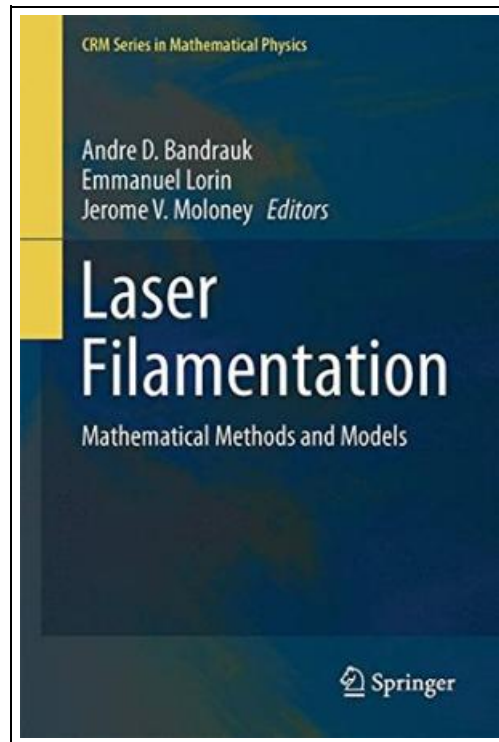


Laser Filamentation : Mathematical Methods and Models



Filesize: 5.23 MB

Reviews

The best book i actually go through. It can be full of wisdom and knowledge Once you begin to read the book, it is extremely difficult to leave it before concluding.

(Prof. Greg Herzog)

LASER FILAMENTATION : MATHEMATICAL METHODS AND MODELS



DOWNLOAD PDF

Springer-Verlag GmbH Okt 2015, 2015. Buch. Condition: Neu. Neuware - This book is focused on the nonlinear theoretical and mathematical problems associated with ultrafast intense laser pulse propagation in gases and in particular, in air. With the aim of understanding the physics of filamentation in gases, solids, the atmosphere, and even biological tissue, specialists in nonlinear optics and filamentation from both physics and mathematics attempt to rigorously derive and analyze relevant non-perturbative models. Modern laser technology allows the generation of ultrafast (few cycle) laser pulses, with intensities exceeding the internal electric field in atoms and molecules ($E=5 \times 10^9$ V/cm or intensity $I = 3.5 \times 10^{16}$ Watts/cm²). The interaction of such pulses with atoms and molecules leads to new, highly nonlinear nonperturbative regimes, where new physical phenomena, such as High Harmonic Generation (HHG), occur, and from which the shortest (attosecond - the natural time scale of the electron) pulses have been created. One of the major experimental discoveries in this nonlinear nonperturbative regime, Laser Pulse Filamentation, was observed by Mourou and Braun in 1995, as the propagation of pulses over large distances with narrow and intense cones. This observation has led to intensive investigation in physics and applied mathematics of new effects such as self-transformation of these pulses into white light, intensity clamping, and multiple filamentation, as well as to potential applications to wave guide writing, atmospheric remote sensing, lightning guiding, and military long-range weapons. The increasing power of high performance computers and the mathematical modelling and simulation of photonic systems has enabled many new areas of research. With contributions by theorists and mathematicians, supplemented by active experimentalists who are experts in the field of nonlinear laser molecule interaction and propagation, Laser Filamentation sheds new light on scientific and industrial applications of modern lasers. 216 pp. Englisch.



[Read Laser Filamentation : Mathematical Methods and Models Online](#)



[Download PDF Laser Filamentation : Mathematical Methods and Models](#)

See Also



TJ new concept of the Preschool Quality Education Engineering: new happy learning young children (3-5 years old) daily learning book Intermediate (2)(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment.Paperback. Pub Date :2005-09-01 Publisher: Chinese children before making Reading: All books are the...

[Save ePub »](#)



TJ new concept of the Preschool Quality Education Engineering the daily learning book of: new happy learning young children (3-5 years) Intermediate (3)(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment.Paperback. Pub Date :2005-09-01 Publisher: Chinese children before making Reading: All books are the...

[Save ePub »](#)



Comic Illustration Book for Kids: Short Moral Stories for Kids with Dog Farts

Createspace, United States, 2013. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.This is the Black White Color Version! BONUS - Includes FREE Dog Farts...

[Save ePub »](#)



English Age 3-5

Letts Educational. Paperback. Book Condition: new. BRAND NEW, English Age 3-5, Letts Monster Practice, Introducing key English skills in preparation for KS1, this English practice book offers plenty of practice and reinforcement of the topics...

[Save ePub »](#)



Klara the Cow Who Knows How to Bow (Fun Rhyming Picture Book/Bedtime Story with Farm Animals about Friendships, Being Special and Loved. Ages 2-8) (Friendship Series Book 1)

Createspace, United States, 2015. Paperback. Book Condition: New. Apoorva Dingar (illustrator). Large Print. 214 x 149 mm. Language: English . Brand New Book ***** Print on Demand *****.Klara is a little different from the other...

[Save ePub »](#)

**Write Better Stories and Essays: Topics and Techniques to Improve Writing Skills for Students in Grades 6 - 8: Common Core State Standards Aligned**

Createspace Independent Publishing Platform, United States, 2012. Paperback. Book Condition: New. 277 x 211 mm. Language: English . Brand New Book ***** Print on Demand *****.Mr. George Smith, a children s book author, has been

[Save eBook »](#)

**Kidz Bop - A Rockin' Fill-In Story: Play Along with the Kidz Bop Stars - and Have a Totally Jammin' Time!**

Adams Media. PAPERBACK. Book Condition: New. 144050573X.

[Save eBook »](#)

**Pickles To Pittsburgh: Cloudy with a Chance of Meatballs 2**

Atheneum Books for Young Readers, 2000. Paperback. Book Condition: New. No Jacket. New paperback print book copy of Pickles to Pittsburgh: Cloudy with a Chance of Meatballs 2 written by Judi Barrett. Drawn by Ron

[Save eBook »](#)

**Too Old for Motor Racing: A Short Story in Case I Didnt Live Long Enough to Finish Writing a Longer One**

Balboa Press. Paperback. Book Condition: New. Paperback. 106 pages. Dimensions: 9.0in. x 6.0in. x 0.3in. We all have dreams of what we want to do and who we want to become. Many of us eventually decide

[Save eBook »](#)

**iPhone 6 iPhone 6s in 30 Minutes: The Unofficial Guide to the iPhone 6 and iPhone 6s, Including Basic Setup, Easy IOS Tweaks, and Time-Saving Tips**

I30 Media Corporation, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****. In 30 minutes, learn how to unlock the secrets of your

[Save eBook »](#)