Adrian Vasile Dalca Curriculum Vitae

Massachusetts General Hospital,
Harvard Medical School, and
Computer Science and Artificial Intelligence Lab,
Massachusetts Institute of Technology

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Education

Ph.D. Massachusetts Institute of Technology 2016

Electrical Engineering and Computer Science
Thesis: Genetic, Clinical and Population Priors for Brain Images
Minor: Healthcare Ventures
Advisor: Prof. Polina Golland
Thesis Readers: John Guttag (MIT), Mert Sabuncu (HMS/MGH), Natalia Rost (HMS/MGH)
GPA: 5.00/5.00

S.M. Massachusetts Institute of Technology 2012

Electrical Engineering and Computer Science
Thesis: Segmentation of Nerve Bundles and Ganglia in Spine MRI using Particle Filters
Advisor: Prof. Polina Golland
GPA: 5.00/5.00

M.Sc. University of Toronto 2010

Department of Computer Science
Thesis: VARiD: A Variation Detection Framework for Color-Space and Letter-Space Platforms
Advisor: Prof. Michael Brudno
GPA: 4.00/4.00

Hon. B.Sc. University of Toronto, with High Distinction 2008

Department of Computer Science
Advisor: Prof. Michael Brudno
GPA: 3.97/4.00

Research Experience

Instructor (Junior Faculty), Radiology, MGH, Harvard Medical School, Charlestown, MA

Laboratory for Computational Neuroscience. 2019 – Present

Research Affiliate, CSAIL, MIT, Cambridge, MA

Data Driven Inference Group. 2019 – Present

Postdoctoral Fellow, CSAIL, MIT, and MGH, Harvard Medical School, Charlestown, MA

Biomedical Data Analysis Group. Advisor: Prof. Mert Sabuncu 2017 – 2019
Data Driven Inference Group. Advisor: Prof. John Guttag 2017 – 2019

Research Assistant, Massachusetts Institute of Technology, Cambridge, MA

Medical Vision Group. Advisor: Prof. Polina Golland 2010 – 2016
Computational Biology Lab. Advisor: Prof. Manolis Kellis Fall 2009

Research Assistant, University of Toronto, Toronto, ON, Canada

Computational Biology Lab. Advisor: Prof. Michael Brudno 2006 – 2009
Geophysics Lab. Advisor: Prof. Jerry Mitrovica 2007 – 2008

Teaching and Mentorship

Mentorship, Massachusetts Institute of Technology, Cambridge, MA   2014-Current

    Mentored six graduate students   2017
    Resulted in several publications, including ones for which I am senior author

    On thesis committee of MIT doctoral student   2017-Current

    Mentored five MIT undergraduate students   2014-2017
    Students successfully contributed to code and publications, including a best-paper award

Teaching Assistant, Massachusetts Institute of Technology, Cambridge, MA

    6.815/865: Computational Photography. Prof. Fredo Durand   2015

Teaching Assistant, University of Toronto, Toronto, ON, Canada

    CSC120: Computer Science for the Sciences   2009
    CSC207: Software Design   2008

Publications

(‡) equal contribution; (*) senior role.

Under Review

Adrian V. Dalca, John Guttag, and Mert R. Sabuncu.
"Unsupervised Data Imputation via Variational Inference of Deep Subspaces".
Under Review.

Kathleen Lewis, Natalia Rost, John Guttag and **Adrian V. Dalca**,
"Fast Learning-based Registration of Sparse 3D Clinical Images".
Under Review.

Markus D. Schirmer, Marco J. Nardin, Kathleen L. Donahue, **Adrian V. Dalca** et al (57 authors),
"Brain Volume and Outcome After Ischemic Stroke".
Under Review at JAMA Neurology.

Journals and Conferences

Adrian V. Dalca, Guha Balakrishnan, John Guttag, and Mert R Sabuncu
"Unsupervised Learning of Probabilistic Diffeomorphic Registration for Images and Surfaces"
MedIA: Medical Image Analysis (2019), Accepted.

Adrian V. Dalca, Evan Yu, Polina Golland, Bruce Fischl, Mert R Sabuncu, and Juan Eugenio Iglesias
"Unsupervised deep learning for Bayesian brain MRI segmentation"
MICCAI: Medical Image Computing and Computer Assisted Intervention, LNCS (2019), Accepted, [Acc. rate: 30%].

