

CURRICULUM VITAE

Laura Finzi

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EDUCATION

- 1990** Ph.D. in Chemistry, University of New Mexico, Albuquerque, NM.
1987 Master's in Chemistry, University of New Mexico, Albuquerque, NM.
1984 Laurea in Industrial Chemistry, University of Bologna, Bologna, Italy.

PROFESSIONAL ACTIVITY

- September 2012 - present:** Professor, Physics Department, Emory University.
2023: Faculty of the Emory-GATech BME graduate program.
2015 - present : Chemistry Department Affiliated Faculty.
July 2005-August 2012: Associate Professor, Physics Department, Emory University.
June 1999-June 2005: Tenured Researcher and Group Leader, Biology Dept, University of Milano, Italy.
1993-May 1999: Researcher (tenured in '96), Biology Dept, University of Milan, Italy.
1992-1993: Post Doctoral Fellow, Biochemistry Dept., Brandeis University (Jeff Gelles' group).
1990-1991: Post Doctoral Fellow, Chem. Dept., **University of New Mexico** (October-December 1990), Institute of Molecular Biology, **University of Oregon** (January-December 1991) (Carlos Bustamante's group).

HONORS and AWARDS

- 2024: Invited speaker and Chair, *The fluid versus gel nature of the genome Symposium*, 68th Biophysical Society Meeting, Philadelphia, February 10-14.
2023: APS Fellow
2023: Invited speaker, *TORC Talks*. The TORC project is an international collaboration between molecular biology (Aalap Mogre/Carsten Kröger/Charlie Dorman in Dublin, Ireland), theoretical biophysics (Victor Velasco Berrelleza/Sarah Harris in Leeds, UK) and computer science (Penn Rainford/Susan Stepney in York, UK), date TBD (on the first Wednesday of each month at 15:00 UK time (starting October 2023). This invitation recognizes the fundamental role my group and I played in starting and growing the nascent area of the biophysics of supercoiling.
2023: Invited speaker, *Biophysics School in honor of the 50th anniversary of the foundation of the Italian Society of Pure and Applied Biophysics*, Erice, Italy, 16-22 October.
2023: Publication # 51 was cited as a landmark in the field by the NASEM first decadal Report on Biological Physics/Physics of Living Systems. The same publication has been cited 2,440 times as of September 2023.
2023: Elected President of the Senate of the Emory College of Arts and Science for the 2024-25 academic year.
2022: Appointed Member of the Executive Council of the Senate of the Emory College of Arts and Science.
2022: Elected Member of the Senate of the Emory College of Arts and Science.
2022: Invited speaker in the *Living Histories* series (<https://iyerbiswas.com/outreach/livinghistories/>).
2020: Member of the Biophysical Society Nomination Committee.
2020: Founding co-Chair of the "Single-Molecule Forces, Manipulation and Visualization" subgroup of the Biophysical Society (Now thriving and self-sustainable).
2019: WiSE, co-founded and co-Chaired by Dr. Finzi, received the Emory Program of the Year Award.
2018: Member of the Cell and Molecular Biology Research Program at the Emory University Winship Cancer Institute.
2018: Recognized for "Excellent Teaching" by Phi Beta Kappa Mentees both in the Spring and Fall semesters.
2018: Invited speaker and co-Chair, *DNA supercoiling Symposium*, 62nd Biophysical Society Meeting, San Francisco, curriculum vitae - Laura Finzi

February 18.

2017-present: Editorial Board Member of *Biophysics Reviews* (*BREVS*)

2017: Organized the “South-East Single molecule Biophysics meeting

2016 - present: Affiliated Faculty in the Emory Chemistry Department

2016: Editor Special Issue "Supercoiling in DNA-protein interactions" of *Biophysical Reviews*, Springer.

2015 - present: Faculty member of the Emory Graduate Division in Biological and Biomedical Sciences (GDBBS) – Biochemistry, Cell and Developmental Biology (BCDB) program.

2014 - 2015: co-Chair and, then, Chair of the “Nanoscale Approaches to Biology” Subgroup of the Biophysical Society. (Now thriving and self-sustainable)

2014: Invited speaker and Chair, *Biophysics of Epigenetic Switches Symposium*, 58th Biophysical Society Meeting, San Francisco, February 18.

2013: Elected to Emory’s MilliPub Club (for >1000 citations on Science 258, 1122 (1992).

