

# MANOLIS ANTONOYIANNAKIS

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*Associate Editor & Bibliostatistics Analyst*  
The American Physical Society  
Editorial Office, 1 Research Road, Ridge, NY 11961  
E-mail: [manolis@aps.org](mailto:manolis@aps.org)

*Adjunct Associate Research Scientist*  
Applied Physics and Applied Mathematics, Columbia University  
S.W. Mudd Building, 500 W. 120th Street, New York, NY 10027  
E-mail: [ma2529@columbia.edu](mailto:ma2529@columbia.edu)

## EDUCATION

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<b>Ph.D. in Physics</b> Imperial College London Thesis advisor: J. B. Pendry Thesis title: <i>Electromagnetic Fields and Forces in Nanostructures</i>	1998
<b>M.S. in Physics</b> University of Illinois at Urbana-Champaign	1994
<b>B.S. in Theoretical Physics</b> Royal Holloway, University of London	1992
<b>Physics</b> (transferred to Royal Holloway) Aristotle University of Thessaloniki, Greece	1988-89

## EXECUTIVE EDUCATION

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<b>Columbia Engineering Data Analytics Boot Camp</b> The Fu Foundation School of Engineering and Applied Science Columbia University	2019
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## PROFESSIONAL APPOINTMENTS

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Associate Editor <i>Physical Review B, American Physical Society</i>	2017–
Bibliostatistics Analyst American Physical Society	2013–
Adjunct Associate Research Scientist <i>Department of Applied Physics and Applied Mathematics, Columbia University</i>	2006–
Senior Assistant Editor <i>Physical Review B, American Physical Society</i>	2014–17
Senior Assistant Editor <i>Physical Review X, American Physical Society</i>	2013–14
Senior Assistant Editor <i>Physical Review Letters, American Physical Society</i>	2011–13
Scientific Advisor to the President F.C. Kafatos <i>European Research Council</i> (London, UK & Brussels, Belgium)	2008–10
Assistant Editor <i>Physical Review Letters, American Physical Society</i>	2007–11

Assistant Editor 2003–07  
*Physical Review B, American Physical Society*

Science Editor 2000–03  
*Crete University Press, Foundation for Research and Technology–Hellas (FORTH) (Heraklion, Greece)*

## TEACHING

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### GRADUATE

- Do's and don'ts of getting your research published, IGERT Quantum Optics, Columbia University, 2018.
- 5-lecture Seminar on Scientific Publishing, IGERT Quantum Optics, Columbia University, 2016–17.  
Training graduate students and junior researchers on scientific publishing. The seminar's 5 themes were:
  - Writing a paper
  - Peer review
  - Citation analysis & performance metrics
  - Publication ethics
  - Topics from the history and sociology of science publishing

### UNDERGRADUATE

- Lab demonstrator, Physics Department, Imperial College London 1995–96
- Graduate Teaching Assistant, Physics Department, University of Illinois at Urbana-Champaign 1992–94  
Statistical Mechanics (7<sup>th</sup> semester)  
Electricity & Mechanics Lab (4<sup>th</sup> semester)  
Quantum Physics (7<sup>th</sup> semester)  
Quantum Physics (8<sup>th</sup> semester)

### HIGH SCHOOL

- I tutored high-school physics at a public school, in private evening schools, and at home (Heraklion, Greece) 2000–03

## TECHNICAL SKILLS

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Python programming (Python 3, APIs, JSON, Pandas, Matplotlib), R, VBA, Databases (SQL, NoSQL, MySQL, MongoDB), Git, Web visualization (HTML, CSS, Bootstrap, Dashboarding, JavaScript, D3.js), Flask, Web scraping (Splinter, BeautifulSoup), Tableau, Machine Learning

## REVIEWING EXPERIENCE

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Journal of Informetrics, Scientometrics, Learned Publishing, Physical Review E.

