

Marcia Levitus

Curriculum Vitae

Education

- 1998 **Ph.D. in Physical Chemistry.** University of Buenos Aires, Argentina.
- 1995 **B.S. in Chemistry. *Magna Cum Laude.*** University of Buenos Aires, Argentina.

Professional Experience

- 2011-present **Associate Professor of Chemistry and Biochemistry and Associate Professor of Physics (Affiliated).** Arizona State University.
- 2005-2011 **Assistant Professor of Chemistry and Biochemistry and Assistant Professor of Physics (Affiliated).** Arizona State University.
- 2000-2004 **HHMI Postdoctoral Fellow.** University of California, Berkeley. Advisor: Carlos Bustamante.
- 1998-2000 **Postdoctoral Fellow.** University of California, Los Angeles. Advisor: Miguel Garcia-Garibay.
- 1995-1998 **Graduate Student Researcher.** University of Buenos Aires, Argentina. Advisor: Pedro Aramendia.
- 1992-1995 **Undergraduate Student Researcher.** University of Buenos Aires, Argentina. Advisor: Pedro Aramendia.

Honors and Awards

- 2010 Inter-American Photochemical Society Young Investigator Award
- 2007 NSF-Early CAREER award
- 2000 L.F.Leloir Award to the best doctoral thesis in the School of Sciences of the University of Buenos Aires. Honorable Mention
- 1999 H. Schumacher Award from the Argentinean Physicochemical Society to the best doctoral thesis in Physical Chemistry. Honorable Mention
- 1995 P. A. Berdoy Award from the Argentinean Chemical Society given to the graduating senior with the highest GPA in chemistry in all Argentinean universities

Publications

a) Under revision

1. "Electrostatic interactions at the dimer interface stabilize the E. coli β sliding clamp" Anirban Purohit, Jennifer K. England, Lauren G. Douma, Farzaneh Tondnevi, Linda B. Bloom*, and Marcia Levitus*. Under review in *Nucleic Acids Research*. Currently preparing to re-submit (major revisions).
2. "Clamp loader-catalyzed opening of the β -sliding clamp is independent of β dimer stability" Lauren G. Douma, Kevin Yu, Jennifer K. England, Marcia Levitus*, and Linda B. Bloom* Under review in *Nucleic Acids Research*. Currently preparing to re-submit (minor revisions).

b) Published in peer-reviewed Journals (40 articles published, h = 21).

★ = ML as corresponding author. ☑ = includes undergraduate in the Levitus lab

◆ = ML as senior collaborating author. ‡ = ML as a postdoc. ¶ = ML as a graduate student

3. Tang, S; Donaphon, B; Levitus M., Raymo F. Structural Implications on the Properties of Self-Assembling Supramolecular Hosts for Fluorescent Guests. *Langmuir* **2016**, *32*, 8676–8687. ★
4. Stennett, E.M.S.; Ciuba, M.A.; Lin, S.; Levitus M. Demystifying PIFE: The Photophysics Behind the Protein-Induced Fluorescence Enhancement Phenomenon in Cy3. *J. Phys. Chem. Lett.* **2015**, *6*, 1819–1823. ★
5. Stennett, E. M. S.; Ma, N.; van der Vaart, A.; Levitus, M., Photophysical and Dynamical Properties of Doubly Linked Cy3-DNA Constructs. *J Phys Chem B* **2014**, *118*, 152-163. ★
6. Stennett, E. M. S.; Ciuba, M. A.; Levitus, M., Photophysical Processes in Single Molecule Organic Fluorescent Probes. *Chem Soc Rev* **2014**, *43*, 1057-1075. ★
7. Shinde, S.; Binder, J. K.; Goyal, B.; Woodrum, B.; De Munari, S.; Levitus, M.; Ghirlanda, G., A Designed Buried Salt Bridge Modulates Heterodimerization of a Membrane Peptide. *Biopolymers* **2014**, *102*, 437-443. ★
8. Kuriata, A. M.; Chakraborty, M.; Henderson, J. N.; Hazra, S.; Serban, A. J.; Pham, T. V. T.; Levitus, M.; Wachter, R. M., Atp and Magnesium Promote Cotton Short-Form Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase (Rubisco) Activase Hexamer Formation at Low Micromolar Concentrations. *Biochemistry* **2014**, *53*, 7232-7246. ◆
9. Kanno, D. M.; Levitus, M., Protein Oligomerization Equilibria and Kinetics Investigated by Fluorescence Correlation Spectroscopy: A Mathematical Treatment. *J Phys Chem B* **2014**, *118*, 12404-12415. ★☑
10. Binder, J. K.; Douma, L. G.; Ranjit, S.; Kanno, D. M.; Chakraborty, M.; Bloom, L. B.; Levitus, M., Intrinsic Stability and Oligomerization Dynamics of DNA Processivity Clamps. *Nuc Acids Res* **2014**, *42*, 6476-6486. ★☑
11. Ciuba, M. A.; Levitus, M., Manganese-Induced Triplet Blinking and Photobleaching of Single Molecule Cyanine Dyes. *Chemphyschem* **2013**, *14*, 3495-3502. ★
12. Wang, G. N.; Dhar, K.; Swanson, P. C.; Levitus, M.; Chang, Y., Real-Time Monitoring of Rag-Catalyzed DNA Cleavage Unveils Dynamic Changes in Coding End Association with the Coding End Complex. ★