2013: Co-organizer of the Atlanta Area Molecular and Cellular Biophysics Symposium.

2012 - 2018: Standing Member of the NIH Molecular Structure and Function – C (MSFC) Study Section.

2012 - 2014: Member of the Biophysical Society Program Committee.

2012: Moderator (in representation of the *Biophysical Journal*) of the Cell Press podcast “Single Molecule Biology” presented by Steve Block, National Lecturer at the 2012 Biophysical Society Meeting.

2011-2013: Member of the Biophysical Society Executive Board.

2010: Member of the Biophysical Society Nomination Committee.

2007 - 2011: Emory Computational and Life Sciences Core Faculty.

7/1/08 - 6/30/14: Editorial Board Member, *Biophysical Journal* (two terms).

2008 - 2011: Elected member of the Biophysical Society Council.

2008 - 2011: Member of the Biophysical Society Special Programs Committee.

2000 - 2004: Invited referee for EEC Framework Programmes grant applications

2005 - present: NSF and HFSP reviewer.

1990: Dow-Smith award.

1988 - 89: American Association of University Women for the academic year.

1988: UNM Chemistry Dept. award.

SCIENTIFIC SOCIETY MEMBERSHIPS

Biophysical Society (1989 – present), American Physical Society (2009 – present), American Chemical Society (2019), American Association for the Advancement of Science (2023 –).

PEER REVIEW ACTIVITIES

Reviewer for peer-reviewed, scientific journals such as *Cell*, *Physical Review Letters*, *Physical Reviews E*, *Proceedings of the National Academy of Sciences (PNAS)*, *Journal of Molecular Biology*, *Biophysical Journal*, *Nucleic Acids Research (NAR)*, *European Biophysics J*, *Cytometry A*, Nature Publishing Group (npg) Journals, *eLife*, *JoVE*, etc.

External reviewer for tenure and promotion at various domestic and foreign Universities.

2023 Reviewer for NSF Div-Bio Infrastructure Major Research Instrumentation (DBI-MRI).

2023 Reviewer for NASEM Ford Foundation Fellowships, Physical Sciences, Mathematics, & Computer Science.

2021 Reviewer for NIH ZRG1 F04B-H Biochemistry and Biophysics of Biological Macromolecules.

2020 Reviewer for NIH (NIAID and MGA studi sections).

2018 Reviewer of NIH X02 applications.

2015 Member of the “*Ad hoc*” on-site review panel of the NIH P40 Center in Albany NY (ZRG1 GGG-T (40) P study section)

2012-2018 Standing member of the NIH Molecular Structure and Function C (MSFC) study session,.

“*Ad hoc*” reviewer for the NIH MSFC study section prior to Fall 2012.

Regular *ad hoc* reviewer for NSF (CHE, PoLS, MCB; 2006, '08, '09, '10, '13, '14, '21, '23).

Regular reviewer for the Dutch government (FOM), the Belgian Research Council and the Swiss National Science Foundation.

Reviewer for the Human Frontiers Science Programme organization (HFSP0).

2000-2004 Referee for EEC Framework Programme 5 (FP5) and FP6 grant applications.

COMMITTEES AND SERVICE

Emory Physics Department:

CUWiP, Auburn, January 2023. Participated in the conference, talked to students presenting posters and presided the recruitment table at the conference dinner.

Founding Chair, DEI committee.

Led the Physics Department Research “Ramp-up after Covid shut down” effort (Spring 2020).

Search request proposal committee (advising the Department Chair and the Condensed Matter Group), Fall 2019.

Teaching mentor for assistant professor Daniel Sussman, 2019-present.

Research mentor for colleagues Minsu Kim, 2012-present and Shashank Shekhar, 2020-present.

Montag Award committee member, 2015 – 2019.

Biophysics Major, Chair, Spring 2015 – present.

Search Committee, Chair, 2010-2011, 2011-2012, 2017 – 2018.

Strategic Committee, 2016 – 2018.

Colloquium Committee, 2011-2012, 2016 – 2018.

Director of Graduate Studies, 2008-2011.

Jackson Fellowship for undergraduate research in Physics, selection committee, 2006 - 2010.

Ph.D. Advisory Committee, Qualifier Proposal Committee, Ph.D. Defense Committee member for a number of students in the Physics, Chemistry and BCDB graduate programs at Emory, in the Physics department at GATech, and at foreign Universities, 2006 - present.

