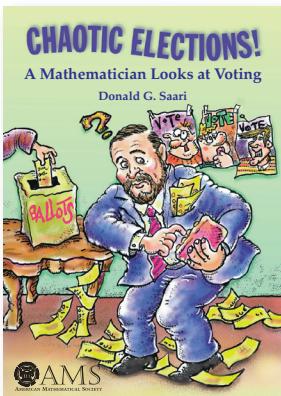


April is Mathematics Awareness Month

This year's theme is:

Mathematics and Voting!

*Learn the mathematics of
voting with these AMS titles ...*



Chaotic Elections! A Mathematician Looks at Voting

Donald G. Saari, University of California, Irvine, CA

The book presents a very clear picture of how the author views the central issues of voting theory and provides an excellent entrée into his work.

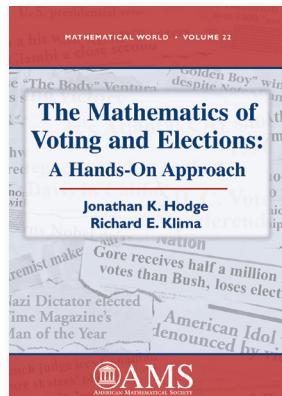
—*Zentralblatt MATH*

What does the 2000 U.S. presidential election have in common with selecting a textbook for a calculus course in your department? Was Ralph Nader's influence on the election of George W. Bush greater than the now-famous chads? In *Chaotic Elections!*, Don Saari analyzes these questions, placing them in the larger context of voting systems in general. His analysis shows that the fundamental problems with the 2000 presidential election are not with the courts, recounts, or defective ballots, but are caused by the very way Americans vote for president.

This expository book shows how mathematics can help to identify and characterize a disturbingly large number of paradoxical situations that result from the choice of a voting procedure. Moreover, rather than being able to dismiss them as anomalies, the likelihood of a dubious election result is surprisingly large. These consequences indicate that election outcomes—whether for president, the site of the next Olympics, the chair of a university department, or a prize winner—can differ from what the voters really wanted. They show that by using an inadequate voting procedure, we can, inadvertently, choose badly. To add to the difficulties, it turns out that the mathematical structures of voting admit several strategic opportunities, which are described.

Finally, mathematics also helps identify positive results: By using mathematical symmetries, we can identify what the phrase "what the voters really want" might mean and obtain a unique voting method that satisfies these conditions.

2001; 159 pages; Softcover; ISBN: 978-0-8218-2847-2; List US\$24; AMS members US\$19; Order code ELECT



The Mathematics of Voting and Elections: A Hands-On Approach

Jonathan K. Hodge and **Richard E. Klima**

COURSE ADOPTION The Mathematics of Voting and Elections: A Hands-On Approach

Jonathan K. Hodge, Grand Valley State University, Allendale, MI, and **Richard E. Klima**, Appalachian State University, Boone, NC

The book by Hodge and Klima is an excellent entry into this field ... has plenty of material for a one-semester course ... friendly and clear style that students will appreciate ... well-written and well-edited ...

—MAA Reviews

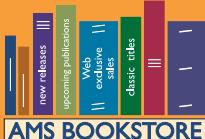
Have you ever wondered ... why elections often produce results that seem to be displeasing to many of the voters involved? Would you be surprised to learn that a perfectly fair election can produce an outcome that literally *nobody* likes? When voting, we often think about the candidates or proposals in the election, but we rarely consider the procedures that we use to express our preferences and arrive at a collective decision.

The Mathematics of Voting and Elections: A Hands-On Approach will help you discover answers to these and many other questions. Easily accessible to anyone interested in the subject, the book requires virtually no prior mathematical experience beyond basic arithmetic, and includes numerous examples and discussions regarding actual elections from politics and popular culture.

Mathematical World, Volume 22; 2005; 226 pages; Softcover; ISBN: 978-0-8218-3798-6; List US\$35; AMS members US\$28; Order code MAWRLD/22

Find out more about mathematics and voting at www.mathaware.org.

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