Nuc Acids Res **2012**, *40*, 6082-6096.

13. Stennett, E. M. S.; Kodis, G.; Levitus, M., Photobleaching and Blinking of Tamra Induced by Mn²⁺. *Chemphyschem* **2012**, *13*, 909-913. ★
14. Ranjit, S.; Levitus, M., Probing the Interaction between Fluorophores and DNA Nucleotides by Fluorescence Correlation Spectroscopy and Fluorescence Quenching. *Photochem Photobiol* **2012**, *88*, 782-791. ★
15. Chakraborty, M.; Kuriata, A. M.; Henderson, J. N.; Salvucci, M. E.; Wachter, R. M.; Levitus, M., Protein Oligomerization Monitored by Fluorescence Fluctuation Spectroscopy: Self-Assembly of Rubisco Activase. *Biophys J* **2012**, *103*, 949-958. ★
16. Tims, H. S.; Gurunathan, K.; Levitus, M.; Widom, J., Dynamics of Nucleosome Invasion by DNA Binding Proteins. *J Mol Biol* **2011**, *411*, 430-448. ◆
17. Spiriti, J.; Binder, J. K.; Levitus, M.; van der Vaart, A., Cy3-DNA Stacking Interactions Strongly Depend on the Identity of the Terminal Basepair. *Biophys J* **2011**, *100*, 1049-1057. ★
18. Levitus, M.; Ranjit, S., Cyanine Dyes in Biophysical Research: The Photophysics of Polymethine Fluorescent Dyes in Biomolecular Environments. *Q Rev Biophys* **2011**, *44*, 123-151. ★
19. Levitus, M., Chemical Kinetics at the Single-Molecule Level. *J Chem Educ* **2011**, *88*, 162-166. ★
20. Levitus, M., Relaxation Kinetics by Fluorescence Correlation Spectroscopy: Determination of Kinetic Parameters in the Presence of Fluorescent Impurities. *J Phys Chem Lett* **2010**, *1*, 1346-1350. ★
21. Gurunathan, K.; Levitus, M., FRET Fluctuation Spectroscopy of Diffusing Biopolymers: Contributions of Conformational Dynamics and Translational Diffusion. *J Phys Chem B* **2010**, *114*, 980-986. ★
22. Ranjit, S.; Gurunathan, K.; Levitus, M., Photophysics of Backbone Fluorescent DNA Modifications: Reducing Uncertainties in FRET. *J Phys Chem B* **2009**, *113*, 7861-7866. ★
23. Harvey, B. J.; Perez, C.; Levitus, M., DNA Sequence-Dependent Enhancement of Cy3 Fluorescence. *Photoch Photobio Sci* **2009**, *8*, 1105-1110. ★☑
24. Harvey, B. J.; Levitus, M., Nucleobase-Specific Enhancement of Cy3 Fluorescence. *J Fluoresc* **2009**, *19*, 443-448. ★
25. Gurunathan, K.; Levitus, M., Single-Molecule Fluorescence Studies of Nucleosome Dynamics. *Curr Pharm Biotechno* **2009**, *10*, 559-568. ★
26. Gurunathan, K.; Levitus, M., Applications of Fluorescence Correlation Spectroscopy to the Study of Nucleic Acid Conformational Dynamics. *Prog Nucleic Acid Re* **2008**, *82*, 33-69. ★
27. Torres, T.; Levitus, M., Measuring Conformational Dynamics: A New Fcs-FRET Approach. *J Phys Chem B* **2007**, *111*, 7392-7400. ★
28. Sanborn, M. E.; Connolly, B. K.; Gurunathan, K.; Levitus, M., Fluorescence Properties and Photophysics of the Sulfoindocyanine Cy3 Linked Covalently to DNA. *J Phys Chem B* **2007**, *111*, 11064-11074. ★☑
29. Li, G.; Levitus, M.; Bustamante, C.; Widom, J., Rapid Spontaneous Accessibility of Nucleosomal DNA. *Nat Struct Mol Biol* **2005**, *12*, 46-53. †
30. Goedken, E. R.; Levitus, M.; Johnson, A.; Bustamante, C.; O'Donnell, M.; Kuriyan, J., Fluorescence Measurements on the E-Coli DNA Polymerase Clamp Loader: Implications for Conformational