Emory College:

AWIS’s Women in STEM Panel, February 8th 2023.

Member of the Emory College Faculty Senate Executive Committee, 2022 – present.

Co-founder and Chair of the ECAS Women in Science at Emory (WiSE), 2017 – present.

Committee for the establishment of a Visiting Faculty Fellow program for the Emory Institute of the Liberal Arts, 2021

Committee for Academic Standards (elected by Emory faculty), 2018-2021

Co-Chair of the Faculty Science Council, 2017 – 2020

Faculty interviewer during Emory Scholar Finalists’ Week, March, 2017.

Invited and hosted Nobel Laureate, Prof. W.E. Moerner for a Hightower Lecture, April 2015.

Emory Diversity Graduate Fellowship Committee, 2014-2015.

Emory Tenure and Promotion Committee (elected by Emory faculty), Fall 2013 – 2016.

Emory College Curriculum Committee (elected by Emory faculty), Fall 2012 – 2015.

curriculum vitae - Laura Finzi

Emory Space Committee, Member, 2014-2016.

Emory Tibetan Science Initiative (ETSI), taught introductory physics to Tibetan monks in the monastery of Drepung, India, June, 2014.

Clare Booth Luce Fellowship (CBL) committee member, 2012-2013.

Pre-major Advising Connections at Emory (P.A.C.E.), 2009-present.

Member of the Marshall Nomination committee (Fall 2009).

Chair of the URC Math and Science subcommittee (2006 – Spring 2009).

Member of the search committee for the Computational and Life Sciences (CLS) strategic initiative, 2007 – Spring 2009.

Freshman Advising and Mentoring at Emory (F.A.M.E.) advisor (Fall '06 and '07).

External member of the search committee for the Chemistry Dept., 2007-08.

Member of the committee for the selection of the applications to the INSPIRE program (2007).

Emory University

Panelist, Emory Office of Research Webinar on S10 & MRI grants, Apr 27th, 2023.

Biochemistry, Cell and Developmental Biology (BCDB) graduate program recruiting activities, 2016-2022.

BCDB, Chair of Student Progress, 2020-22.

Tenure and Promotion Advisory Committee (TPAC; advises the President and the Provost), 2018-2021.

Faculty Life Course Committee, 2016-2021.

Outside Emory

2021: Mentor for an NSF EPSCoR application by Dr. Lillian at the University of South Alabama.

2020-2022: co-founder and co-Chair with Prof Mark Williams (Northeastern University) of the Biophysical Society Subgroup “*Single Molecule Forces, Manipulation and Visualization.*”

2017: Organizer of the Southeastern Single-Molecule Biophysics Networking Meeting, April 6-9.

2015-2017: Mentor for the NIH-SCORE Program to Dr. Lorenzo Brancaleon in the department of Physics and Astronomy at UT San Antonio.

2009; 2015: co-founder; Chair of the Biophysical Society Subgroup “*Nanoscale Biophysics.*”

Chaired and co-Chaired several scientific sessions at different domestic and international meetings and conferences.

ACTIVE COLLABORATIONS

Dr. David Dunlap, Department of Physics, Emory University.

Dr. Irina Artzimovich, Microbiology Department, Ohio State University.

Dr. Marco Cosentino Lagomarsino, European Institute of Molecular Oncology and Department of Physics, University of Milano, Italy

Dr. Vittore Scolari, Physics of Living Systems, Institute Marie Curie, France.

Dr. Andrew Spakowitz, Chemical Engineering, Material Science and Engineering, Applied Physics, Stanford University

Dr. Radhika Subramanian, Department of Molecular Biology, Simches Research Center, Massachusetts General Hospital, Harvard Medical School.

Dr. Seth Childers, Department of Chemistry, University of Pittsburgh.

Dr. Francesca Storici, School of Biology, GATech.

Dr. Miguel Garcia-Diez, department of pharmacological Sciences, Stony Brooks University.

Dr. Keith Shearwin, Dept. of Molecular and Biomedical Science, University of Adelaide, Adelaide, Australia.

Dr. Fenfei Leng, Florida International University.

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Dr. Paolo Annibale, Dept of Physics, University of St. Andrews, UK.

Dr. Francesco Mantegazza, Università degli Studi Bicocca, School of Medicine, Milano, Italy.