Amy Zhao, Guha Balakrishnan, Fredo Durand, John Guttag, and **Adrian V. Dalca***
"Data augmentation using learned transforms for one-shot medical image segmentation"
CVPR: Computer Vision and Pattern Recognition (2019), Accepted, [Acc. rate: 25.2%].

Guha Balakrishnan, Amy Zhao, Mert Sabuncu, John Guttag, and **Adrian V. Dalca***
"VoxelMorph: A Learning Framework for Deformable Medical Image Registration"
IEEE TMI: Transactions on Medical Imaging (2019), Accepted.

Adrian V. Dalca, Katherine Bouman, William Freeman, Mert Sabuncu, Natalia Rost, and Polina Golland
"Medical Image Imputation from Image Collections"
IEEE TMI: Transactions on Medical Imaging 38.2 (2019), pp. 504–514.

Cagla Bahadir, **Adrian V. Dalca**, and Mert Sabuncu
"Learning-based Optimization of the Under-sampling Pattern in MRI"
IPMI: Information Processing and Medical Imaging (2019), Accepted.

Guha Balakrishnan, **Adrian V. Dalca**, Amy Zhao, John Guttag, Fredo Durand, and William T. Freeman
"Visual Deprojection: Probabilistic Recovery of Collapsed Dimensions in Images and Videos"
ICCV: International Conference in Computer Vision (2019), Accepted.

Markus D Schirmer, **Adrian V. Dalca**, Ramesh Sridharan, Anne-Katrin Giese, Kathleen L Donahue, Marco J Nardin, Steven JT Mocking, Elissa C McIntosh, Petrea Frid, Johan Wasselius, et al.
"White Matter Hyperintensity Quantification in Large-Scale Clinical Acute Ischemic Stroke Cohorts–The MRI-GENIE Study"
NeuroImage: Clinical (2019).

Adrian V. Dalca, Guha Balakrishnan, John Guttag, and Mert Sabuncu
"Unsupervised Learning for Fast Probabilistic Diffeomorphic Registration"
MICCAI: Medical Image Computing and Computer Assisted Intervention, LNCS 11070 (2018), 729–738.
[Acc. rate: 35%]. **Finalist for Best Paper (Young Scientist) award.**

Adrian V. Dalca, John Guttag, and Mert Sabuncu
"Anatomical Priors in Convolutional Networks for Unsupervised Biomedical Segmentation"
CVPR: Computer Vision and Pattern Recognition (2018), [Acc. rate: 29%].

Guha Balakrishnan, Amy Zhao, Mert Sabuncu, John Guttag, and **Adrian V. Dalca***
"An Unsupervised Learning Model for Deformable Medical Image Registration"
CVPR: Computer Vision and Pattern Recognition (2018), [Acc. rate: 29%].

Francesco P. Casale, **Adrian V. Dalca**, Luca Saglietti, Nicolo Fusi, and Jennifer Listgarten
"Gaussian Process Prior Variational Autoencoders"
NIPS: Neural Information Processing Systems (2018), [Acc. rate: 21%].

Guha Balakrishnan, Amy Zhao, **Adrian V. Dalca**, Fredo Durand, and John Guttag
"Synthesizing Images of Humans in Unseen Poses"
CVPR: Computer Vision and Pattern Recognition (2018), [Acc. rate: 29%].

Katherine L. Bouman, Michael D. Johnson, **Adrian V. Dalca**, Andrew A. Chael, Freek Roelofs, Sheperd S. Doeleman, and William T. Freeman
"Reconstructing Video of Time-Varying Sources from Radio Interferometric Measurements"
IEEE TCI: Transactions on Computational Imaging 4.4 (2018), pp. 512–527.

Adrian V. Dalca, Katherine Bouman, William Freeman, Mert Sabuncu, Natalia Rost, and Polina Golland
"Population Based Image Imputation"
IPMI: Information Processing in Medical Imaging 10265 (2017), 659–671. [Acc. rate: 36%].
Best poster award.

Miaomiao Zhang, Ruizhi Liao, **Adrian V. Dalca**, Ellen Grant, and Polina Golland
"Frequency Diffeomorphisms for Efficient Image Registration"
IPMI: Information Processing and Medical Imaging 10265 (2017), 559–570. [Acc. rate: 36%].

Anne-Katrin Giese et al. (41 authors)
"Design and Rationale for Examining Neuroimaging Genetics in Ischemic Stroke: the MRI-GENIE Study"
Neurology Genetics 3.5 (2017), e180.