Changes During Atp and Clamp Binding. *J Mol Biol* **2004**, *336*, 1047-1059.

31. Schmieder, K.; Levitus, M.; Dang, H.; Garcia-Garibay, M. A., Photophysical Properties of Coplanar and Twisted 1,4-Bis(9-Ethynylanthracenyl)Benzene. Rotational Equilibration in the Excited States of Diaryalkynes. *J Phys Chem A* **2002**, *106*, 1551-1556. ‡
32. Dang, H.; Levitus, M.; Garcia-Garibay, M. A., One Step Pd(0)-Catalyzed Synthesis, X-Ray Analysis, and Photophysical Properties of Cyclopent[Hi]Aceanthrylene: Fullerene-Like Properties in a Nonalternant Cyclopentafused Aromatic Hydrocarbon. *J Am Chem Soc* **2002**, *124*, 136-143. ‡
33. Levitus, M.; Zepeda, G.; Dang, H.; Godinez, C.; Khuong, T. A. V.; Schmieder, K.; Garcia-Garibay, M. A., Steps to Demarcate the Effects of Chromophore Aggregation and Planarization in Poly(Phenyleneethynylene)S. 2. The Photophysics of 1,4-Diethynyl-2-Fluorobenzene in Solution and in Crystals. *J Org Chem* **2001**, *66*, 3188-3195. ‡
34. Levitus, M.; Schmieder, K.; Ricks, H.; Shimizu, K. D.; Bunz, U. H. F.; Garcia-Garibay, M. A., Steps to Demarcate the Effects of Chromophore Aggregation and Planarization in Poly(Phenyleneethynylene)S. 1. Rotationally Interrupted Conjugation in the Excited States of 1,4-Bis(Phenylethynyl)Benzene. *J Am Chem Soc* **2001**, *123*, 4259-4265. ‡
35. Levitus, M.; Garcia-Garibay, M. A., Polarized Electronic Spectroscopy and Photophysical Properties of 9,10-Bis(Phenylethynyl)Anthracene. *J Phys Chem A* **2000**, *104*, 8632-8637. ‡
36. Schick, G.; Levitus, M.; Kvetko, L.; Johnson, B. A.; Lamparth, I.; Lunkwitz, R.; Ma, B.; Khan, S. I.; Garcia-Garibay, M. A.; Rubin, Y., Unusual Luminescence of Hexapyrrolidine Derivatives of C-60 with T-H and Novel D-3-Symmetry. *J Am Chem Soc* **1999**, *121*, 3246-3247. ‡
37. Levitus, M.; Schick, G.; Lunkwitz, R.; Rubin, Y.; Garcia-Garibay, M. A., Photophysical Properties of Hexapyrrolidine C-60 Adducts with T-H and D-3 Symmetry: Protonation of Multiple Basic Sites. *J Photoch Photobio A* **1999**, *127*, 13-19. ‡
38. Levitus, M.; Bourdelande, J. L.; Marques, G.; Aramendia, P. F., Fluorescence Anisotropy of Dyes Included in Crosslinked Polystyrene. *J Photoch Photobio A* **1999**, *126*, 77-82. ¶
39. Levitus, M.; Aramendia, P. F., Photochromism and Thermochromism of Phenanthrospiropyrone in Poly(Alkylmethacrylates). *J Phys Chem B* **1999**, *103*, 1864-1870. ¶
40. Levitus, M.; Talhavini, M.; Negri, R. M.; Atvars, T. D. Z.; Aramendia, P. F., Novel Kinetic Model in Amorphous Polymers. Spiropyran-Merocyanine System Revisited. *J Phys Chem B* **1997**, *101*, 7680-7686. ¶
41. Levitus, M.; Glasser, G.; Neher, D.; Aramendia, P. F., Direct Measurement of the Dipole Moment of a Metastable Merocyanine by Electromechanical Interferometry. *Chem Phys Lett* **1997**, *277*, 118-124. ¶
42. Levitus, M.; Negri, R. M.; Aramendia, P. F., Rotational Relaxation of Carbocyanines - Comparative-Study with the Isomerization Dynamics. *J Phys Chem* **1995**, *99*, 14231-14239. ¶

