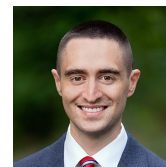


Michael Romano, B.S.

M.D./Ph.D. Candidate

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🌐 <https://github.com/mfromano/>



Education

- 2012 – ◇ **Boston University School of Medicine**
M.D./Ph.D. Candidate
Computational Neuroscience, GPA 3.95
Dissertation: *Population analysis of the striatum during voluntary movement*
Step 1: 256, Step 2 CK: 262
Core clinicals: 4 Honors / 7 (Family Medicine graded P/F due to COVID-19)
Other clinicals: 3 Honors / 3
- 2009 – 2012 ◇ **Davidson College**
B.S., Chemistry
- 2008 – 2009 ◇ **Georgetown University**
Biochemistry

Current research

- 03/2020 – ◇ **Kolachalama Lab** Boston, MA
Project lead
Vijaya Kolachalama, PhD, FAHA
Using a convolutional neural network to predict time-to-progression from mild cognitive impairment (MCI) to Alzheimer's Dementia (AD) using MRIs, ¹⁸F-FDG PET scans, and florbetapir PET scans. Interested in developing graphical statistics based on disease-probability maps that we can use as biomarkers for progression from MCI to AD.

Employment History

- 09/2020 – ◇ **RISQCe** Boston, MA
Technology potential advisor
Mikhail Higgins, MD, MPH
Radiology Interventions, Safety, Quality and Complications e-curriculum (RISQCe). Developing a case-based e-curriculum whereby interventional radiology trainees learn details of procedures, instrumentation, and potential pitfalls before they go into the operating room. Ultimately this will be a platform where users can upload their own cases. The overarching goal is to improve patient outcomes. My role is to integrate cutting-edge technology into the platform where appropriate to enhance engagement and learning. Currently applying for start-up funding.
- 08/2015 – 10/2015 ◇ **The Addis Clinic** Boston, MA
Programmer
Lydia Dant
Programmer for The Addis Clinic, a non-profit that connects physician consultants in the United States with healthcare workers in resource-poor settings via telemedicine. Optimized the software to accommodate limited internet access in Ethiopia by working on a middleware layer that enabled data transfer between Ethiopia and the United States.

Volunteering

- 03/2020 – 03/2020 ◇ **Boston Health Care for the Homeless Program** Boston, MA
Volunteer
Nepantla Canizzo
During the face-mask shortage in the early COVID-19 pandemic, I collected and transported supplies for the homeless so that they could construct their own face-masks.
- 02/2018 – 06/2018 ◇ **BU CALM** Boston, MA
Volunteer
BU CALM Student Leaders
With CALM (Cuddling Assists in Lowering Maternal and Infant Stress), volunteered a two hour time slot monthly to hold infants with neonatal abstinence syndrome who were otherwise not able to have skin-to-skin contact with a caretaker.
- 01/2015 – 01/2015 ◇ **International Nursing Incorporated** Cotui, Dominican Republic
Medical Assistant
Karen Soderberg-Gomez
Volunteered for two weeks as a medical assistant with International Nursing Incorporated in a limited-resource setting in Cotui, Dominican Republic. Interviewed and performed assessments on patients, educated patients, and provided them with basic healthcare necessities.

Programming languages and frameworks

- Proficient ◇ Python, MATLAB, Linux, django, HTML
- Intermediate ◇ Bash, R
- Beginner ◇ JavaScript

Awards and Certifications

Awards

- 2014 ◇ **Boston University Graduate Fellowship in Computational Neuroscience**
Fellowship was awarded to three applicants and provided full funding for the first two years of my Ph.D.

Certifications

- 05/31/2020 ◇ **BLS Certified**
Valid through 05/31/2021

Publications

Articles

- 1 House, A., **Romano, M.**, Orczykowski, M., Zumwalt, A., & Devaiah, A. (In Press). Multimodal microvascular mapping for head and neck, skull base research and education: An anatomical donor study. *Journal of Neurological Surgery Part B: Skull Base*.
- 2 Greear, G. M., **Romano, M.**, Katz, M. H., Munarriz, R., & Rague, J. T. (2020). Testicular torsion: Epidemiological risk factors for orchiectomy in pediatric and adult patients. *International Journal of Impotence Research*, 1–7.