TEACHING and MENTORING

At Emory University:

“Physics in Biology and Medicine” (PHYS 365), Spring 2022-23.

“Electrodynamics and Magnetism” (PHYS 365), Fall 2019.

“Biological Physics” (PHYS 434/534; graduate), Fall 2017, 2018 and Spring 2021.

“Freshman Seminar: from Energy to information and life” (PHYS 190), Spring and Fall 2016, Fall 2022, 23.

“Foundations in BCDB-I” (BCDB 501), Fall 2015 – 2021 (these are 1-2 weeks modules).

“Thermal Physics” (PHYS 421), Fall 2012.

“Introductory Physics” (PHYS 142), Springs 2009 – 2012, 2014.

“Single-molecule biophysics” (PHYS 380, now Phys 556), Spring 2006, 08, 13, 15 – 20; Fall 2021.

“Biomacromolecules” (PHYS 380, now PHYS 552), Fall 2006 - 2009, 2011 and 2015.

“How things work” (PHYS 121), Fall 2010.

“Freshman Seminar: Physics and Physiology” (PHYS 190), Spring 2007.

Mentor for an NIH-SCORE program’s investigator at the University of Texas in San Antonio (UTSA)

Trained 42 undergraduate students, 1 pre-med technician, 16 graduate students and 12 postdocs. Trained People of color (12 undergraduates, 7 graduates, 1 postdoc), Blacks (8 undergraduates, 1 technician, 1 graduate student, 2 postdocs), Latinx (2 undergraduates, 1 graduate, 2 postdocs). Full list may be viewed at: <http://www.physics.emory.edu/faculty/finzi/labmembers.html>

Mentor of undergraduate students in the following Emory programs: Physics undergraduate research (PHYS 499R), Summer Undergraduate Research at Emory (SURE), Scholarly Inquiry and Research at Emory (SIRE), Interdisciplinary Science Program for Integrating Research into Education (INSPIRE).

Mentor of undergraduate Honor students (Paul Liebesny, 2008-09; Chandler Fountain, 2011-12; Hamin Jeon, 2012-2013; Crissy Hendrickson and Geethika Malla, 2018; Zixing Zheng and Joe Piccolo, 2020; Stefano Martin, Gustavo Borjas, Sam Miller, 2021; Anna Eligulashvili, 2022; Allison Cartee, 2023). All graduated with Highest Honors, but three who received High Honors.

Mentor of graduate students in the Problems and Research to Integrate Science and Mathematics ([PRISM](#)) program.

Mentor of a [HHMI/STEP](#) curriculum development fellow (2012 - 2013).

Sponsored and helped drafting several intra- and extramural applications by graduate students and postdoctoral fellows.

At the University of Milano:

1993-2005: laboratory course on enzymology and electron transport to 3rd year undergraduate students, classes on microscopy to graduates and postgraduates.

INVITED SEMINARS and LECTURES

Invited speaker, *TORC Talks*. The TORC project is an international collaboration between molecular biology (Aalap Mogre/Carsten Kröger/Charlie Dorman in Dublin, Ireland), theoretical biophysics (Victor Velasco Berrelleza/Sarah Harris in Leeds, UK) and computer science (Penn Rainford/Susan Stepney in York, UK), date TBD (on the first Wednesday of each month at 15:00 UK time (starting October 2023).

Invited speaker at the *School on Biophysics to celebrate the 50th anniversary of the Italian Society of Pure and Applied Biophysics*, Ettore Majorana Foundation and Centre, Erice, Italy, Oct 16-20, 2023.

Clemson University, College of Science Town Hall Meeting, April 5th, 2023.

Department of Physics and Astronomy, Clemson University, April 6th, 2023.

Department of Physics and Astronomy, University of Texas, Rio Grande Valley, February 3rd, 2023.

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Invited panel speaker, Conference of Undergraduate Women in Physics (CUWiP), Auburn, Alabama, January 21, 2023

International School of Physics Enrico Fermi on "Multimodal and Nanoscale Microscopy", Varenna, Italy. July 11-16th, 2022.

American Physical Society D-Bio Living Histories, April 20, 2022;
<https://www.youtube.com/watch?v=wPAuAnzBBgw>.

Nanoscopy 2.0, 6th NIC@IIT, Italian, Institute of Technology, Genova, Italy, Nov 29 - Dec 3, 2021 (Keynote speaker).