c) **Book Chapters.**

- "Fluorescence Correlation Spectroscopy: Applications to the Study of Conformational Dynamics in Nucleic Acids" Kaushik Gurunathan and Marcia Levitus*. In: Progress in Nucleic Acid Research and Molecular Biology, Vol. 82, **2008**, **82** 33-69. Elsevier.

d) **Conference Proceedings.**

- "Sequence-dependent photophysical properties of Cy3-labeled DNA". Marcia Levitus*, *Proc. SPIE* 7576, 75761D (2010).
- "Measuring Conformational Dynamics in Nucleic Acids: A New FCS-FRET Approach". Marcia Levitus*, Proceedings of the IX. Linz Winter Workshop 2007, *Advances in Single Molecule Research for Biology and Nanoscience*, (Peter Hinterdorfer, Gerhard Schütz, Peter Pohl, Eds.), Schriftenreihe Biophysik 2, Tauner Verlag, Linz, Austria.

Research Funding

Current:

National Science Foundation - BIO-1157765

"The dynamics of replication processivity factors"

Award Amount: \$ 481,368

Role: PI (co-PI: Linda Bloom, U Florida)

6/1/12-5/31/15 (NCE
through 5/2017)

DOE-BES Photosynthetic Systems DE-FG02-09ER16123

"Structure of Rubisco Activase"

Award Amount: \$600,000

Role: Co-PI (6%) PI: R. Wachter (ASU).

09/15/2015 –
09/14/2018

Past:

National Science Foundation - PHY-0644414

"CAREER: Conformational dynamics of DNA and nucleosomes: A quantitative single-molecule study"

Award Amount: \$ 568,000 , Role: PI

College of Liberal Arts and Sciences, ASU

"The structure and dynamics of DNA damaged by ionizing radiation: Implications for repair mechanisms"

Award Amount: \$50,000

Role: PI (50%) co- PI: O. Beckstein (50%).

04/15/07-04/14/13

1/1/14-12/31/14

Department of Energy – Grant Number 09104609

"The Regulation of Carbon Fixation in Plants and Green Algae: Rubisco Activase and the Origin of Heat Inactivation of CO₂ Assimilation"

Award Amount: \$750,000

Role: Co-PI PI: R. Wachter.

