

APS CONGRESSIONAL SCIENCE FELLOWSHIP 2018-2019

THE AMERICAN PHYSICAL SOCIETY is currently accepting applications for the Congressional Science Fellowship Program. Fellows serve one year on the staff of a senator, representative or congressional committee. They are afforded an opportunity to learn the legislative process and explore science policy issues from the lawmakers' perspective. In turn, Fellows have the opportunity to lend scientific and technical expertise to public policy issues.

QUALIFICATIONS include a PhD or equivalent in physics or a closely related field, a strong interest in science and technology policy and, ideally, some experience in applying scientific knowledge toward the solution of societal problems. Fellows are required to be members of the APS.

TERM OF APPOINTMENT is one year, beginning in September of 2018, with participation in a two week orientation sponsored by AAAS. Fellows have considerable choice in congressional assignments.

A STIPEND is offered in addition to allowances for relocation, in-service travel, and health insurance premiums.

APPLICATION should consist of a letter of intent of no more than 2-pages, a 2-page resume: with one additional page for publications, and three letters of reference. Please see the APS website (<http://www.aps.org/policy/fellowships/congressional.cfm>) for detailed information on materials required for applying and other information on the program.

**ALL APPLICATION
MATERIALS MUST BE
SUBMITTED ONLINE BY
CLOSE OF BUSINESS
ON JANUARY 15, 2018
(5:00 PM EST).**

BOOKS

solar system and Earth. He discusses subjects that are currently puzzling scientists like me, such as dark energy, and those that are well understood by the physics community, such as the round shape of planets and the electromagnetic spectrum. The book's material was drawn from the essays Tyson wrote for his Universe column in *Natural History* magazine between 1995 and 2005. As a result, *Astrophysics for People in a Hurry* sometimes feels like a collection of short stories. That may well be appropriate for people in a hurry, but it also leads to a feeling that the book's chapters are disconnected and lack a flowing train of thought.

Surprisingly, Tyson includes only a single paragraph on gravitational waves, whose discovery was announced in 2016 and widely reported in the mass media. A chapter on gravitational waves would have added cutting-edge material to the book, and it would have allowed readers to familiarize themselves with one of the biggest scientific breakthroughs of this decade.

The first chapter describes the evolution of the universe from the first instants after its birth to billions of years later. It may seem ideal to start an accessible book on astrophysics with a summary of the cosmic history of the universe. In my opinion, though, the chapter would be a bit overwhelming for someone with no knowledge in physics.

The rest of the book, however, is very easy and pleasant to read. I particularly enjoyed chapters 11 and 12. Chapter 11, "Exoplanet Earth," describes our planet from the perspective of interstellar observers. Tyson's playful twist manages to teach readers about terrestrial features such as chemical elements, electromagnetic radiation, and life while simultaneously discussing the rationale and scientific methodology behind the search for life on other planets.

Chapter 12, "Reflections on the Cosmic Perspective," provides an unexpected yet welcome meditation on how knowledge and awareness of our incredibly vast universe can lead to a more tolerant and empathic society. Readers may or may not be willing to embrace Tyson's cosmic perspective. But in a time when scientific evidence is disregarded by some of the world's most influential people, the ideas presented in that concluding chapter invite relevant and necessary

discussion on topics such as inequality and climate change.

Overall, *Astrophysics for People in a Hurry* goes beyond familiarizing busy readers with different topics of astrophysics. It offers entertaining insights into broader challenges in science, some of the unknown frontiers that scientists face at present, and the implications of understanding our surroundings and the almost unfathomable vastness of the universe.

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NEW BOOKS

Plasmas and fusion

Magnetic Confinement Fusion Driven Thermonuclear Energy. B. Zohuri. Springer, 2017. \$99.00 (185 pp.). ISBN 978-3-319-51176-4

Plasma Remediation Technology for Environmental Protection. C. Du, J. Yan. Zhejiang U. Press and Springer, 2017. \$99.00 (79 pp.). ISBN 978-981-10-3655-2

Popularizations

Anomaly! Collider Physics and the Quest for New Phenomena at Fermilab. T. Dorigo. World Scientific, 2017. \$48.00 *paper* (285 pp.). ISBN 978-1-78634-111-2

Astrophysics for People in a Hurry. N. D. Tyson. W. W. Norton, 2017. \$18.95 (222 pp.). ISBN 978-0-393-60939-4

Bad Choices: How Algorithms Can Help You Think Smarter and Live Happier. A. Almosawi. Viking, 2017. \$20.00 (145 pp.). ISBN 978-0-7352-2212-0

Beyond Infinity: An Expedition to the Outer Limits of Mathematics. E. Cheng. Basic Books, 2017. \$27.00 (284 pp.). ISBN 978-0-465-09481-3

The Digital Mind: How Science Is Redefining Humanity. A. Oliveira. MIT Press, 2017. \$29.95 (317 pp.). ISBN 978-0-262-03603-0

The Mathematics Lover's Companion: Masterpieces for Everyone. E. Scheinerman. Yale U. Press, 2017. \$28.00 (274 pp.). ISBN 978-0-300-22300-2

Rigor Mortis: How Sloppy Science Creates Worthless Cures, Crushes Hopes, and Wastes Billions. R. Harris. Basic Books, 2017. \$28.00 (278 pp.). ISBN 978-0-465-09790-6

Scienceblind: Why Our Intuitive Theories about the World Are So Often Wrong. A. Shtulman. Basic Books, 2017. \$30.00 (311 pp.). ISBN 978-0-465-05394-0

Where the River Flows: Scientific Reflections on Earth's Waterways. S. W. Fleming. Princeton U. Press, 2017. \$26.95 (204 pp.). ISBN 978-0-691-16878-4

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