SESSION S7: NON-TRADITIONAL CAREERS FOR PHYSICISTS
Invited Speakers Session S7:
Wednesday, March 12, 2008

APS Journals Editors

A road less traveled: An editorial career
http://meetings.aps.org/Meeting/MAR08/Event/79480
Manolis Antonoyiannakis
(1) Physical Review Letters
(2) Columbia University

Scientific communication: An alternative career in physics
http://meetings.aps.org/Meeting/MAR08/Event/79481
Daniel Ucko
Physical Review Letters
A road less traveled: An editorial career

Manolis Antonoyiannakis
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Why not a “conventional” career:

During my graduate (MSc, PhD) studies, physics research seemed (gradually, but systematically and inexorably) a lot more mundane than I had imagined before actually embarking on it.

Research physicists seemed less inspiring as role models.

Job landscape seemed too rough and too competitive for my taste.
I dreamt of learning much more about Life than I felt I would be able to do following the traditional path of a researcher’s life.

Idea of contract work (post-doc) with minimum job security, and associated compulsory relocation every 2 years, felt restrictive and unappealing.

\[\text{CRISIS!}\]

+ Appeal of the “road less traveled”
  (wanting to be different)

Search for a way out (consistent with my nature)
Exit strategy #1:
Secondary education in Greece

[Volunteering in Crete -
started an animal welfare association
called “ΖΩΟΦΙΛΗ ΔΡΑΣΗ”]

Exit strategy #2:
Scientific publishing in Crete University Press
(an alternative route to education)

Some turbulence, more soul searching

A great mentor comes along
Stefanos Trachanas
Physicist, textbook author, teacher, “activist”
Director of Crete University Press
Exit strategy #3:
Scientific publishing in APS – editorial job in PRB (2003)...
...then in PRL (2007)

What’s the main attraction?

Science publishing in a world-leading organization
+ non-profit
+ New York City
Editorial job in APS

Main role:
Take critical decisions re: scientific papers, under constraints:
(1) Time
(2) Lack of full expertise in some areas
(3) Conflicting recommendations from reviewers

It is the constraints that make the “problem” interesting!
Editorial job in APS

World leading professional institution
Academic environment
Job security and stability
Opportunities to learn and grow within the job:
• learn more physics
• writing
• design own projects and make then happen
I love to travel!! (3 months/year in my case)
modest salary
Essential traits of an editor

Scientific background in at least one field
  (typically: PhD + post-doc experience)
Willingness to learn (about physics + people)
Integrity
Critical thinking
Flexible thinker vs. independent thinker
Communication skills
Sense of humor
Common sense!
Essential traits of an editor

The whole of science is nothing more than a refinement of everyday thinking.

(Albert Einstein)
APS editors’ 21 countries of origin
PRL editors - a group of very different people who (try to) work seamlessly
The bigger picture

It is just as important to make knowledge live and to keep it alive as to solve specific problems.

(Albert Einstein, 1954)

“To Advance and Diffuse the Knowledge of Physics”

(APS mission statement)
My advice to a young scientist

Trust your instinct/inner voice about where you want to be and what you want to do.

Believe in yourself – you can do a lot more than you may think you are capable of.

Embrace change and learn from it.
“The Road Not Taken”

“I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.”

Robert Frost (1874–1963)
Scientific communication: An alternative career in physics

Daniel Ucko, Physical Review Letters
Scientific publishing as a career

• A way to be doing physics in a more general way.

• Part of the community, and an essential part of such.

• Advancement of science.
Why work in scientific publishing?

• Why peer review?
  – Puts results to test
  – Improves manuscripts
  – Adds value and trust in results

• Editorial work is physics work.

• Peer reviewed publication makes progress in science.
Who am I?

- Assistant Editor, Physical Review Letters

and before that

- Post-doc at University of Birmingham, UK
- PhD and MSci from University College London, University of London
American Physical Society

Established in 1893.


Weekly journal, publishing physics results of great importance and broad interest.

Located in Ridge, NY (on Long Island).
APS journals (prola.aps.org)

Physical Review A: atomic, molecular, and optical physics
Physical Review B: condensed matter and materials physics
Physical Review C: nuclear physics
Physical Review D: particles, fields, gravitation, and cosmology
Physical Review E: statistical, non-linear, and soft-matter physics
Physical Review ST-AB*: special topics: accelerators & beams
Physical Review ST-PER*: special topics: physics education research
Physical Review Letters: all topics in physics
Reviews of Modern Physics: all topics in physics
Bulletin of the APS: abstracts of papers for meetings
APS news: news of the APS
Focus*: publications of special interest
*online only
What do / do?

- Select referees
- Read correspondence
- Make decisions

but also

✓ Find papers to Suggest or highlight
✓ Outreach
✓ Participation
Opportunities at Physical Review?

Physical Review and Physical Review Letters Submissions
1983 - 2007
Skills needed for editors

- Scientific grounding
- Experience as author or referee
- Decision making
- Extract useful advice and information
- Helping authors get published.
Opportunities at Physical Review?

- [www.aps.org](http://www.aps.org)
- [prl.aps.org, prb.aps.org](http://prl.aps.org, prb.aps.org) etc.
- [physicstoday.org](http://physicstoday.org)