10/1/09- 9/30/12

National Institutes of Health –HHS 1R03ES016291-01

"A new general methodology for studying conformational dynamics in single cells"

Award Amount: \$148,335, Role: PI

08/01/07- 05/31/09

Seminars, Lectures and Poster Presentations

a) Research Lectures and Seminars (last 5 years)

* Invited lecture in a scientific conference/workshop	** Invited seminar in a colloquium/ seminar series.	† Contributed lecture in a scientific conference/workshop.
○ 61 st Annual Meeting of the Biophysical Society (Biological Fluorescence Subgroup). February 2017, New Orleans. LA		*
○ 26 th Inter-American Photochemical Society conference. January 2017. Sarasota, FL.		*
○ University of Colorado Denver. Department of Chemistry. September 2016.		**
○ International Discussion Meeting Förster Resonance Energy Transfer in Life Sciences II. Max Planck Institute for Biophysical Chemistry. Göttingen. April 2016.		*
○ 59 th Biophysical Society Annual Meeting, February 20, 2015, Baltimore, MD.		†
○ University of Utah, Department of Chemistry. November 2014.		**
○ University of Miami, Department of Chemistry. September 2014.		**
○ 2 nd FB ³ Conference (Fluorescent Biomolecules and their building blocks). UC San Diego, August 2014.		*
○ Gordon Research Conference in Biopolymers. Salve Regina University, Newport, RI. June 2014.		†
○ 8th LFD Workshop in Advanced Fluorescence Imaging and Dynamics. October 21-25, 2013. University of California, Irvine.		*
○ 7th LFD Workshop in Advanced Fluorescence Imaging and Dynamics. October 22-26, 2012. University of California, Irvine.		*
○ University of South Florida, Department of Chemistry. September 2012.		**
○ University of Münster, Physikalisches Institut. July 2012		**
○ Symposium on Single Molecule Kinetics, Physikzentrum Bad Honnef, Germany. July 2012.		*
○ Conference on Fluorescent Biomolecules and their Building Blocks – Design and Applications. Göteborg, Sweden, July 2012.		*
○ University of California San Diego, Organic Chemistry division. October 2011.		**
○ ACS National Meeting, Marie Curie Symposium. Denver, August 2011		*
○ 21 st I-APS Pre-Symposium Workshop, May 16th -17th, 2011, Mendoza, Argentina		*
○ International Bunsen Discussion Meeting: “Förster Resonance Energy transfer in Life Sciences”. Göttingen, Germany. March 2011		*

b) Invited Service and Outreach Lectures / Seminars (last 5 years)

- "Unbelievable Frontiers" (TED-style talk for the general public). IMAX Theater, Arizona Science Center, Phoenix, AZ. May 10, 2014.
- “Why You Should Consider Doctoral Education and the Professoriate” MGE@MSA Seventh Annual Graduate School Fair and Student Research Conference, Arizona State University, 2013
- “Why You Should Consider Doctoral Education and the Professoriate” MGE@MSA Sixth Annual Graduate School Fair and Student Research Conference, Arizona State University, 2012

Note: The Mountain States Alliance Program (MGE@MSA - Phase II) is based at Arizona State University, and is aimed to increase the enrolment and retention of minority students

c) **Poster Presentations in Scientific Conferences** (last 5 years)

