th Middle East Medical Assembly (MEMA) annual meeting, 2018.* Beirut Lebanon
2. **Nahas, Z.** Depression in Palliative Care Setting, *49th Middle East Medical Assembly (MEMA) annual meeting, 2018.* Beirut Lebanon
3. **Nahas, Z.** Vagus Nerve Stimulation for Treatment Resistant Depression, *LivaNova Dubai, 2016,* Dubai.
4. **Nahas, Z.** Focal Electrically Administered Seizure Therapy, *Society of Biological Psychiatry 70th Annual Meeting, 2015,* Toronto, Canada.
5. **Nahas, Z.** Focal Electrically Administered Seizure Therapy, *1st International Brain Stimulation Meeting, 2015,* Singapore.
6. **Nahas, Z.** Brain Stimulation Therapies in Mood Disorders, *First Annual Meeting of Neuroscience Weil Cornell, 2014,* Qatar.
7. **Nahas, Z.** Epidural Prefrontal Cortical Stimulation for Treatment Resistant Depression, *McGill University, 2010,* Montreal, Canada.
8. **Nahas, Z.** Transcranial Magnetic Stimulation for Depression, *Recent Advances in Brain Stimulation Meeting, 2010,* Montreal, Canada.

9. **Nahas, Z.** Brain Stimulation for Treatment Resistant Depression, *American University of Beirut Grand Rounds*, 2010, Beirut, Lebanon.
10. **Nahas, Z.** Deep Brain Stimulation and Epidural Cortical Stimulation for Neuropsychiatric Disorders, *Movement Disorders Congress Annual Meeting*, 2010, Buenos Aires, Argentina.
11. **Nahas, Z.** Epidural Prefrontal Cortical Stimulation for Treatment Resistant Depression, *Dartmouth College Grand Rounds*, 2010, Lebanon.
12. **Nahas, Z.** Interleaved TMSfMRI, *Updates on TMS*, 2008, Montreal, Canada.
13. **Nahas, Z.** Vagus Nerve Stimulation for Depression, *Canadian Psychiatric Meeting*, 2007, Montreal, Canada.
14. **Nahas, Z.** Future of TMS, *Uruguay Biological Psychiatry Meeting*, 2006, Montevideo, Uruguay.
15. **Nahas, Z.** Interleaved TMSfMRI, *Philips Med Center*, 2006, Eindhoven, Netherlands.
16. **Nahas, Z.** VNS as Antidepressants, *International Society of Affective Disorder Annual Meeting*, 2006, Lisbon, Portugal.
17. **Nahas, Z.** Nature, Nurture, and the Influence on Early Development, *Javeriana Psychiatric Congress*, 2006, Bogota, Colombia.
18. **Nahas, Z.** VNS as Antidepressants, *Javeriana Psychiatric Congress*, 2006, Bogota, Colombia.
19. **Nahas, Z.** Neurobiology of Depression, *Javeriana Psychiatric Congress*, 2006, Bogota, Colombia.
20. **Nahas, Z.** TMS as Antidepressants, *Javeriana Psychiatric Congress*, 2006, Bogota, Colombia.
21. **Nahas, Z.** TMSfMRI, *World Federation of Societies of Biological Psychiatry Asia-Pacific Congress*, 2004, Seoul, Korea.
22. **Nahas, Z.** TMS and VNS in Depression, *Bipolar Disorder Meeting*, 2003, Cascais, Portugal.
23. **Nahas, Z.** Transcranial Magnetic Stimulation, *Biological Psychiatry Meeting*, 2002, Brazil.
24. **Nahas, Z.** Transcranial Magnetic Stimulation, *Italian Biological Psychiatry Meeting*, 2002, Milan, Italy.
25. **Nahas, Z.** TMS and Mood Disorders, *Lebanese College of Neuropsychopharmacology*, 1999, Beirut, Lebanon.