## HONORS AND AWARDS

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- **Beit Fellowship for Scientific Research**, Imperial College London 1995–98
- **Martin Holloway Prize** for best graduate in the Science Faculty, Royal Holloway, University of London 1992
- **Driver Prize** for best final-year student at the Physics Department, Royal Holloway, University of London 1992
- **Leo Pincherle Prize** for excellence in physics, Royal Holloway, University of London 1991
- **Leo Pincherle Prize** for excellence in physics, Royal Holloway, University of London 1990

## PUBLICATIONS

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### A. RESEARCH ARTICLES, COMMENTARIES, AND EDITORIALS

1. [How a Single Paper Affects the Impact Factor: Implications for Scholarly Publishing](#),  
M. Antonoyiannakis, Proceedings of the 17<sup>th</sup> International Conference on Scientometrics & Informetrics (ISSI 2019) (accepted)
2. [Impact Factors and the Central Limit Theorem: Why Citation Averages are Scale Dependent](#),  
M. Antonoyiannakis, *Journal of Informetrics* **12**, 1072 (2018)
3. [Editorial: Highlighting Impact and the Impact of Highlighting: PRB Editors' Suggestions](#),  
M. Antonoyiannakis, *Physical Review B* **92**, 210001 (2015)
4. [Acceptance Rates in Physical Review Letters: No Seasonal Bias](#),  
M. Antonoyiannakis, *Learned Publishing* **27**, 53 (2014)
5. [The European Research Council: A Revolutionary Excellence Initiative for Europe](#),  
M. Antonoyiannakis and F. C. Kafatos, *European Review* **17**, 511 (2009)
6. [Editorial: Is PRL too large to have an 'impact'?](#),  
M. Antonoyiannakis and S. Mitra, *Physical Review Letters* **102**, 060001 (2009)
7. [The European Research Council Takes Flight](#),  
M. Antonoyiannakis, J. Hemmelskamp and F. C. Kafatos, *Cell* **136**, 805 (2009)
8. [Electromagnetic Forces in Photonic Crystals](#),  
M. I. Antonoyiannakis and J. B. Pendry, *Physical Review B* **60**, 2363 (1999)
9. [Mie Resonances and Bonding in Photonic Crystals](#)  
M. I. Antonoyiannakis and J. B. Pendry, *Europhysics Letters* **40**, 613 (1997)

#### B. Ph.D. THESIS

##### [Electromagnetic Fields and Forces in Nanostructures](#),

Emmanuel (Manolis) Ioannou Antonoyiannakis, June 1998, Imperial College London

#### C. EDITING & TRANSLATING ACADEMIC TEXTBOOKS

1. [An Introduction to Quantum Physics: A First Course for Physicists, Chemists, Materials Scientists, and Engineers](#), by S. Trachanas (Wiley-VCH, 2017). ISBN: 978-3-527-41247-1.

I co-translated and co-edited from Greek into English this quantum mechanics textbook by Stefanos Trachanas. Originally published by Crete University Press, this is an extensively revised and expanded edition of a classic textbook that has educated generations of Greek physicists, chemists, engineers, and materials scientists.

2. [Thomas' Calculus](#), 10<sup>th</sup> ed., rev. by R.L. Finney, M. D. Weir, and F. R. Giordano (Addison Wesley Longman, 2001). The book was translated and published by Crete University Press in Greek in 2004. ISBN: 978-960-524-182-7.

I translated into Greek and edited the 10<sup>th</sup> edition (1250 pages). The editing included redesigning and casting into SI units more than 130 problems and worked examples.

3. [Problems in Quantum Mechanics](#), by S. Trachanas. The book was originally published by Crete University Press in Greek in 2002. ISBN: 978-960-524-142-1.

I solved and verified with the author many of the 150 problems, quizzes, and solved examples in the book.

4. [General Relativity](#), by J. L. Martin (Prentice Hall, 1996). The book was translated and published by Crete University Press in Greek in 2005. ISBN: 978-960-524-198-8.