- "ATP-Mg²⁺ mediated assembly of RuBisCO activase investigated using Fluorescence Correlation Spectroscopy." Platform talk. M. Chakraborty, A. Kuriata, J. Henderson, M. E. Salvucci, R. Wachter, M. Levitus. 58Th Biophysical Society Annual Meeting, February 15-19, **2014**, San Francisco, CA.
- "Photophysical and dynamical properties of doubly linked Cy3-DNA constructs" N. Ma, Elana Stennett, M. Levitus, A. van der Vaart. 58Th Biophysical Society Annual Meeting, February 15-19, **2014**, San Francisco, CA.
- "Single-molecule studies of DNA replication processivity clamps". J. K. Binder, S. Ranjit, M. Chakraborty, D. Kanno, L. Douma, L. Bloom and M. Levitus. 58Th Biophysical Society Annual Meeting, February 15-19, **2014**, San Francisco, CA.
- "Mg²⁺-induced triplet blinking and photobleaching of single molecule cyanine dyes". M. Ciuba, E. M. S. Stennett, M. Levitus. 58Th Biophysical Society Annual Meeting, February 15-19, **2014**, San Francisco, CA.
- "Photoblinking and photobleaching of single molecule fluorescent probes induced by Mn²⁺" M. Ciuba, E. Stennett and M. Levitus. Gordon Research Conference on Photochemistry. Easton MA. July **2013**
- "Single molecule studies of DNA replication processivity clamps" S. Ranjit, J. Binder, L. Douma, L. Bloom and M. Levitus. Gordon Research Conference on Nucleic Acids. Biddeford, ME. June **2013**.
- "Photoblinking and photobleaching of single molecule fluorescent probes induced by Mn²⁺" M. Ciuba, E. Stennett and M. Levitus. 57Th Biophysical Society Annual Meeting, February 2-6, **2013**, Philadelphia, PA.
- "Blinking and bleaching of tetramethylrhodamine on DNA induced by paramagnetic cations" E. Stennett and M. Levitus, 56Th Biophysical Society Annual Meeting, February 25-29, **2012**, San Diego, CA.
- "Investigating the Stoichiometry of Rubisco activase by fluorescence fluctuation methods". M. Chakraborty, A. Kuriata, N. Henderson, R. Wachter, M. Levitus. 56Th Biophysical Society Annual Meeting, February 25-29, **2012**, San Diego, CA.
- "Monitoring dimerization of GPA using FRET" J. K. Binder, S. Shinde, B. Woodrum, G. Ghirlanda, M. Levitus. 56Th Biophysical Society Annual Meeting, February 25-29, **2012**, San Diego, CA.
- "The stability and dynamics of E. Coli beta-clamp by single molecule and fluorescence correlation spectroscopy" S. Ranjit, L. Douma, L. B. Bloom, M. Levitus. 56Th Biophysical Society Annual Meeting, February 25-29, **2012**, San Diego, CA.
- "Photophysics of Single-Molecule Fluorescent Dyes", M. Levitus, 21st I-APS Conference, May 16th -17th, **2011**, Mendoza, Argentina

Teaching and Mentoring

a) Courses Taught

PREFIX	CLASS	ROLE	SEMESTERS (ENROLLMENT)
CHM 240	Mathematical Methods in Chemistry	Sole Instructor	Spring 2005 (18) Spring 2006 (15) Spring 2011 (7) Spring 2012 (34) Spring 2013 (33) Spring 2014 (37) Spring 2016 (39) Spring 2017 (37)
BCH 341	Physical Chemistry with Biological Focus	Sole Instructor	Fall 2016 (240)
CHM 341	Elementary Physical Chemistry	Team-taught with one other professor (50%)	Fall 2007 (138), Spring 2008 (130)
CHM 343	Physical Chemistry Laboratory	Team-taught with one other professor (50%)	Fall 2007 (38), Spring 2008 (32)
CHM549	Advanced Topics in Physical Chemistry: Single Molecule Spectroscopy	Sole Instructor	Fall 2006 (16), Fall 2008 (14)
CHM 598	Quantitative Foundations of Modern Biochemistry	Sole Instructor	Fall 2008 (20), Fall 2009 (20), Fall 2011 (22), Fall 2014 (23), Fall 2015 (12)

Fall 2005 and Spring 2007: Approved Release from teaching before tenure. The two courses taught in the Fall of 2008 satisfy the teaching requirement for the academic year 2008-2009. Fall 2012: approved release (sabbatical leave). Spring 2015: Maternity leave.

b) Student Mentoring (bold = current)

Summary for 2016: 4 Ph.D. students, 2 Barrett Honors College undergraduate students, member of 7 oral/supervisory committees.

