

PHYSICAL REVIEW A

covering atomic, molecular, and optical physics and quantum information

PHYSICAL REVIEW A DAMOP Business Meeting Sacramento, California Monday, June 5, 2017

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Two Main Themes:

- People
- Content

These are closely coupled.

Departing Editorial Staff

- Barry Sanders – Associate Editor (now EiC for NJP)
- Keith MacAdam – Associate Editor
- Lee Collins – Associate Editor (20 years!)

November 6, 2016

In Memory of Keith B. MacAdam

It is with great sadness that we must report the passing of our dear friend and colleague, and former Associate Editor of *Physical Review A*, Keith B. MacAdam, on the morning of Sunday, November 6, 2016.

Keith was born in Rochester, NY, and earned a Ph.D. in physics from Swarthmore College in 1971. After doing research at the University of Stirling in Scotland, Yale University, and the University of Arizona, he came to the University of Kentucky as an Assistant Professor in 1977, where he stayed until his retirement and built a strong research program in experimental atomic and molecular physics with his students and post-docs. Keith's research in crossed-beam collisions between charged particles and laser-excited atoms in highly excited Rydberg states was widely recognized in the international AMO physics community. He was elected a Fellow of the American Physical Society in 1987. Research in Aarhus, Denmark, Boulder, CO, and Stockholm, Sweden, extended his international connections. Keith was an Associate Editor for *Physical Review A* for almost ten years, from May 2006 until December 2015.

All of us at *Physical Review* pass on our condolences to the members of his family. We will miss the contributions he made to the journal during his time as an Associate Editor, when his high standards contributed greatly to the quality and success of *Physical Review A*. Even more, we will miss him as a dear friend and colleague.

Pierre Meystre
Editor in Chief
American Physical Society

Gordon Drake
Editor
Physical Review A



Keith B. MacAdam (1944 – 2016)

August 29, 2016

Lee Collins Retires from *Physical Review A*

After more than 20 years as an Associate Editor for *Physical Review A*, Lee Collins has decided to retire from his editorial position. His official appointment began on September 8, 1995, although he first appeared on the masthead as early as November, 1994. Since then, he has handled more than 8000 manuscripts, of which more than 6000 were published. The journal thanks Lee for his editorial expertise in the area of scattering theory, and more recently extended to matter waves and Bose-Einstein condensates. We have benefited from his sound judgement and wise counsel on many occasions.



New Editorial Staff

- Yujun Wang (July 13, 2015) – in-house Associate Editor
- Katuscia Cassemiro (October 1, 2015) – in-house Associate Editor
- Erika Andersson (December 1, 2015) – Associate Editor, Quantum Information, Heriot-Watt University, Scotland
- Marek Zukowski (January 1, 2016) – Associate Editor, Foundations of QM, Gdansk, Poland
- Doerte Blume, (April 1, 2016) – Associate Editor, Cold Atoms and Matter Waves, Washington State University

New(*)/Reappointed Board Members (2017–2020)

- G. Alber, Quantum Optics and Quantum Information
- D. Bauer, Atoms, Molecules, and Clusters in Strong Fields **
- J. L. Bohn, Cold Atoms
- G. Campbell, Ultracold Atoms *
- N. Goldman, Ultracold Atoms, Quantum Simulation, and Topological Properties in Quantum Matter *
- P. Horak, Nonlinear and Quantum Optics, Photonic Systems **
- V. Kendon, Quantum Information Processing and Computational Physics
- T. Kirchner, Dynamics, Interactions, and Collisions of Atomic and Molecular Few-Body Systems *
- A. F. Koenderink, Nano-optics, Photonic Systems, and Quantum Optics
- V. I. Korobov, Theoretical Atomic and Molecular Physics *
- F. Marino, Nonlinear Optics and Optomechanics *
- D. Petrosyan, Quantum Optics and Quantum Information **
- P. Rabl, Theoretical Quantum Optics, Quantum Computing, and Quantum Simulation *
- S. Wabnitz, Nonlinear Optics and Soliton Theory *

Retiring Board Members (2013–2016)

- J. A. Bergou: Quantum Information, Quantum Optics
- S. A. Gardiner: Quantum Optics, Quantum Chaos
- U. D. Jentschura: Atomic Theory and Fundamental Physics
- M. S. Kim: Quantum Optics and Quantum Information
- Z. Kis: Coherent Processes in Atomic Media
- M. Lein: Atoms and Molecules in Strong Fields
- K. Pachucki: Theoretical Physics
- D. Pelinovsky: Nonlinear Optics and Soliton Theory
- N. N. Rosanov: Nonlinear Optics and Soliton Theory