Nematollah K. Batmanghelich, **Adrian V. Dalca**, Gerald Quon, Mert R. Sabuncu, and Polina Golland
"Probabilistic Modeling of Imaging, Genetics and Diagnosis"
IEEE TMI: Transactions on Medical Imaging 35.7 (2016), pp. 1765–79.

Adrian V. Dalca, Ramesh Sridharan, Mert Sabuncu, and Polina Golland
"Predictive Modeling of Anatomy with Genetic and Clinical Data"

MICCAI: Medical Image Computing and Computer Assisted Intervention, LNCS 9351 (2015), 519–526.
[Acc. rate: 32%].

Danielle Pace, **Adrian V. Dalca**, Tal Geva, Andrew J. Powell, Mehdi H. Moghari, and Polina Golland
"Interactive Whole-Heart Segmentation in Congenital Heart Disease"
MICCAI: Medical Image Computing and Computer Assisted Intervention, LNCS 9351 (2015), 80–88.
[Acc. rate: 32%].

Adrian V. Dalca, Ramesh Sridharan, Lisa Cloonan, Kaitlin M. Fitzpatrick, Allison Kanakis, Karen L. Furie, Jonathan Rosand, Ona Wu, Mert Sabuncu, Natalia S. Rost, and Polina Golland
"Segmentation of Cerebrovascular Pathologies in Stroke Patients with Spatial and Shape Priors"
MICCAI: Medical Image Computing and Computer Assisted Intervention, LNCS 8674 (2014), 773–780.
[Acc. rate: 29%].

Kayhan N. Batmanghelich, **Adrian V. Dalca**, Mert R. Sabuncu, and Polina Golland
"Joint generative modeling of imaging and genetics"
IPMI: Information Processing and Medical Imaging, LNCS 7917 (2013), 766–777. [Acc. rate:32].

Adrian V. Dalca, Ken Ferrier, Jerry X. Mitrovica, J. Taylor Perron, Glen Milne, and Jessica Creveling
"On post-glacial sea-level - III: incorporating sediment redistribution"
GJI: Geophysical Journal International (2013), pp. 45–60.

Adrian V. Dalca, Giovanna Danagoulian, Ron Kikinis, Ehud Schmidt, and Polina Golland
"Segmentation of nerve bundles and ganglia in spine MRI using particle filters"
MICCAI: Medical Image Computing and Computer-Assisted Intervention, LNCS (2011), 537–545.
[Acc. rate: 30%].

Adrian V. Dalca, Stephen M. Rumble, Samuel Levy, and Michael Brudno
"VARiD: A variation detection framework for color-space and letter-space platforms"
Bioinformatics 26.12 (2010), i343–i349. [Acc. rate: 20%].

Adrian V. Dalca and Michael Brudno
"Genome variation discovery with high-throughput sequencing data"
Briefings in Bioinformatics 11.1 (2010), pp. 3–14.

Stephen M. Rumble, Phil Lacroute, **Adrian V. Dalca**, Marc Fiume, Arend Sidow, and Michael Brudno
"SHRiMP: Accurate mapping of short color-space reads"
PLoS computational biology 5.5 (2009).

Adrian V. Dalca and Michael Brudno
"FRESCO: Flexible alignment with rectangle scoring schemes"
PSB: Pacific Symposium on Biocomputing 13 (2008), 3–14. [Acc. rate: 36%].

Peer Reviewed Workshops

Adrian V. Dalca, John Guttag, and Mert Sabuncu
"Unsupervised Medical Image Imputation via Variational Inference of Deep Subspaces"
NIPS ML4H: Machine Learning for Health (2018).

Adrian V. Dalca, Guha Balakrishnan, John Guttag, and Mert Sabuncu
"Atlas Construction and Improved Registration of Medical Images with CNN Frameworks "
NIPS ML4H: Machine Learning for Health (2018).

Adrian V. Dalca, Guha Balakrishnan, John Guttag, and Mert Sabuncu
"Improved Probabilistic Diffeomorphic Registration with CNNs"
MED NIPS: Medical Imaging Meets NIPS (2018).

Kathleen Lewis, Guha Balakrishnan, Natalia Rost, John Guttag, and **Adrian V. Dalca***
"Fast Learning-based Registration of Sparse Clinical Images"

NIPS ML4H: Machine Learning for Health (2018),
Spotlight.

Francesco P. Casale, **Adrian V. Dalca**, Nicolo Fusi, and Jennifer Listgarten
"Generative models for clinical imaging genetic analysis"
NIPS ML4H: Machine Learning for Health (2018).