26. **Nahas, Z.** rTMS in Mood and Emotions, *INSERM- Functional Imaging Laboratories*, 1998, Orsay, France.
27. **Nahas, Z.** rTMS and Neuroimaging, *American University of Beirut- Department of Psychiatry*, 1998, Beirut, Lebanon.
28. **Nahas, Z.** Serial Spin-Labeled Perfusion MRI in a Manic Patient on Olanzapine and Lithium, *Junior Investigator- CINP*, 1998, Glasgow, Scotland.

Invited Oral Presentations at National Professional Meetings, Conferences, etc.

1. **Nahas, Z.** Embrace and the launching the first suicide prevention helpline in the Middle East. *John Hopkins Public Health invited lectures. 2018.* Baltimore.
2. **Nahas, Z.** Epidural Cortical Stimulation, *Weil Cornell New York Grand Rounds*, 2015, New York, NY.
3. **Nahas, Z.** Medial and Lateral Stimulation for Depression, *Stanford University Neurosurgery Special Lecture*, 2015, Stanford, CA.
4. **Nahas, Z.** Transcranial Magnetic Stimulation and Focal Electrically Administered Seizure Therapy, *AHNI Neuroscience Annual Meeting*, 2015. Chicago, IL.
5. **Nahas, Z.** Latest Advancement in Convulsive Therapy, *ACNP 53rd Annual Meeting*, 2014, Phoenix, AZ.
6. **Nahas, Z.** Is Randomness Versus Determinism a Productive Question for the Neuromodulation? Specific Implications for Future Brain Stimulation Therapies in Depression, *Medical University of South Carolina, Grand Rounds*, 2011, Charleston, SC.
7. **Nahas, Z.** Neuromodulation and the Future of Somatic Psychiatric Therapies, *Southeastern Medical Assembly Annual Scientific Meeting*, 2010, Kissimmee, FL.
8. **Nahas, Z.** Depression: Treatment Options, *Southeastern Medical Assembly Annual Scientific Meeting*, 2010, Kissimmee, FL.
9. **Nahas, Z.** Epidural Prefrontal Cortical Stimulation for Treatment Resistant Depression, *University of Alabama Grand Rounds*, 2010, Birmingham, AL.
10. **Nahas, Z.** Epidural Prefrontal Cortical Stimulation for Treatment Resistant Depression, *Wayne State University Grand Rounds*, 2010, Detroit, MI.
11. **Nahas, Z.** OPT-TMS Mechanisms of Action Studies, *American Psychiatric Association Annual Meeting*, 2010, New Orleans, LA.
12. **Nahas, Z.** TMS fMRI: An Update, *Society of Biological Psychiatry Annual Meeting*, 2010, New Orleans, LA.
13. **Nahas, Z.** Epidural Prefrontal Cortical Stimulation for Treatment Resistant Depression, *University of Wisconsin Grand Rounds*, 2009, Madison, WI.