- 3 Shemesh, O. A., Linghu, C., Piatkevich, K. D., Goodwin, D., Celiker, O. T., Gritton, H. J., ... Tseng, H.-A. et al. (2020). Precision calcium imaging of dense neural populations via a cell-body-targeted calcium indicator. *Neuron*, 107(3), 470–486.
- 4 Gritton, H. J., Howe, W. M., **Romano, M.**, DiFeliceantonio, A. G., Kramer, M. A., Saligrama, V., ... Han, X. (2019). Unique contributions of parvalbumin and cholinergic interneurons in organizing striatal networks during movement. *Nature Neuroscience*, 22(4), 586–597 *co-first author.
- 5 Piatkevich, K. D., Bensussen, S., Tseng, H.-a., Shroff, S. N., Lopez-Huerta, V. G., Park, D., ... Gritton, H. J. et al. (2019). Population imaging of neural activity in awake behaving mice. *Nature*, 574(7778), 413–417.
- 6 **Romano, M.**, Bucklin, M., Gritton, H., Mehrotra, D., Kessel, R., & Han, X. (2019). A Teensy microcontroller-based interface for optical imaging camera control during behavioral experiments. *Journal of Neuroscience Methods*, 320, 107–115.
- 7 Pittman-Polletta, B. R., Quach, A., Mohammed, A. I., **Romano, M.**, Kondabolu, K., Kopell, N. J., ... McCarthy, M. M. (2018). Striatal cholinergic receptor activation causes a rapid, selective and state-dependent rise in cortico-striatal β activity. *European Journal of Neuroscience*, 48(8), 2857–2868.
- 8 Paidas, M. J., Annunziato, J., **Romano, M.**, Weiss, L., Or, R., & Barnea, E. R. (2012). Pregnancy and multiple sclerosis (MS): A beneficial association. possible therapeutic application of embryo-specific Pre-implantation Factor (PIF*). *American Journal of Reproductive Immunology*, 68(6), 456–464.
- 9 Paidas, M. J., Krikun, G., Huang, S. J., Jones, R., **Romano, M.**, Annunziato, J., & Barnea, E. R. (2010). A genomic and proteomic investigation of the impact of preimplantation factor on human decidual cells. *American Journal of Obstetrics & Gynecology*, 202(5), 459–e1.

Posters and Abstracts

- 1 Hartz, A., **Romano, M.**, & Scalera, J. E. (Accepted). AI education: A deep appreciation of deep learning for resident radiologists, Association of University Radiologists 69th Annual Meeting, ePoster.
- 2 **Romano, M.**, Howe, W., Gritton, H., Zemel, D., Bucklin, M., & Han, X. (2017). Cholinergic and parvalbumin interneurons coordinate distinct aspects of dorsal striatal network dynamics during voluntary movement, Society for Neuroscience, Neuroscience 2017 Poster Session.
- 3 Horn, G., **Romano, M.**, Munarriz, R., & Katz, M. (2016). 052: Testicular torsion: Epidemiological risk factors for orchiectomy in pediatric and adult patients. (Vol. 13, S25). The Journal of Sexual Medicine, Proceedings of the 21st Annual Fall Scientific Meeting of SMSNA.
- 4 Liu, S., **Romano, M.**, Phillips, E. A., & Munarriz, R. (2016). 049: Epidemiology of penile fractures in the emergency setting. (Vol. 13, S24). The Journal of Sexual Medicine, Proceedings of the 21st Annual Fall Scientific Meeting of SMSNA.
- 5 Duzyj, C., Barnea, E., Jebailey, L., Annunziato, J., **Romano, M.**, Krikun, G., ... Paidas, M. (2011). 199: Preimplantation factors effect on decidua: Signaling pathways suggest correlation with neurological development and diseases. (Vol. 204, S89). American Journal of Obstetrics & Gynecology, SMFM Abstract Poster Session.
- 6 Paidas, M., Krikun, G., Huang, S.-T. J., Annunziato, J., **Romano, M.**, Leitao, K., ... Barnea, E. R. (2009). 26: Genomic and proteomic investigation of preimplantation factor's impact on human decidual cells. (Vol. 201, S14–S15). American Journal of Obstetrics & Gynecology, SMFM Abstract Poster Session.
- 7 Paidas, M., Krikun, G., Huang, S.-T. J., **Romano, M.**, Grinolds, A., & Barnea, E. R. (2008). 556: Preimplantation factor (PIF)* increases expression of key immunomodulatory factors suggesting a critical role in human implantation. (Vol. 199, S162). American Journal of Obstetrics & Gynecology, SMFM Abstract Poster Session.

Sasson, I., Triche, E. W., Azpurua, H., **Romano, M.**, & Paidas, M. (2008). 128: Short cervix and negative fetal fibronectin: Low risk of delivery within 2 weeks of screening. (Vol. 199, S49). American Journal of Obstetrics & Gynecology, SMFM Abstract Poster Session.