Biographical Sketch

Dr. Aaron A. Golden

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(a) Professional Preparation

Dublin University, Trinity College, Ireland; Experimental Physics; B.A.(Mod.), 1991
Queen's University Belfast, Northern Ireland; Computational Science; M.Sc., 1993
National University of Ireland, Galway, Ireland; Astrophysics; Ph.D., 1999

(b) Appointments

2013–present: **Research Associate Professor**, Mathematical Sciences, Yeshiva University, New York, NY

2011–present: **Associate Professor**, Genetics, Albert Einstein College of Medicine, New York, NY

2009–2011: **Lecturer**, Mathematical Sciences, NUI Galway, Ireland

2006–2009: **Lecturer**, Engineering & Informatics, NUI Galway, Ireland

2002–2004: **Visiting Professor**, Applied Mathematics, University of Porto, Portugal

1999–2006: **Lecturer**, Information Technology, NUI Galway, Ireland

(c) Five Publications Most Closely Related to the Proposed Project

1. Mahony, S., McInerney, J., Smith, T. and **Golden, A**. Gene prediction using the Self-Organising Map: automatic generation of multiple gene models. *BMC Bioinformatics* **5**, 23, 2004.

2. Mahony, S., Hendrix, D., **Golden, A.**, Smith, T.J., & Rokhsar, D.S. Transcription factor binding site identification using the self-organizing map. *Bioinformatics* **21(9)**, 1807, 2005.

3. Mahony, S., **Golden, A.**, Smith, T.J., Benos, P.V. Improved detection of DNA motifs using a self-organized clustering of familial binding profiles. *Bioinformatics* **21**, Suppl 1:i283, 2005.

4. Mahony, S., Benos, P.V., Smith, T.J., **Golden, A**. Self-organizing neural networks to support the discovery of DNA-binding motifs. *Neural Networks* **19(6-7)**, 950-962, 2006.

5. **Golden, A.**, Djorgovski, S.G., Greally, J.M., Astrogenomics: big data, old problems, old solutions? *Genome Biology* **14** 129, 2013.

(d) Other Significant Publications

1. Shearer, A., Stappers, B., O'Connor, P., **Golden, A.**, Strom, R., Redfern, M., Ryan, O., Enhanced Optical Emission During Crab Giant Radio Pulses *Science* **301** 493, 2003

2. Hallinan, G., Bourke, S., Lane, C., Antonova, A., Zavala, R.T., Brisken, W.F., Boyle, R.P., Vrba, F.J., Doyle, J.G., **Golden, A.**, Periodic Bursts of Coherent Radio Emission from an Ultracool Dwarf *Astrophysical Journal* **663** 25, 2007

(e) Synergistic Activities

1. Conference service:

(i) Co-Chair & Program Committee, "Workshop on Clusters, Clouds and Grids for Health", In conjunction with CCGrid 2014 - 14th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, May 26-29, 2014, Chicago, IL, USA (ii) Program Committee, "6th International

Workshop in Science Gateways" IWSG 2014, Trinity College Dublin - 3-5 June, 2014 (iii) Program Committee, "Workshop on Clusters, Clouds and Grids for Life Sciences", In conjunction with CCGrid 2015 - 15th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, May 4-7, 2015, Shenzhen, Guangdong, China.

2. **University service:**
   (i) 2011-present IT Faculty Advisory Committee, HPC Core Advisory Committee (ii) 2012-present Junior Faculty Mentoring Committee (iii) 2012-present Medical Scientist Training Program (MSTP) Steering Committee (iv) 2012-present Course Coordinator, 1352 'Computational Genomics & Epigenomics' (v) 2013-present Patent Committee, Voting Member

3. **Mentoring:**
   (i) Summer 2012 Minyi Lee, Riverdale Country School, Bronx, NY (Accepted to MIT Fall 2013) (ii) Summer 2013, 2014 Kundan Guha, Horace Mann Preparatory School, Bronx, NY

4. **Teaching:** (i) 2011-2012, 2012-2013, 2013-2014 (Albert Einstein College of Medicine): 1352 'Computational Genomics & Epigenomics', 'Genomics 101 for Medical Science Training Programme students', (ii) 2013-2014 MAT5270 'Data Science' M.A./Honors Undergraduate, Department of Mathematical Sciences, Yeshiva University, (iii) 2002-2004 (University of Porto, European M.Sc. in Astronomy): M11 'Interferometry and Other Techniques in Astronomy', (iv) 1999-2011 (National University of Ireland, Galway), CT101:'Introduction to Software/Hardware', CT108: 'Next Generation Technologies: Scientific Computing', CT213: 'Computer Systems & Architecture', CT223: 'Operating Systems', CT211: 'Next Generation Technologies: Scientific Computing', CT229 'Programming II: Algorithms', CT245 'Technological Frameworks', CT319 'Artificial Intelligence', CT323 'Biomedical Systems: Microarray Technologies', CT560 'Biomedical Systems: Microarray Technologies', CT335 'Object Oriented Programming', CT404 'Graphics and Image Processing', CT433 'Advanced Topics in IT: Genome Informatics', CT343/CT360 'Introduction to Genome Informatics', CT861 'Computer Systems & Architecture', CT866 'Networks & Communications', CS424 'Software Engineering', CS427 'Object Oriented Programming', MA113/MA228 'Statistics & Probability'.

(f) Collaborators & Other Affiliations

Collaborators and Co-Editors: *Albert Einstein College of Medicine/Yeshiva University*: Enver Akalin; Nir Barzilai; John Greally; Chandan Guha; Sanjeev Gupta; Noboru Hiroi; Kami Kim; Jack Lenz; Matt Levy; Alex Maslov; Cristina Montagna; Bernice Morrow; *Rutgers University*: Shantenu Jha; *Northwestern University*: Jonathan Licht; *California Institute of Technology*: Gregg Hallinan; *Jet Propulsion Laboratory*: Leon K. Harding

Graduate Advisers and Postdoctoral Sponsors: *National University of Ireland, Galway*: Andy Shearer; R. Michael Redfern; *University of California at Berkeley*: C. Stuart Bowyer

Thesis Adviser and Postgraduate-Scholar Sponsor: *Doctoral students supervised:* Padraig O' Connor (SQT Training, Plassey Tech. Park, Limerick, Ireland), Shaun Mahony (Penn State University, State College, PA), James Mac Donald (Valeo Vision Systems, Tuam, Co. Galway, Ireland), Caoilfhionn Lane (Digital Enterprise Research Institute, Galway, Ireland), Andrew McLellan (Albert Einstein College of Medicine, Bronx, NY), Gregg Hallinan (California Institute of Technology, Pasadena, CA), Alan Fergus (Ericcson Ireland Ltd., Athlone, Ireland), Stephen Bourke (California Institute of Technology, Pasadena, CA), Leon K. Harding (Jet Propulsion Laboratory, Pasadena, CA), Paul Geeleher (University of Chicago, Chicago, IL), Pilib Ó Broin (Albert Einstein College of Medicine, Bronx, NY). *Undergraduate honors thesis students:* Rachel Shapiro (Yeshiva University), at the National University of Ireland, Galway 15. Total graduate students: 11; Total postdoctoral scholars: 2.