I edited the Greek translation (language editing).

5. [Thermodynamics](#), by E. Fermi (Dover, 1956). The book was translated and published by Crete University Press in Greek in 2002. ISBN: 978-960-524-138-4.

I co-edited the Greek translation (language and science editing).

#### D. SCIENTIFIC WRITING

As an editor for *Physical Review Letters*, I have [written](#) several Synopses in the APS online publication *Physics*, on papers that the editors deemed most interesting or important. As an editor for *Physical Review B*, I have written several brief summaries (“teasers”) for papers selected as Editors' Suggestions.

#### E. INVITED TALKS

1. *Making Sense of Journal Impact Metrics*, [Institute of Physics, University Rostock](#),” colloquium (Rostock, Germany, 2017)
2. *Peer Review Meets Analytics*, [Physics Department, University of Illinois at Urbana-Champaign](#),” invited talk (Urbana, IL, 2017)
3. *Selectivity, Prestige, and High-Impact in Science Publishing: An APS Perspective*, [Doctoral School “Metamaterials: From THz to Optics](#),” invited talk (Crete, 2016)
4. *Analyzing Peer Review*, [Early Stage Career Workshop, Nanoscale Quantum Optics COST Action](#), invited talk (Malta, 2015)
5. *Scientific Publishing in APS Journals: Review Process & Citation Analysis*, [Tel Aviv University, Physics Department](#), colloquium (Tel Aviv, Israel, 2015)
6. *Science Publishing: Trends & Challenges*, [ETOPIM 10 conference](#), after-dinner talk (Neve Ilan, Israel, 2015)
7. *Tutorial for Authors & Referees*, [APS March Meeting](#) (San Antonio, TX, 2015)
8. *Impact Facts & Impact Factors: A View from the Physical Review*, [PQE - The Winter Colloquium on the Physics of Quantum Electronics](#), invited talk (Snowbird, UT, 2015)
9. *What is Physical Review X? And Why Is It A Journal For You?* [APS March Meeting](#), presentation and panel discussion on *Physical Review X* (Denver, CO, 2014)
10. *The Intricacies of Peer Review: An Insider's View from the Physical Review*, [Wesleyan University, Physics Department](#), colloquium (Middletown, CT, 2013)
11. [3rd European PhD School on Mathematical Modeling of Complex Systems, Technological Educational Institute of Crete](#), lecture (Heraklion, Greece, 2013)
12. *The Physical Review Journals & You: Why and How Should We Work Together?* [Shanghai Jiaotong University, Physics Department](#), seminar (Shanghai, China, 2012)
13. *The Physical Review Journals & You: How to Work Together*, [Nanjing University, Physics Department](#), colloquium (Nanjing, China, 2012)
14. *Editors' Session*, [Hong Kong University of Science and Technology, Advanced Study Institute](#), seminar (Hong Kong, China, 2012)
15. [National University of Singapore, Physics Department](#), colloquium (Singapore, 2012)
16. [National University of Singapore, Center for Quantum Technologies](#), seminar (Singapore, 2012)
17. [Nanyang Technological University, Physics Department](#), colloquium (Singapore, 2012)
18. [First Joint Session Between the Chinese Physical Society and the American Physical Society](#) (Guangzhou, China, 2012)
19. *Scientific Publishing in a Competitive Environment: Physical Review Letters and Physics in the New Era*, [University of Texas at Austin, Electrical & Computer Engineering Department](#), colloquium (Austin, TX, 2011)
20. *Scientific Publishing in a Competitive Environment: Physical Review Letters and Physics in the New Era*, [European Laboratory for Nonlinear Spectroscopy \(LENL\)](#), colloquium (Florence, Italy, 2011)
21. *Scientific Publishing in a Competitive Environment: Physical Review Letters and Physics in the New Era*, [Ecole Polytechnique, Physics Department](#), colloquium (Paris, France, 2011)
22. *Scientific Publishing in a Competitive Environment: Physical Review Letters and Physics in the New Era*, [University of Paris, Institut d' Electronique Fondamentale](#), seminar (Paris, France, 2011)
23. *Scientific Publishing in a Competitive Environment: Physical Review Letters and Physics in the New Era*, [University of Paris, Laboratoire de Physique des Solides](#), seminar (Paris, France, 2011)
24. *Scientific Publishing in a Competitive Environment: Physical Review Letters and Physics in the New Era*, [Commissariat à l'énergie atomique \(CEA\) – Saclay, Quantum Electronics Group](#), seminar (Paris, France, 2011)
25. [NANOMETA conference](#), talk (Seefeld, Austria, 2011)
26. [National Technical University of Athens, Physics Department](#), colloquium (Athens, Greece, 2010)
27. *Getting Published – and Getting Noticed! – in Physical Review Letters*, [University of Southampton, Optoelectronics Research Center](#), seminar (Southampton, UK, 2009)
28. [Institute of Physics, Standing Conference for Professors of Physics](#), seminar (London, UK, 2009)
29. [CIC Nanogune, Nanoscience Cooperative Research Center](#), seminar (San Sebastian, Spain, 2009)
30. *Successful Letters in Physical Review Letters*, [Tokyo University, Applied Physics Department](#), colloquium (Tokyo, Japan, 2008)
31. *Successful Letters in Physical Review Letters*, [Tokyo University, Physics Department](#), colloquium (Tokyo, Japan, 2008)
32. *Successful Letters in Physical Review Letters*, [Kyoto University, Yukawa Institute of Theoretical Physics](#), colloquium (Kyoto, Japan, 2008)
33. *Successful Letters in Physical Review Letters*, [Extreme Photonics Lab, RIKEN](#), seminar (Wako, Japan, 2008)
34. *Peer Review and Citation Analysis in PRL: An Editor's Perspective*, [Cambridge University](#),