Danielle Pace, **Adrian V. Dalca**, Tom Brosch, Tal Geva, Andrew J. Powell, Jurgen Weese, Mehdi H. Moghari, and Polina Golland
"Iterative Segmentation from Limited Training Data: Applications to Congenital Heart Disease"
MICCAI DLMIA: Deep Learning in Medical Image Analysis, LNCS (2018).

Adrian V. Dalca, John Guttag, and Mert Sabuncu
"Spatial Anatomical Priors in Convolutional Networks for Unsupervised Biomedical Segmentation"
NIPS ML4H: Machine Learning for Health (2017),
Spotlight.

Adrian V. Dalca, Andreea Bobu, Natalia S Rost, and Polina Golland
"Patch-Based Discrete Registration of Clinical Brain Images"
MICCAI PATCHMI: Patch-based Techniques in Medical Imaging, LNCS 9993 (2016), 60–67.
Best paper award.

Adrian V. Dalca, Ramesh Sridharan, Natalia S. Rost, and Polina Golland
"tipiX: Rapid Visualization of Large Image Collections"
MICCAI IMIC: Interactive Medical Image Computing Workshop (2014),
Best paper award for impact and usability.

Ramesh Sridharan, **Adrian V. Dalca**, and Polina Golland
"An interactive visualization tool for Nipype medical imaging pipelines"
MICCAI IMIC: Interactive Medical Image Computing Workshop (2014).

Ramesh Sridharan‡, **Adrian V. Dalca**‡, Kaitlin M. Fitzpatrick, Lisa Cloonan, Allison Kanakis, Ona Wu, Karen L. Furie, Jonathan Rosand, Natalia S. Rost, and Polina Golland
"Quantification and Analysis of Large Multimodal Clinical Image Studies: Application to Stroke"
MICCAI MBIA: Multimodal Brain Image Analysis, LNCS 8159 (2013), pp. 18–30.

Theses

Adrian V. Dalca
"Genetic, Clinical and Population Priors for Brain Images"
Ph.D. Thesis. Cambridge, MA: Massachusetts Institute of Technology, July 2016.

Adrian V. Dalca
"Segmentation of nerve bundles and ganglia in spine MRI using particle filters"
S.M. Thesis. Cambridge, MA: Massachusetts Institute of Technology, June 2012,
Morris Joseph Levin Award.

Books and Proceedings

Danail Stoyanov, Zeike Taylor, Enzo Ferrante, **Adrian V. Dalca**, et al (Editors).
Graphs in Biomedical Image Analysis and Integrating Medical Imaging and Non-Imaging Modalities.
Springer. 2018.

Adrian V. Dalca, Nematollah K. Batmanghelich, Mert Sabuncu, Li Shen (Editors).
Imaging Genetics.
Elsevier. 2017.

Jorge Cardoso, Tal Arbel, Enzo Ferrante, Xavier Pennec, **Adrian V. Dalca**, et al (Editors).
Graphs in Biomedical Image Analysis, Computational Anatomy and Imaging Genetics.

Springer. 2017.

Jorge Cardoso, Tal Arbel, Fei Gao, Bernhard Kainz, Theo van Walsum, Kuangyu Shi, Kanwal K. Bhatia, Roman Peter, Tom Vercauteren, Mauricio Reyes, **Adrian V. Dalca**, et al (Editors)
Molecular Imaging, Reconstruction and Analysis of Moving Body Organs, and Stroke Imaging and Treatment.
Springer. 2017.

Presentations

Machine Learning in Medical Image Analysis *Advances in Imaging and Machine Learning.* Invited Talk.
Boston, MA, USA. 2019

Unsupervised Learning of Image Correspondences in Medical Image Analysis.
California Institute of Technology. Invited Talk.
Pasadena, CA, USA. 2019

Machine Learning for Medical Image Analysis.
6.874 Computational Systems Biology: Deep Learning in the Life Sciences, EECS, MIT. Invited Talk.
Boston, MA, USA. 2019

Machine Learning for Medical Image Analysis.
CSC2541HS: Topics in Machine Learning: ML for Health. DCS, University of Toronto. Invited Talk.
Toronto, ON, Canada. 2019

Improved Probabilistic Diffeomorphic Registration with CNNs.
Medical Imaging meets NeurIPS. Oral Presentation.
Montreal, QC, Canada. 2018

Improved Probabilistic Diffeomorphic Registration with CNNs.
Medical Imaging meets NeurIPS. Oral Presentation.
Montreal, QC, Canada. 2018

Unsupervised Learning for Large Scale Medical Image Analysis.
Brown University. Invited Talk.
Providence, RI, USA. 2018

VoxelMorph: Unsupervised Learning for Fast Deformable Medical Image Registration.
Philips Research North America. Invited Talk.
Cambridge, MA, USA. 2018

Unsupervised Learning for Fast Probabilistic Diffeomorphic Registration.
Medical Image Computing and Computer Assisted Intervention. Oral presentation.
Granada, Spain, 2018. **Finalist Best Paper Award**.