14. **Nahas, Z.** Epidural Prefrontal Cortical Stimulation for Treatment Resistant Depression, *Yale University Grand Rounds*, 2009, New Haven, CT.
15. **Nahas, Z.** TMS and EpCS: Now and in the Future, *APA Symposium on Brain Stimulation*, 2009, San Francisco, CA.
16. **Nahas, Z.** Brain Imaging for Neuropsychiatrists, *APA CME Course*, 2009, San Francisco, CA
17. **Nahas, Z.** TMS Mechanisms of Action, *ACT TMS Certification Course*, 2009, San Francisco, CA.
18. **Nahas, Z.** Epidural Prefrontal Cortical Stimulation for Treatment Resistant Depression, *MUSC Grand Rounds*, 2009, Charleston, SC.
19. **Nahas, Z.** Epidural Prefrontal Cortical Stimulation for Treatment Resistant Depression, *UT Southwestern Grand Rounds*, 2009, Dallas, TX.
20. **Nahas, Z.** The Best Rhythm for the Brain, *Study Group ACNP Annual Meeting*, 2008, Scottsdale, AZ.
21. **Nahas, Z.** Neuromodulation in Psychiatry, *SUMMA Grand Rounds*, 2008, Akron, OH.
22. **Nahas, Z.** Neuromodulation for Treatment Resistant Depression, *University of Kentucky Grand Rounds*, 2007, Louisville, KY.
23. **Nahas, Z.** TMS and VNS as Antidepressants, *University of Cincinnati Psychiatry Grand Rounds*, 2005, Cincinnati, OH.
24. **Nahas, Z.** VNS as Antidepressant, *Annual Meeting of the American Association of Geriatric Psychiatry*, 2005, San Diego, CA.
25. **Nahas, Z.** Transcranial Magnetic Stimulation, *University of Iowa Psychiatry Grand Rounds*, 2004, Iowa City, IA.
26. **Nahas, Z.** TMSfMRI as New Neuroscience Tool, *University of Iowa Research Rounds*, 2004, Iowa City, IA.
27. **Nahas, Z.** Neuromodulation as Therapeutic: A Complementary Approach, *Research Rounds: Biological Branch, NYSPI Columbia University*, 2004, New York, NY.
28. **Nahas, Z.** Transcranial Magnetic Stimulation, *APA Annual Meeting*, 2004, New York, NY.
29. **Nahas, Z.** TMS Antidepressant Mechanisms of Action: A Critical View, *aCT/ISTS Annual Meeting*, 2004, New York, NY.
30. **Nahas, Z.** VNS in Depression, *ECNS Annual Meeting*, 2003, Houston, TX.

31. **Nahas, Z.** Brain Stimulation and Functional Imaging, *Baylor College of Medicine Psychiatry Grand Rounds*, 2003, Houston, TX.
32. **Nahas, Z.** Brain Stimulation as Cognitive Enhances, *11th Annual Meeting of the International Psychogeriatric Association*, 2003, Chicago, IL.
33. **Nahas, Z.** Vagus Nerve Stimulation and fMRI in Treatment-Resistant Depression, *Annual Meeting of the Society of Biological Psychiatry*, 2002, Philadelphia, PA.
34. **Nahas, Z.** Interleaved TMS/fMRI: A New Neuroscience Tool, *fMRI Lecture Series Wake Forest University*, 2002, Winston-Salem, North Carolina.
35. **Nahas, Z.** TMS and VNS as Treatment for Depression, *Neuromodulation: Defining the Future Symposium Cleveland Clinic*, 2001, Cleveland, OH.
36. **Nahas, Z.** Evocative Memory in Borderline Personality Disorders; Using TMS and fMRI to Understand the Neuronal Network of Evocative Memory Deficits in BPD, *New York Psychoanalytic Institute and Neuroscience Research Funds/Seminar on Basic Neurosciences Research*, 2001, New York, NY.
37. **Nahas, Z.** Interleaved VNS/fMRI, *Biological Psychiatry Meeting*, 2001, New Orleans, LA.
38. **Nahas, Z.** Interleaved TMS/fMRI: A New Neuroscience Tool, *Neuroscience Grand Rounds MUSC*, 2001, Charleston, SC.
39. **Nahas, Z.** TMS in the Elderly, *American Association for Geriatric Psychiatry 14th Annual Meeting*, 2001, San Francisco, CA.
40. **Nahas, Z.** Novel Approaches to the Patient with Treatment Resistant Depression, *Post-Graduate Institute of Medicine*, 2000, Wichita, Nebraska.
41. **Nahas, Z.** Neuroimaging Research, *MUSC-Days of Discoveries*, 2000, Charleston, NC.
42. **Nahas, Z.** Novel Approaches to the Patient with Treatment Resistant Depression, *Post-Graduate Institute of Medicine*, 2000, Charleston, NC
43. **Nahas, Z.** Neuroimaging as Test for Neurological Impairment. Cons and Pros, *Federal Defender Training Group*, 2000, San Francisco, CA.
44. **Nahas, Z.** TMS and VNS. New Treatment Approaches for Treatment of Depression, *MUSC-Breakfast Rounds*, 1999, Charleston, NC.
45. **Nahas, Z.** Future Trends in Psychiatry. Transcranial Magnetic Stimulation in Mood and Emotions, *Michigan Psychiatric Society – Winter Meeting*, 1999, Ann Arbor, MI.
46. **Nahas, Z.** Violence and Neuroimaging, *Federal Defender Training Group*, 1999, Atlanta, GA.