- a. Cavendish Laboratory, seminar (Cambridge, UK, 2008)
35. *Peer Review and Citation Analysis in PRL: An Editor's Perspective*, Royal Holloway, University of London, Physics Department, seminar (Egham, UK, 2008)
36. *Peer Review and Citation Analysis in PRL: An Editor's Perspective*, Imperial College London, Physics Department, seminar (London, UK, 2008)
37. *Peer Review and Citation Analysis in PRL: An Editor's Perspective*, University College London, Centre for Computational Science, seminar (London, UK, 2008)
38. *Peer Review and Citation Analysis in PRL: An Editor's Perspective*, Aristotle University of Thessaloniki, Physics Department, Colloquium (Thessaloniki, Greece, 2008)
39. *Quantifying Citation Impact: Beyond the Journal Impact Factor*, Columbia University, Applied Physics and Applied Mathematics, seminar (New York, NY, 2008)
40. *A Road Less Traveled: An Editorial Career*, APS March Meeting, Panel on Alternative Careers, (New Orleans, LA, 2008)
41. *Peer Review in Physical Review & Letters*, University of Crete, Physics Department, colloquium (Heraklion, Greece, 2007)
42. *Peer Review in Physical Review & Letters*, Max Planck Institute for Complex Systems, colloquium (Dresden, Germany, 2007)
43. *Peer Review in Physical Review & Letters*, Leibniz Institute for Solid State and Materials Research Dresden (IFW-Dresden), Winter School, seminar (Dresden, Germany, 2007)
44. *Peer Review in Physical Review & Letters*, Goethe University, Institute of Theoretical Physics, colloquium (Frankfurt, Germany, 2007)
45. *Peer Review in Physical Review & Letters*, Dresden University of Technology, Institute of Solid State Physics (IFP), colloquium (Dresden, Germany, 2007)
46. *The Peer Review Process at the Physical Review*, University of Athens, Physics Department, colloquium (Athens, Greece, 2005)
47. *The Peer Review Process at the Physical Review*, National Technical University of Athens, Department of Sciences, colloquium (Athens, Greece, 2005)
48. *The Peer Review Process at the Physical Review*, EKEFE Demokritos, Institute of Materials Science, colloquium (Athens, Greece, 2005)