University of Tennessee, Knoxville, Department of Biochemistry & Cellular and Molecular Biology (BCMB) seminar speaker and guest lecturer in the 'Special Topics in Molecular Machines.' BCMB 615 graduate course. March, 31, 2021.

Kennesaw University, Physics Department, "DNA Topology and Transcription Regulation", March 6, 2020

XXII Annual Linz Winter Workshop on Force Spectroscopy, Linz, Austria, Jan 31-Feb 3, 2020.

The 31st Frontiers in Nucleic Acid Chemistry Symposium, South East Regional Meeting of the American Chemical Society (SERMACS), Savannah, Oct 21-22, 2019

"Single-Molecule Force Spectroscopy Workshop: Progress and Prospects in Biological and Chemical Sciences", Duke University, Aug 29-Sep 1, 2019.

"Single Molecule Biophysics (SMB)" Winter Conference, Center for Physics, Aspen, Jan 6-11, 2019.

Emory Public Lecture on 2018 Nobel Prize in Physics, November 2018.

Emory Biochemistry Department, November 1, 2018.

Clemson University, Physics Department seminar series, September, 2018.

Kennesaw University, Key-note speaker, APS-sponsored symposium, September 15th, 2018

University of Illinois at Chicago, Physics Department seminar series, April 18th, 2018.

Florida International University, Physics Department seminar series, March 30th, 2018.

62nd Biophysical Society Meeting, symposium on "DNA supercoiling", San Francisco, February 17-21, 2018.

"Single Molecule Biophysics (SMB)" Winter Conference, Center for Physics, Aspen, Jan 4-9, 2017.

Fifth Global Biotechnology Congress 2017, Session lecture, Boston, July 10 - 13, 2017, declined.

North Dakota State University, Physics Department seminar series, Spring 2017.

Georgetown University, D.C., 9/22/2016

Scientific Symposium in honor of Carlos Bustmante 65th b-day, UC Berkeley, 5/21/2016

North Carolina State University, Physics Department colloquium series, 10/05/2015

Aarhus University, Physics Department, Distinguished iNANO Lecture, Aarhus, Denmark, 8/14/2015

NHLBI, Biochemistry and Biophysics Center Guest Speaker Seminar Series, 5/27/2015

Emory University, Chemistry Department, Distinguished Visiting Researchers Seminar Series, 5/4/2015

59th Biophysical Society Annual Meeting, platform "DNA Replication & Transcription", Baltimore, MD. February 11, 2015.

"Single Molecule Biophysics (SMB)" Winter Conference, Center for Physics, Aspen, Jan 4-9, 2015.

Cornell University, Biophysics seminar Series, March 12, 2014.

58th Biophysical Society Meeting, symposium on "Biophysics of Epigenetic Switches", February 18, 2014.

Auburn University, Physics Department, January 17, 2014.

UT at San Antonio, Physics Department, October 25, 2013.

Emory University, Atlanta Area Cell and Molecular Biophysics Symposium, Atlanta, September, 2013.

Atlanta Science Tavern (<http://www.meetup.com/AtlantaScienceTavern/>), March 23, 2013.

"Single Molecule Biophysics (SMB)" Winter Conference, Center for Physics, Aspen, Jan 5 - 11, 2013.

Mechanobiology workshop, Singapore, November 7-10, 2012.

6th Mechanobiology Conference, 'Mechanobiology of Chromatin and Transcription', Singapore, November 12-14, 2012.

Emory Emeritus College (<http://www.emory.edu/emeritus/>), September 10, 2012;

Italian Institute of Technology, Genova, Italy, July 3, 2012;

University of Texas at Austin, Department of Physics, 6/14/2011;

University of Alabama at Birmingham, Department of Biochemistry and Molecular Genetics, 1/28/2011;

AAPT National Winter Meeting, Jacksonville, FL, January 8-12, 2011 (Could not go);

"Statistical physics and topology of polymers with ramifications to structure and function of DNA and proteins", Yukawa Institute for Theoretical Physics, Kyoto University, Kyoto, Japan, 8/2-6/2010. This was a satellite meeting of the XXIV International Conference on Statistical Physics, Cairns, Queensland, Australia, 19-23 July, 2010. (Did not accept invitation).