Change in coverage: Quantum Information

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Adding Quantum Information to Our Statement of Coverage for *Physical Review A*

The purpose of this Editorial is to formally include Quantum Information in the broad list of topics covered by *Physical Review A*. Over its 46-year history, *Physical Review A* has had only two different formal statements of coverage. The journal began life in 1970 labeled “General Physics,” but this did not adequately recognize the large and growing component of papers from the atomic, molecular, and optical physics community. Consequently, in January 1990, *Physical Review A* was divided into sections A-1 and A-15 with the statement of coverage “Atomic, Molecular, and Optical Physics” for section A-1. When section A-15 split off and became *Physical Review E* in 1993, the resulting *Physical Review A* took over the label of section A-1.

On the other hand, physics is a dynamic science. In the more than 20 years since then, the interests of physics researchers have continued to evolve, and the scope of the journal has continued to evolve with them. This continuing evolution is reflected by the creation and discontinuation of sections within the journal throughout the years, but it has, up to now, not been reflected in the statement of coverage of the journal.

Within the *Physical Review* family of journals, *Physical Review A* has always been, and still is, the natural home for quantum information papers. This was recognized in January 1998 with the creation of a dedicated “Quantum Information” section within the journal, which has been growing rapidly. In 2014, the Quantum Information section accounted for 19% of all submissions to *Physical Review A*, and 18% of published papers. These numbers rise to 25% and 22%, respectively, if one adds the closely related areas of quantum foundations and entanglement, which are published in the “Fundamental Concepts” section of the journal.

However, increasingly, some areas of research in quantum information range beyond the realm of traditional AMO physics, and hence do not easily fall under the label provided by the previous coverage statement. By now, quantum information has established itself as its own discipline, rather than being subsumed under one of the “traditional” subfields of physics.

Given this background, we feel that it is time to recognize the substantial contribution that quantum information makes to *Physical Review A* by expanding the formal statement of coverage of the journal to explicitly include quantum information. Therefore, from now on, this statement of coverage will read “Atomic,

Physical Review A Receipts by Section

Articles, Brief Reports, Rapids, and Comments

January 1 – December 31

	2014	2015	2016	% change	
A-1	817	782	831	+6.3	Fundamental Concepts
A-2	896	890	945	+6.2	Quantum Information
A-3	360	331	306	-7.6	A & M Structure and Dynamics
A-4	272	254	215	-15.4	A & M Collisions, Interactions
A-7	476	488	513	+5.1	A & M Processes in External Fields
A-8	632	611	608	-0.5	Matter Waves
A-9	1188	1214	1226	+1.0	Quantum Optics, Lasers, Nonlinear Optics
Total	4641	4570	4644	+1.6	

Physical Review A

January 1 – December 31

State of the Journal – Overview

	2013	2014	2015	2016
Submissions (direct)	3583	3559	3446	3496
Annual increase	+2.2%	-1.2%	-3.2%	+1.5%
Submissions (all)	4702	4656	4582	4644
Annual increase	+2.2%	-1.0%	-1.6%	+1.4%
From abroad	84%	85%	86%	86%
Rejection rate: all	38.4%	42.1%	40.0%	38.2%
Published pages	22109	22222	21982	24443
	+0.9%	0.5%	-1.1%	+11.2%
Published articles (ex errata)	2815	2672	2569	2747
	+1.4%	-5.1%	-3.9%	+6.9%

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From the APS Editor in Chief

The journals of the American Physical Society welcome and will continue to welcome manuscripts from all countries, with publication based on scientific merit alone.

Pierre Meystre
Editor in Chief
American Physical Society

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SUMMARY

- Physical Review A continues to be the journal of choice world-wide for the publication of full-length articles in most areas of AMO Physics, but there is competition for papers on quantum information.
- After two or three years of declines in submissions and published pages, there has been a significant growth in the past year, perhaps due to our excellent staff of remote and internal editors hired over the past couple of years. Foreign submissions continue to increase (now at 86%).
- Sect. A-9 'Quantum Optics, Lasers, Nonlinear Optics' is the largest, but at present A-1 'Fundamental concepts' and A-2 'Quantum Information' are the fastest growing.

THANKS to the RIDGE 'A' TEAM

- Managing Editor
 - Thomas Pattard
- Associate Editors
 - Dirk Jan Bukman
 - Katuscia Cassemiro
 - Yujun Wang
- Senior Assistant Editors
 - Margaret Foster
 - Jill Gargano
- Assistant Editors
 - Serena Bradde
 - Juan-José Liétor-Santos
- Senior Editorial Assistant
 - Terre Arena