## F. CONTRIBUTED TALKS

1. *How a single paper affects the Impact Factor: Implications for Scholarly Publishing*, 17<sup>th</sup> International Society for Scientometrics and Informetrics (Rome, Italy, 2019)
2. *Impact Factors and the Central Limit Theorem: Why Citation Averages are Scale Dependent*, APS March Meeting (Boston, MA, 2019)
3. *Why Impact Factor Rankings Favor Small Journals*, APS March Meeting (Los Angeles, CA, 2018)
4. *Editorial Highlighting and Highly Cited Papers*, APS March Meeting (New Orleans, LA, 2017)
5. *Highlighting Papers*, American Physical Society, Editors' Annual Fall Meeting (Ridge, NY, 2016)
6. *Highlighted Impact: Do editors' selections identify influential papers?* APS March Meeting (Baltimore, MD, 2016)
7. *Median Citation Index vs. Journal Impact Factor*, APS March Meeting (San Antonio, TX, 2015)
8. *"In God We Trust, All Others [Must] Bring Data:" Bibliostatistics Support for the Editorial Office*, American Physical Society, Editors' Annual Fall Meeting (Ridge, NY, 2013)
9. *Report on trip to China and Singapore*, American Physical Society, Editorial Offices (Ridge, NY, 2012)
10. *Quantifying Peer Review*, Wave Propagation conference (WAVEPRO) (Rethymno, Greece, 2011)
11. *Impact Statistics*, American Physical Society, Editors' Annual Fall Meeting (Ridge, NY, 2010)
12. *S-index: Measuring Significant, not Average, Citation Performance*, APS March Meeting (Pittsburgh, PA, 2009)
13. *The European Research Council: Funding Frontier Research on the Basis of Peer Reviewed Excellence*, American Physical Society, Editorial Offices (Ridge, NY, 2009)
14. *Citation Analysis: Beyond the Journal Impact Factor*, APS March Meeting (New Orleans, LA, 2008)
15. *Mining the Web of Science*, American Physical Society, Editorial Offices (Ridge, NY, 2007)

## COMMUNITY WORK

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### SCIENTIFIC

Metamaterials 2019, Physical Review Journals Symposium and Awards, co-organizer (Rome, Italy)  
 APS March Meeting 2019, Panel Discussion, Scholarly Metrics in Research Assessment, organizer & moderator (Boston, MA)  
 Metamaterials 2018, Physical Review Journals Symposium and Awards, co-organizer (Espoo, Finland)  
 Metamaterials 2017, Physical Review Journals Symposium and Awards, co-organizer (Marseille, France)  
 NANOMETA 2013, Program Committee (Seefeld, Austria)  
 NANOMETA 2011, Program Committee (Seefeld, Austria)

## *PUBLIC*

Frustrated with the lack of organized care for stray/abandoned pets in my Greek hometown, I decided to get involved with this problem upon my return to Crete after my PhD. I organized volunteers, and campaigned in media outlets (local newspapers, radio and TV stations) and with local authorities. These efforts led to the founding and successful operation of Heraklion's Humane Society "ΖΩΟΦΙΛΗ ΔΡΑΣΗ". (Heraklion, Greece; 1998–2003).

## **PROFESSIONAL MEMBERSHIP**

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American Physical Society (APS) (since 1993)  
American Statistical Association (ASA) (since 2012)  
Association for Information Science & Technology (ASIS&T) (since 2013)  
International Society for Scientometrics and Informetrics (ISSI) (since 2018)

## **OTHER EXPERIENCE**

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National military service (Greece)

1999–00