MAIER STEVE AVENDAÑO AMADO
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Education

Harvard University PhD, in Systems Biology, 2015.

Universidad de Los Andes M.Sc, in Biological Sciences, 2009.

Universidad de Los Andes B.Sc, in Microbiology, 2008. .

Publications

B. Beliveau , A. Boettiger, **M.S. Avendaño**, R. Jungmann, R. McCole , E. Joyce , C. Kim-Kiselak , F. Bantignies ,C. Fonseka , J. Erceg ,M. Hannan , H. Hoang , D. Colognori , J. Lee ,W. Shih ,P. Yin , X. Zhuang and T. Wu. In situ single-molecule localization super-resolution imaging and haplotype visualization using Oligopaint FISH probes. *Nature communications,* **6**, 7147 (2015).

M.S. Avendano*, R. Jungmann*, J.B. Woehrstein*, M. Dai, W.M. Shih, P. Yin. Multiplexed 3D Cellular Super-Resolution Imaging with DNA-PAINT and Exchange-PAINT. *Nature Methods,* 11, 313-318 (2014).

Maier S. Avendaño, Chad Leidy, and Juan M. Pedraza. Tuning the range and stability of multiple phenotypic states with coupled positive-negative feedback loops. *Nature Communications*, 4, 1–8. (2013)

Research Experience

Wyss institute for Biological inspired Engineering (2011-present).
Quantitative super-resolution imaging via programmable autonomous blinking
Advisor: Prof Peng Yin, Dr Ralf Jungmann.

Universidad de Los Andes (Sep-Dec 2009)
Rheology of small lipid vesicle suspension
Advisor: Prof Chad Leidy, Prof Andres Gonzales.

Massachusetts Institute of Technology (MIT) and Universidad de Los Andes (March 2007-July 2009)
Master thesis project, grade 5.0/5.0: *Tuning the range and stability of multiple phenotypic states with coupled positive and negative feedback loop*.
Advisor: Prof Alexander van Oudenaarden, Prof Juan Pedraza, Prof Chad Leidy.

Complex systems summer school-San Carlos de Bariloche Argentina (Dec 2008)
Dynamic adaptation behaviour in fluctuating environments in Biological and Economical system.

Massachusetts Institute of Technology (MIT) February-June 2007.
Stability and noise effects on gene regulatory circuits
Advisor: Prof Alexander van Oudenaarden.

Work experience

Universidad Autonoma Baja California Ensenada
Instructor, Introduction to Systems Biology and DNA nanotechnology. Clubes de Ciencia Mexico, summer 2014. Ensenada, Baja California. Mexico.

Universidad de Los Andes
Instructor, Biological Science department, 1st semester of 2010. Bogotá, Colombia.
Professional Research assistant, Biophysics group, Physics department, 2009. Bogotá, Colombia.
Research assistant, Physics department, 2007,2008. Bogotá, Colombia.
Teaching Assistant, Biological Science department, 2006. Bogotá, Colombia.
Tutorials in: Physics, Mathematics and Molecular Biology. 2004-2009.

Gimnasio Monseñor Manuel Maria Camargo
Tutorials for 5th and 6th grade in: Mathematics and Biology. 2006-2007. Bogotá, Colombia.

Schools

Santa Fe Institute
Complex systems summer school-San Carlos de Bariloche Argentina, 2008.

Awards and Scholarships

MIT TR35, Most important innovators under 35 in Colombia, (MIT Technology Review) - 2015

HHMI international student fellowship, 2013-2015.

Fondo Colombia Harvard Fund. Harvard University, 2010-2011

Candidate for the thirteen (13th) ***Concurso Nacional Otto de Greiff*** for the best undergrad thesis at national level, 2009.

Awarded with ***Proyecto semilla Universidad de los Andes*** sponsorship for Master thesis project in science. Universidad de Los Andes, 2008.

Awarded with ***Proyecto interfacultades Universidad de los Andes*** sponsorship for thesis project in science. Universidad de Los Andes, 2007.

Scholarship ***Beca Fundacion Neme*** for undergraduate studies in Microbiology. Universidad de Los Andes, 2003-2008.

Meetings

Fundations of Nanoscience (FNANO), 2015. Poster session.
M.S. Avendaño, R. Jungmann, P. Yin. Quantitative, multiplexed super-resolution imaging via programmable autonomous blinking.

Single Molecule Approaches to Biology" Gordon Research Conference, 2014. Poster session.
M.S. Avendaño, R. Jungmann, P. Yin. Quantitative super-resolution imaging with qPAINT using transient binding analysis.

14th international conference on systems biology, 2013. Poster session.
M.S. Avendano, R. Jungmann, J.B. Woehrstein, M. Dai, W.M. Shih, P. Yin. Quantitative, multiplexed super-resolution imaging via programmable autonomous blinking.

Miami 2012 Winter Symposium: Nanotechnology in Biomedicine,2012. Poster session.
Maier S. Avendaño, Ralf Jungmann, and Peng Yin. Validating nucleic acid based fluorescent probes for bio-imaging applications.

54th Annual Biophysical Society Meeting, San Francisco CA, 2010. Platform session.
Maier S. Avendaño, Chad Leidy, Alexander V. Oudenaarden, and Juan M. Pedraza. Tuning the range and stability of multiple phenotypic states with coupled positive-negative feedback loops.

53th Annual Biophysical Society Meeting, Boston MA, 2009. Poster session.
M. Avendaño, C. Leidy, J. Pedraza. Feedback control of fluctuations in gene expression and epigenetic memory. Biophysical Journal, Volume 96, Issue 3, Pages 305a-306a 2009.

Languages
Spanish (first), English (fluent),

Programming language
Matlab.

References

Prof Peng Yin (Graduate Thesis Advisor), Assistant Professor in Systems biology, Harvard Medical School. Ph.D. (Duke University). Peng_Yin@hms.harvard.edu

Dr. Ralf Jungmann, Independent group leader at the Max Planck Institute of Biochemistry and Ludwig-Maximilians-Universität München.

Prof Alexander Van Oudenaarden, Director Hubrecht Institute for Developmental Biology and Stem Cell Research. Ph.D. (Delft University of Technology, The Netherlands). a.vanoudenaarden@hubrecht.eu

Prof Juan Manuel Pedraza, Professor in Physics, Universidad de Los Andes. Ph.D. (MIT). jmpedraza@hms.harvard.edu