VoxelMorph: A Probabilistic Learning Framework for Fast Diffeomorphic Medical Image Registration.
Bridging the Divide: Machine Learning in Medicine. Poster presentation.
Ithaca, NY, USA. 2018. **Best Poster Award**.

VoxelMorph: Unsupervised Learning for Deformable Medical Image Registration.
NeuroNex Technology Conference. Poster presentation.
Ithaca, NY, USA. 2018.

An Unsupervised Learning Model for Fast Deformable Medical Image Registration.
Biomedical Imaging and Analysis Seminar. Invited Talk.
Cambridge, MA, USA. 2018.

Spatial Anatomical Priors in Convolutional Networks for Unsupervised Biomedical Segmentation.
NIPS ML4H: Machine Learning for Health. Poster Presentation.
Long Beach, CA, USA. 2017.

Population Based Medical Image Imputation,
Information Processing in Medical Imaging. Poster Presentation.
Boone, NC, USA. 2017. **Best Poster Award**.

Population Based Medical Image Imputation,

Computer Vision Research Seminar, CSAIL, MIT. Oral Presentation.
Cambridge, MA, USA. 2017.

Population Based Image Imputation.
Institute for Medical Engineering and Science Research Social, MIT. Oral Presentation.
Cambridge, MA, USA. 2017.

Genetic and Clinical Priors for Brain Images.
6.874 Computational and Systems Biology, EECS, MIT. Invited Talk.
Boston, MA, USA. 2017.

Patch-Based Discrete Registration of Clinical Brain Images.
International Workshop on Patch-based Techniques in Medical Imaging. Oral Presentation.
Athens, Greece. 2016.

Population, Clinical, and Genetic Priors for Medical Images.
Laboratory of Neuro Imaging. Invited Talk.
Los Angeles, CA, USA. 2016.

Genetic, Clinical, and Population Priors for Medical Images.
Computer Science and Artificial Intelligence Lab. Ph.D. Defense.
Cambridge, MA, USA. 2016.

Characterization of Cerebrovascular Pathologies from Brain Images.
WHISR Talk Series. Invited Talk.
Cambridge, MA, USA. 2016

Predictive Modeling of Anatomy with Genetic and Clinical Data,
Medical Image Computing and Computer Assisted Intervention. Poster.
Munich, Germany. 2015.

Segmentation of Cerebrovascular Pathologies in Stroke Patients with Spatial and Shape Priors.
Medical Image Computing and Computer Assisted Intervention. Poster.
Cambridge, MA, USA. 2014.

tipiX: Rapid Visualization of Large Image Collections.
MICCAI-IMIC Interactive Medical Image Computing Workshop. Oral Presentation.
Cambridge, MA, USA. 2014.

Quantification and Analysis of Large Multimodal Clinical Image Studies: Application to Stroke.
MICCAI International Workshop on Multimodal Brain Image Analysis. Oral Presentation.
Nagoya, Japan. 2013.

A Bayesian Framework for Imaging Genetics.
International Imaging Genetics Conference. Poster.
Irvine, CA, USA. 2013.

Segmentation of Nerve Bundles and Ganglia in Spine MRI Using Particle Filter.
EECS Masterworks. Poster.
Cambridge, MA, USA. 2012. **Morris Joseph Levin Award**

Segmentation of Nerve Bundles and Ganglia in Spine MRI Using Particle Filter.
Medical Image Computing and Computer Assisted Intervention. Poster.
Toronto, Canada. 2011.

VARiD: A Variation Detection Framework for Color-Space and Letter-Space Platforms.
Intelligent Systems for Molecular Biology. Oral Presentation.
Stockholm, Sweden. 2010.

FRESCO: Flexible Alignment with Rectangle Scoring Schemes.
Pacific Symposium on Bioinformatics. Oral Presentation.
The Big Island, HI, USA. 2008.