Small Systems Biology Meeting, May 6-8, 2010, Dragor, Denmark;

Southeast Workshop on Soft Materials, GATech, Atlanta, May 13, 2010

University of Puerto Rico at Río Piedras, Department of Chemistry, San Juan, PR, 5/17/2010. Supported by the NIH-RISE Program (Research Initiative for Scientific Enhancement),

American Physics Society March Meeting, A10: Focus Session: Single Molecule Biophysics and Chemical Physics Contributed talk. Portland, Oregon, March 15–19, 2010 (Did not go due to teaching conflict);

7th European Biophysical Societies Association (EBSA) Meeting, Genoa, Italy, July 11-15th, 2009.

"From DNA-inspired physics to physics-inspired biology", Intl. Center for Theoretical Physics, Trieste-Miramare, Italy, June 1-5th, 2009.

109th General Meeting of the American Society for Microbiology, Philadelphia, PA, May 17-21, 2009.

"DNA loop formation, nucleosome positioning, and transcriptional regulation", APS March Meeting Symposium, Division of Biological Physics, Pittsburg, 3/16-20, 2009

Georgia Institute of Technology, Chemistry Department Seminar Series, February 24th, 2009

University of Maryland, Biophysics Symposium on "Single Molecules", November 17th, 2008.

Emory School of Medicine, Biochemistry Department Seminar series, October 16th, 2008.

Fall meeting of the Southeast Section of APS-Physics, Biophysics session. November 8-10, 2008, Nashville, TN (declined).

"Mathematics of DNA Structure, Function, and Interactions", part of the 2007 program focused on Molecular and Cellular Biology at the Institute for Mathematics and its Applications (IMA). September 15-21, 2007. The University of Minnesota, Minneapolis. On-line talk available at: <http://www.ima.umn.edu/2007-2008/W9.16-21.07/abstracts.html#Finzi-Laura>

Workshop "Mechanics of Life: from Biomolecules to Molecular Machines". June 11-13, 2007, University of Michigan, Ann Arbor. On-line talk available at: <http://www.umich.edu/~mctp/SciPrgPgs/events/2007/mechlife/sci.pro.fin.html>

Drexel University, Physics Department, Colloquium series, 3/1/07

"Single Molecule Biophysics (SMB)" Winter Conference, Center for Physics, Aspen, Feb 4-10, 2007.

Contributing speaker at the Gordon conference on "Single-molecule Approaches to Biology", Colby-Sawyer College, New London, NH, 18-23 June, 2006.

"New Physical Approaches to Molecular and Cellular Machines" workshop at the Kavli Institute for Theoretical Physics, May 29-June 4, 2006. On-line talk available at: <http://online.kitp.ucsb.edu/online/biomachine06/>

"Phages, Experiments and Modeling", workshop organized by the Center for Models of Life, Niels Bohr Institute, Dracor, Denmark, May 4-6, 2006

HFSP Fifth Awardees Annual Meeting, Natcher Conference Center, NIH, Bethesda, MD, June 5-8 2005

Workshop on Biopolymers: Thermodynamics, Kinetics and Mechanics of DNA, RNA and Proteins", The Abdus Salam International Center for Theoretical Physics, Trieste, Italy, May 30-June 3, 2005

“DNA, Mathematics and Mechanics”, Lecce, Italy, May 26-28, 2005

INFN School on “Single Molecule Biophysics”, Villa Gualino, Torino, 6-12/9/2004.

“Topological modifications of DNA in transcriptional regulation”, Waksman Institute, Rutgers University, NJ, USA, 21/1/2004

“Topological Modifications of DNA: a regulatory mechanism of gene expression”, Physics Department, Emory University, GA, USA, 9/2/2004.

Invited lecturer in the session dedicated to "Nanovideoimaging".in the course entitled "Imaging techniques in animal and human research : can Space help Biology", European University of Studies, Toulouse, France 15-19/9/2003.

13th Conversation in Albany, SUNY, Albany NY, USA, 17-21 June, 2003.

“DNA topological modifications in transcriptional regulation: a study at the single molecule level” University of Lausanne, Switzerland, 24/3/2003.

“DNA topological modifications in the control of transcription” University of Twente, NL, 12-13/12/2002.

Invited lecturer in the National School of Biophysics, Genova 1-7/12/ 2002.

“Rivelazione dinamica di nanostrutture biologiche con tecniche di singola molecola” LXXXVIII Congresso Nazionale Società Italiana di Fisica (SIF), Alghero 26/9-1/10, 2002.