47. **Nahas, Z.** Depression in Demented Patients. A Naturalistic Study, *Texas Society Psychiatric Physicians Annual Meeting*, 1997, Texas.
48. **Nahas, Z.** The Primary Esthetics, *Baylor College of Medicine – Department of Psychiatry Grand Rounds*, 1997, Houston, TX.

TEACHING AND CURRICULUM DEVELOPMENT

American University of Beirut Medical Center

Course/Lecture List (AUBMC 2011 – 2017)

PGY-I, II and III Neuropsychopharmacology Course, Psychiatry Residency Training Program, Department of Psychiatry, American University of Beirut Medical Center

PGY-II, III, and IV Psychodynamic Psychotherapy Course, Psychiatry Residency Training Program, Department of Psychiatry, American University of Beirut Medical Center

PGY-II, III, and IV Patient Interview Skills, Psychiatry Residency Training Program, Department of Psychiatry, American University of Beirut Medical Center

Clinical Psychology Interns, Patient Interview Skills, Clinical Psychology Training Program, Department of Psychiatry, American University of Beirut Medical Center

Medical Students II Lecturer (Mood Disorders)

Medical Students III Lecturer (Brain Stimulation)

Curriculum Development

Developed all the curriculum training for the psychiatry residency training program at AUBMC

ADVISING AND MENTORING

Graduate Student Activities

Master's Student Advisees

Supervisor for Masters in Public Health Practicum in Psychiatry	2011 2017
Masters student in Electric Engineering, Co-Mentor	2011 2017
Masters student in Neuroscience, Co-Mentor	2011 2017

Doctoral Committees Served on

Doctoral student in Neuroscience, Co-Mentor Farah Shamaa	2014 - present
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Residents Supervised

Supervision of PGY-II and PGY-III resident's, AUBMC	2012 - 2017
Supervision of PGY-III and PGY-IV residents, MUSC	1999 - 2011

Fellows Supervised

Daher, Michel, MD	2016 - 2017
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Other Mentoring Activities

Supervision of Medical Students, Electroconvulsive Therapy and Brain Stimulation MUSC	1999 – 2011
Supervision of Medical Students, Electroconvulsive Therapy and Brain Stimulation AUBMC	2011 - 2017

CLINICAL SERVICE**Clinical Leadership Accomplishments**

Director, Mood Disorders Program (University of Minnesota)	2017 – present
Director, Interventional Psychiatry Program	2017 – present
Director, Electroconvulsive Therapy Program	September 2018
Director, Mood Disorders Program (AUBMC)	2011 – 2017
Director, Interventional Psychiatry Program	2011 – 2017
Director, Mood Disorders Program (MUSC)	2006 – 2011
Medical Director, Brain Stimulation Laboratory	1999 – 2011

Quality Improvement Projects

Implementation of suicide screening on inpatient admissions/ discharges (AUBMC)	2015
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PROFESSIONAL SERVICE AND PUBLIC OUTREACH**Service to the Discipline/Profession/Interdisciplinary Area(s)**

Member, CME course on Electroconvulsive Therapy, International ECT CME	2015
Chair, CME course on Depression from Bench to Clinical Setting, Abu Haidar Neuroscience Institute AUBMC	2015
Member, CME course on Neuromodulation in Neuropsychiatry, Abu Haidar Neuroscience Institute AUBMC	2015
Executive and Scientific Committees Member, 13 th Pan Arab Psychiatry Federation Annual Meeting	2014
Chair, CME course on Brain Stimulation for Psychiatrists, APA Annual Meeting	2008 – 2013
Chair, CME course on Transcranial Magnetic Stimulation, APA Annual Meeting	2002 - 2008
Chair, CME course on Vagus Nerve Stimulation, APA Annual Meeting	2002 -2006
Chair, CME course on Transcranial Magnetic Stimulation, MUSC	1999 – 2011