Graduate Awards

Whitaker Health Sciences Fund Fellowship (MIT)	2015 – 2016
MICCAI-PATCHMI Best paper award	2016
MICCAI-IMIC Best paper award for impact and usability	2014
Advanced Multimodal Neuroimaging Training Program (NIH)	2014 – 2015
Hewlett Packard Full Fellowship (EECS)	2013 – 2014
Morris Joseph Levin Thesis Presentation Award	2012
NSERC (Alexander Graham Bell) Canada Graduate Scholarship (CGS-D)	2012 – 2014
Barbara J. Weedon Full Fellowship	2012 – 2013
Harvard EPS Pierce Scholarship Admission Scholarship, (Declined in favor of MIT)	2009
NSERC (Alexander Graham Bell) Canada Graduate Scholarship (CGS-M)	2008 – 2010
Ontario Graduate Scholarship, (Declined in favour of NSERC CGS-M)	2008
Halen Sawyer Hogg Graduate Admission Award	2008

Academic Service

Organizing Committee

NIPS ML4H: Machine Learning for Health   2018
Active participation in several aspects of organizing committee

BeyondMIC: integrating imaging and non-imaging modalities   2018 (Founding)
Founded and led the organization

SWITCH: Stroke Workshop on Imaging and Treatment CHallenges   2017 (Founding) - 2018
Active participant of founding and organizing committee

MICGen: MICCAI Workshop on Imaging Genetics   2014 (Founding), 2015, 2017
Founded and led the organization of the first Imaging Genetics workshop in the MICCAI community

MICCAI Educational Initiative   2014 (Founding), 2015
Founded and led initiative to facilitate online availability of educational material, leading to creation of 20 educational videos and two professional courses made available online

Technical Reviewer or Scientific Committee

NeurIPS: Conference on Neural Information Processing Systems	2019
IEEE TMI: Transactions on Medical Imaging	2018-2019
MICCAI: Medical Image Computing and Computer Assisted Intervention	2014-2019
MLHC: Machine Learning in Healthcare	2019
IPMI: Information Processing in Medical Imaging	2019
MIDL: Medical Imaging with Deep Learning	2019
CVPR: Computer Vision and Pattern Recognition (outstanding reviewer award 2019)	2019
ICCV: International Conference on Computer Vision	2019
NeuroImage (Elsevier)	2017-2019
IEEE TPAMI: Transactions on Pattern Analysis and Machine Intelligence	2018-2019
IJCV: International Journal of Computer Vision	2018
NIPS ML4H: Machine Learning for Health	2017-2018
MedNIPS: Medical Imaging Meets NIPS	2018
Workshop on Biomedical Image Registration	2016, 2018
BrainLes: MICCAI Brain Lesion Workshop	2018
SWITCH: Stroke Workshop on Imaging and Treatment CHallenges	2018
Beyond MIC: integrating imaging and non-imaging modalities for healthcare challenges	2018
ISBI: International Symposium on Biomedical Imaging	2017-2018

Medical Image Analysis (Elsevier)	2017
SWITCH: Stroke Workshop on Imaging and Treatment CHallenges	2017-2018
MICGen: MICCAI Workshop on Imaging Genetics	2014, 2017
ICASSP: International Conference on Acoustics, Speech and Signal Processing	2017
Nature Scientific Reports	2016
RECOMB: Research in Computational Molecular Biology	2009

Leadership and Entrepreneurship

Entrepreneurship

First Prize, EECS Start6 Entrepreneurship Competition, $10,000   2015
Created business plan to commercialize software for spinal nerve segmentation in clinical trial MRIs.

First Prize, Hacking Medicine Ultrasound Grand Prize, $1,500   2015
Developed method to guide sonographers towards ideal positioning of ultrasound probe.

MICCAI Student Board (MSB)

President   2014, 2015
Led student group in organizing social and professional activities, and growing student network.

MIT SciEx Initiative

Co-founded video competition to showcase exciting science to broad audience.   2014 (Founding), 2015

MIT - Massachusetts General Hospital SITECOR Program

Paticipated in inaugural MGH Surgeon Shadowing Program for MIT Engineers.   2014

MICCAI 2014

Student Liaison   2014
Interfaced with MICCAI 2014 organizing committee to advocate for student interests.

MIT Eastgate Executive Committee

Information Officer   2010-2012
Developed web interface and organized community events.

University of Toronto

Peer Mentor - First Year Learning Communities   2007-2008
Department of Computer Science Ambassador   2007-2009
Romanian Students' Club President, Webmaster   2004-2007