Postdoctoral Researchers

- Mahinda Ranasinghe (2005-2006), Shian Zhang (July-December 2008).

Graduate Students - Primary Advisor

- Brian K. Connolly. M.S. in Chemistry. Graduated 04/2007.
- Billie Jo Harvey. M.S. in Physics. Graduated 12/2008.
- Tedman A. Torres. Ph.D. in Physics. Graduated 12/2009.
- Kaushik Gurunathan. Ph.D. in Chemistry, Graduated 05/2011.

- Suman Ranjit. Ph.D. in Chemistry, Graduated 04/2013
- Manas Chakraborty. Ph.D. in Chemistry, Graduated 04/2014.
- Elana Stennett. Ph.D. in Chemistry, Graduated 5/2015.
- Jennifer Binder. Ph.D. in Chemistry, Graduated 5/2015.
- **Monika Ciuba. Ph.D. in Chemistry, current.**
- **Bryan Donaphon. Ph.D. in Chemistry, current.**
- **Anirban Purohit. Ph.D. in Chemistry, current**
- **Nikita Kumari. Ph.D. in Chemistry, current**

Undergraduate Students

- Barrett Honors Thesis Advisor (graduation year): Anthony Eskridge (2009) , Priscilla Luna (2010), Ritika Tamirisa (2016), **Moses Onyeabor (current)**
- Research Advisor: Katrin Henry, David Kanno, Claudia Perez, Christopher Larkins, Matthew Sanborn, Megan Kelly, Jesus Aguilar, Brenda Miranda, Ashley Amoroso.

High School Students

- Mikala Mehlav (summer 2007, Biodesign Institute bioscience internship program for local high school students)

Graduate Students – Oral and supervisory committees (only for 2016)

- Austin Echelmeier (supervisory committee)
- Jacob Hilton (supervisory committee)
- Patrick Kelly (supervisory committee)
- Manas Mondal (Chair of oral exam)
- Trung Nguyen (oral committee)
- Anli Tang (Chair of oral exam)
- Ruohan Zhang (oral committee)
- Tara MacCulloch (Chair of oral exam)

Professional Service

January-December 2016:

- National Institutes of Health (NIH): Member of the MSFB study section (2014-2020).
- Member of the Editorial Board of *Methods and Applications in Fluorescence* (1/2015-present).
- Biophysical Society: Chair of the Fluorescence Subgroup (2016).
- Reviewed six manuscripts for *The Journal of Physical Chemistry Letters*, *Biophysical Journal*, *Journal of the American Chemical Society*, *Nature Communications*, *Methods and Applications of Fluorescence*.
- National Science Foundation (NSF): Panelist (MCB, March 2016).
- Member of the Program Committee of the International Discussion Meeting Förster Resonance Energy Transfer in Life Sciences II. Max Planck Institute for Biophysical Chemistry. Göttingen. April 2016.

Before January 2016:

- National Institutes of Health (NIH):
 - Member of the MSFB study section (2014-2020).
 - On site reviewer for a P41 (research resource) grant. NIH/CSR (E. Gratton PI).
- Member of the Editorial Board of *Methods and Applications in Fluorescence* (1/2015-present).
- Biophysical Society:
 - Member of the Council (elected, 2012-2015).
 - Chair of the Nominating Committee (2014).
 - Chair of the Fluorescence Subgroup (elected as vice-chair for 2015 and chair for 2016).
- Reviewer for the *Journal of Physical Chemistry*, *Biophysical Journal*, *Photochemistry and Photobiology*, *Journal of the American Chemical Society*, *Journal of Fluorescence*, *Bioconjugate Chemistry*, *PLoS ONE*, *Langmuir*, *PNAS*, *Nature Communications*, *Methods and Applications of Fluorescence*, *Accounts of Chemical Research*, *Nucleic Acids Research*.
- National Science Foundation (NSF):
 - Ad-hoc grant reviewer since 2006.
 - Panelist in eight opportunities (2007-2016, MCB, CHE and PHY. Details omitted due to the anonymity of process).
- Israeli Science Foundation: Ad-hoc reviewer
- Argentinean Science Foundation (Agencia Nacional de Promocion Cientifica y Tecnica): Ad-hoc reviewer.
- National Academy of Sciences (NAS): Panelist and ad-hoc reviewer for the Research Associateships Program.