Editorships/Journal Reviewer Experience

Ex-Editor-in-Chief, Frontiers in Neuropsychiatric Imaging and Stimulation	2013
Associate Editor, Frontiers in Neuropsychiatric Imaging and Stimulation	2013 – present
Editor, Brain Stimulation Journal	2011 – present
American Journal of Psychiatry	1999 – present
Biological Psychiatry	1998 – present
Brain Research	2001 – present
CNS Spectrums	1998 – 2002
Depression and Anxiety	2000 – 2015

Epilepsy & Behavior	2000 – 2007
Frontiers of Psychiatry	2011 – present
International Journal of Pharmaceutical Medicine	2011
JAMA Psychiatry	2005 – present
Journal of Affective Disorders	1998 – present
Journal of Clinical Psychiatry	1999 – present
Journal of Psychiatric Practice	2007
Journal of Neuropsychiatry and Clinical Neurosciences	1997 – present
Neuroimage	2000 – present
Neuropsychopharmacology	2001 – present
Schizophrenia Research	1999 – present

Review panels for external funding agencies, foundations, etc.

Constello Group Review Panel	2001 – present
Israel Science Foundation	2001 – present
Canadian Institute of Health Research	2001 – present
Wellcome Trust	2001 – present
Department of Defense	2001 – present

Program review experience

National Institute of Mental Health BDCN Member Conflict Study Section	2007 – 2011
National Institute of Mental Health ZMH1 Member Schizophrenia and Aging	2005 – 2006
National Institute of Health Clinical Neuroscience and Disease (CND) Study Section	

Organization of conferences, workshops, panels, symposia

Chair, Grand Rounds Committee, Department of Psychiatry Medical University of South Carolina	2008 - 2011
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Committee memberships

Member, Membership Committee, American College of Neuropsychopharmacology	2016 – present
Member, Liaison Committee, American College of Neuropsychopharmacology	2013 – 2016
Chair, Sub-committee on Liaison with Private Insurance Companies, Lebanese Psychiatric Association	2013 – present
Society of Biological Psychiatry Education and Training Committee	2012 – 2014
Member, Faculty of Medicine Research Taskforce, AUBMC	2011 – 2017
Member, Palliative Care Committee, AUBMC	2011 – 2017
Member, Mental Health Committee, AUBMC	2011 – 2017
Member, Academic Committee, AUBMC	2011 – 2017
Member, Medical Board, AUBMC	2011 – 2017
Pilot & Collaborative Translational and Clinical Studies Work Group, CTSA Planning Project, MUSC	2010 – 2011
Member, Research Executive Committee, Department of Psychiatry Medical University of South Carolina	2007 – 2011

Consultant

MECTA Inc. (unpaid)	2009- present
Neuronetics Inc.	2005 - 2011
Cyberonics Inc.	2005 - 2008

Aventis	2003
Avenir	2003

Service to the University/Medical School/Department

University of Minnesota

Medical School Service and Intercollegiate Service

Clinical Science Council	2017 – present
MnDrive Brain Conditions Steering Committee (periodically)	2017 – present
Fellowship Director, MnDrive Neuromodulation Fellowship	2017 – present

Department/Unit Service

Departmental Leadership Team	2017 – present
Clinical Liaison (chair)	2017 – present
CSU Executive meeting	2017 – present
Clinical Operations	2017 – present

Community Outreach Activities

Invited to present at NAMI Minnesota annual meetings since joined University of Minnesota in 2017.

Organizer of Department of Psychiatry participation at the State Fair Summer 2018.

Founded Embrace in 2013, an NGO in Lebanon for mental health awareness www.embracefund.org

Launched Embrace Lifeline in 2017, the first suicide prevention helpline in Lebanon and the Middle East <https://www.embracelifeline.org>