“Studi Biologici a livello di singola molecola”, Dipartimento di Biochimica, Università Statale degli Studi di Milano, 18/4/2002.

“Modificazioni topologiche del DNA durante la trascrizione: studio su singole molecole”, Simposio “Osservando il genoma in azione”, Istituto Lombardo, Accademia di Scienze e Lettere, Milano, 4/4/2002.

“Control of gene expression: study of the architectural interactions between transcriptional factors and DNA”, CNI, NIH, Bethesda, MD, USA, 28/2/2001.

“Control of gene expression: study of the architectural interactions between transcriptional factors and DNA”, Howard Hughes Medical Institute, Center for Single Molecule Biophysics, School of Medicine and Biomedical Sciences, State University of New York at Buffalo, NY, USA, 26/2/2001.

"DNA nanomanipulation and visualisation at the single molecule level", Laboratoire de Microbiologie et Génétique Moléculaire (UPR 9007, CNRS), Toulouse, France, 1/12/2000.

"Insights from single molecule studies of transcriptional, photosynthetic and motor proteins", Natl. Cancer Institute, NIH, Bethesda, MD, 7/4/2000.

"Insights from single molecule studies of transcriptional, photosynthetic and motor proteins", Department of Biochemistry and Molecular Biology, SUNY Health Science Center, Syracuse 5/4/2000.

"DNA Elasticity and Enzyme-Mediated Looping Studied by Single Molecule Microscopy", DIBIT (Dipartimento di Biotecnologie), HSR (Ospedale San Raffaele), Science Park, 19/5/1999.

"DNA Elasticity and Enzyme-Mediated Looping Studied by Single Molecule Microscopy", Department of Chemistry, New Mexico University, 25/3/1999.

"DNA Elasticity and Enzyme-Mediated Looping Studied by Single Molecule Microscopy", Department of Zoology and Genetics, Iowa State University, 22/3/1999.

PUBLICATIONS (Links to the most significant publications are available on the Finzi Lab web site: <https://physics.emory.edu/faculty/finzi/publications.shtml>)

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/myncbi/browse/collection/40647244/?sort=date&direction=descending>)

1. Jin Qian, Allison Cartee, David Dunlap, Irina Artsimovitch, Laura Finzi “Transcription Through Roadblock Systems Reveals a Hybrid Transit Mechanism” BIORXIV, doi: <https://doi.org/10.1101/2023.01.04.522798>. In revision at *Nat. Comm.*
2. Jin Qian, David Dunlap and Laura Finzi, “A Thermodynamic Model of Bacterial Transcription.” *Physical Review E*, 1 October 2022; Vol. **106**, No. 4; DOI: 10.1103/PhysRevE.106.044406.
3. Yue Lu, Gustavo Borjas, Christine Hendrickson, Zsuzsanna Vörös, David Dunlap, Keith Shearwin and Laura Finzi