University Service

January-December 2016:

- Chair of the Seminar Committee, 2010-present
- Member of the personnel committee, 2014-present (elected)
- Member of the Advisory Committee for the Ultrafast Laser Facility, CLAS. September 2009-present.

Before January 2016:

- Chair of the Seminar Committee, 2010-present
- Member of the personnel committee, 2014-present (elected)
- Member of the Advisory Committee for the Ultrafast Laser Facility, CLAS. September 2009-present.
- Member of the Search Committee for Dean of CLAS, January 2014.
- Member of the Graduate Programs Committee, Department of Chemistry and Biochemistry. August 2005-December 2014. (Interim chair in 2014).

- Faculty Liaison, Graduate Students Advisory Committee, Department of Chemistry and Biochemistry. September 2006-2013.
- Member of the Search Committee for a tenure-track position in biological physics, Departments of Physics and The Biodesign Institute. December 2012.
- Member of a task force to explore aspects of an undergraduate major in Biophysics, Department of Physics. September 2009.
- Member of the Strategic Planning Committee, Department of Chemistry and Biochemistry. November 2006-October 2007.
- Recruiting Trip for our Ph.D. programs. Santa Clara University, May 2006.
- Member of the Search Committee for two tenure-track positions in theoretical biological physics, Departments of Physics and Chemistry and Biochemistry. November 2005.
- Recruiting Trip for our Ph.D. programs. Monterrey Institute of Technology, Mexico, March 2005.

Outreach

- "Unbelievable Frontiers" (TED-style talk for the general public). IMAX Theater, Arizona Science Center, Phoenix, AZ. May 10, 2014.
- Translated pedagogical materials created by the Arizona Science Center in partnership with "Ask a Biologist" (ASU). 2012 <http://askbiologist.asu.edu/ataque-viral>
- Speaker in the panel discussion "Communicating research to non-researchers", organized by the professional development area of the Graduate College at ASU. (April 2012). Podcasts are available at <http://graduate.asu.edu/grow/sfs/categories/publishing-beyond-your-discipline>
- Member of the Design Team for the "Framing New Pathways to Medical Discovery" grant (NIH# R25RR026032) awarded to the Arizona Science Center (Science Museum in the city of Phoenix). Met with other scientists, teachers and museum personnel on a regular basis to provide advice on new activities and exhibitions at the museum (2007-2014)
- Faculty mentor and founding member of the "Physics and Astronomy Graduate Women Association". The goal of the association is to provide a space where female graduate students in the physical sciences can feel comfortable discussing gender-related issues that affect their experiences as graduate students in the program.
- Board member of the Faculty Women's Association at ASU (2009-2014).
- Participated as an interviewee in the project "HerStory", supported by a grant from the NSF to B. Bernstein (ASU Mary Lou Fulton College of Education).
- Panelist in the "1, 2, 3: Success in the Early Years" panel. Faculty Women's Association, ASU. (2008, 2009 and 2010)
- Participated as an interviewee in the Graduate College Podcast Project for professional development. (Conference Presentation: How to write and deliver a compelling conference presentation, July, 2008). <http://graduate.asu.edu/sfs/Podcasts.html>
- Sally Ride Festival (ASU, March 1st, 2008): prepared and conducted a hands-on workshop for 45 elementary and middle school girls.

- Active participant in the Western Alliance to Expand Student Opportunities (WAESO) Program , and the Minority Graduate Education at Mountain States Alliance Program (MGE@MSA - Phase II). Both are based at Arizona State University, and are aimed to increase the enrolment and retention of minority students.
- Participated in the Biodesign Institute Bioscience Internship Program for local high school students. Summer 2007