- Finzi, “Proteins mediating different DNA topologies block RNAP elongation with different efficiency.” *FEBS Letters*, 2022, **596**, 1994-2006; doi:10.1002/1873-3468.14447. Editor’s choice-Journal cover.
4. Wenxuan Xu, Yan Yan, Irina Artsimovich, David Dunlap and Laura Finzi, “Positive supercoiling favors transcription elongation through lac repressor-mediated DNA loops”, *Nucleic Acids Research* **50**, 2826-2835, 2022.
 5. Alexander Zhang, Yan Yan, Fenfei Leng, David Dunlap, and Laura Finzi, “Ionic strength modulates HU protein-induced supercoiling.” BIORXIV/2021/464438.
 6. Yan Yan, Wenxuan Xu, David D. Dunlap and Laura Finzi, “Negative DNA supercoiling makes protein-mediated looping deterministic and ergodic within the bacterial doubling time”, *Nucleic Acids Research* 2021, **49**(20) 11550-11559; <https://doi.org/10.1093/nar/gkab946>.
 7. Domenico Salerno, Francesco Mantegazza, Valeria Cassina, Matteo Cristofalo, Qing Shao, Laura Finzi, David Dunlap, “Nanomechanics of negatively supercoiled diaminopurine-substituted DNA”, *Nucleic Acids Research*, Volume 49, Issue 20, Pages 11778–11786, 18 November 2021; PubMed PMID: 34718727.
 8. Joe Piccolo, Josh Mendez Harper, Wenxuan Xu, Daniel Kovari, David Dunlap, Laura Finzi, “Force spectroscopy with electromagnetic tweezers”, *Journal of Applied Physics* **130**, 134702 (2021). Featured in SciLight: <https://doi.org/10.1063/10.0006622>; DOI: 10.1063/10.0006622
 9. Daniel T. Kovari, David D. Dunlap, Eric Weeks and Laura Finzi, “Model-free 3D localization with precision estimates for bright field imaged particles” *Optics Express*, **27**(21), 29875-29895, 2019.
 10. Suparna Sarkar, Sachin Goyal, Ning Gao, John Mack, Benito Thompson, David Dunlap, Krishnananda Chattopadhyay, Laura Finzi, “Specifically bound Lambda repressor dimers promote adjacent non-specific binding”, *PLOS One*, **13**(4): e0194930, 2018.
 11. Yan Yan, Yue Ding, David Dunlap, and Laura Finzi, “protein-mediated loops in supercoiled DNA create large topological domains”, *Nucleic Acids Research*, 2018, May 18;**46**(9):4417-4424. doi: 10.1093/nar/gky153.
 12. Yan Yan, Fenfei Leng, Laura Finzi and David Dunlap, “Protein-mediated looping of DNA under tension requires supercoiling”, *Nucleic Acids Research*, 2018, Mar 16;**46**(5):2370-2379. doi: 10.1093/nar/gky021.
 13. Zsuzsanna Voros, Yan Yan, David D. Dunlap and Laura Finzi, “Protein-mediated DNA looping enhances roadblocks”, *Protein Science*, **26**(7):1427-1438 (2017).
 14. Suleyman Ucuncuoglu, Krysta Engel, David D. Dunlap, David Schneider, Laura Finzi, “Direct characterization of transcription elongation by RNA polymerase I”, *PLoS One*, 2016 Jul 25;**11**(7):e0159527. doi: 10.1371/journal.pone.0159527.
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Daniel Kovari, Matteo Cristofalo, David Dunlap and [Laura Finzi](#), The overstretching transition of diaminopurine-substituted, triply-bonded, DNA, 60th Biophysical Society Meeting, Los Angeles, Feb 27-March 2, 2016. [Selected oral presentation](#)

Dan Kovari, Eric Weeks, David Dunlap, [Laura Finzi](#), “Tuning up tethered particle motion”, 61st Biophysical Society Meeting, New Orleans, Feb 11-15, 2017.

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Yan Yan, Wenxuan Xu, David Dunlap, [Laura Finzi](#), “RNA polymerase pauses at *lac* repressor obstacles” 62nd Biophysical Society Meeting, San Francisco, Feb 17-21, 2018. [Selected oral presentation](#).

Zsuzsanna Vörös, Cristin R. Hendrickson, David Dunlap, [Laura Finzi](#), “Roadblocks by protein-mediated DNA loops” 62nd Biophysical Society Meeting, San Francisco, Feb 17-21, 2018.

Yan Yan, [Laura Finzi](#), David Dunlap, “Supercoiling makes protein-mediated looping of DNA tethers deterministic”, 63rd Biophysical Society Meeting, Baltimore, Mar 2-6, 2019. [Selected oral presentation](#).

D. Kovari, D. Dunlap, [L. Finzi](#), “Dynamic force-spectroscopy on a budget: new designs and open-source software for building an electromagnetic tweezer” 63rd Biophysical Society Meeting, Baltimore, Mar 2-6, 2019.

Wenxuan Xu, Yan Yan, David Dunlap, [Laura Finzi](#), “Loops enhance transcriptional roadblocks” 63rd Biophysical Society Meeting, Baltimore, Mar 2-6, 2019. [Selected oral presentation](#).

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David Dunlap & [Laura Finzi](#), “Forcing transcription through roadblocks”, Single Molecule Biophysics Conference, Aspen, CO, January 6-13, 2023. [Selected oral presentation](#)

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Jin Qian, Irina Artsimovitch, Yan Yan, Wenxuan Xu, David Dunlap, and [Laura Finzi](#), “Force and DNA-Bound Proteins Bias Transcription Output from Converging and Diverging Genes”, 67th Biophysical Society Annual Meeting, San Diego, CA, February 18-22, 2023. [Selected oral presentation](#).

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