Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics)

By J. Eggers, M. A. Fontelos

Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos

Many key phenomena in physics and engineering are described as singularities in the solutions to the differential equations describing them. Examples covered thoroughly in this book include the formation of drops and bubbles, the propagation of a crack and the formation of a shock in a gas. Aimed at a broad audience, this book provides the mathematical tools for understanding singularities and explains the many common features in their mathematical structure. Part I introduces the main concepts and techniques, using the most elementary mathematics possible so that it can be followed by readers with only a general background in differential equations. Parts II and III require more specialised methods of partial differential equations, complex analysis and asymptotic techniques. The book may be used for advanced fluid mechanics courses and as a complement to a general course on applied partial differential equations.

⬇ **Download** Singularities: Formation, Structure, and Propagati ...pdf

▤ **Read Online** Singularities: Formation, Structure, and Propaga ...pdf

Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics)

By J. Eggers, M. A. Fontelos

Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos

Many key phenomena in physics and engineering are described as singularities in the solutions to the differential equations describing them. Examples covered thoroughly in this book include the formation of drops and bubbles, the propagation of a crack and the formation of a shock in a gas. Aimed at a broad audience, this book provides the mathematical tools for understanding singularities and explains the many common features in their mathematical structure. Part I introduces the main concepts and techniques, using the most elementary mathematics possible so that it can be followed by readers with only a general background in differential equations. Parts II and III require more specialised methods of partial differential equations, complex analysis and asymptotic techniques. The book may be used for advanced fluid mechanics courses and as a complement to a general course on applied partial differential equations.

Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos Bibliography

- Rank: #2223342 in eBooks
- Published on: 2015-08-31
- Released on: 2015-10-06
- Format: Kindle eBook

Editorial Review

Review
"The book will serve as an excellent introduction to the field of singularities in continuum mechanics, and a valuable resource for researchers ... In short, a wonderful achievement!"
H. K. Moffatt, Journal of Fluid Mechanics

About the Author
J. Eggers is Professor of Applied Mathematics at the University of Bristol. His career has been devoted to the understanding of self-similar phenomena, and he has more than fifteen years of experience in teaching non-linear and scaling phenomena to undergraduate and postgraduate students. Eggers has made fundamental contributions to our mathematical understanding of free-surface flows, in particular the break-up and coalescence of drops. His work was instrumental in establishing the study of singularities as a research field in applied mathematics and in fluid mechanics. He is a member of the Academy of Arts and Sciences in Erfurt, Germany, a fellow of the American Physical Society, and has recently been made a Euromech Fellow.

M. A. Fontelos is a researcher in applied mathematics at the Spanish Research Council (CSIC). His scientific work has focused on partial differential equations and their applications to fluid mechanics, with special emphasis on the study of singularities and free-surface flows. His main results concern the formation of singularities (or not) combining the use of rigorous mathematical results with asymptotic and numerical methods.

Users Review

From reader reviews:

Julius Montanez:

Why? Because this Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) is an unordinary book that the inside of the book waiting for you to snap it but latter it will surprise you with the secret it inside. Reading this book beside it was fantastic author who have write the book in such awesome way makes the content interior easier to understand, entertaining method but still convey the meaning totally. So , it is good for you because of not hesitating having this ever again or you going to regret it. This unique book will give you a lot of positive aspects than the other book include such as help improving your proficiency and your critical thinking technique. So , still want to hold up having that book? If I were being you I will go to the book store hurriedly.

Carmela Randle:

Reading can called head hangout, why? Because if you are reading a book particularly book entitled Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) your head will drift away trough every dimension, wandering in every single aspect that maybe not known for but surely can become your mind friends. Imaging every word written in a e-book then become one type conclusion and explanation which maybe you never get just before. The Singularities: Formation, Structure,

and Propagation (Cambridge Texts in Applied Mathematics) giving you yet another experience more than blown away your mind but also giving you useful information for your better life in this era. So now let us demonstrate the relaxing pattern the following is your body and mind is going to be pleased when you are finished reading through it, like winning an activity. Do you want to try this extraordinary shelling out spare time activity?

Larry Mason:

As we know that book is significant thing to add our knowledge for everything. By a e-book we can know everything we really wish for. A book is a group of written, printed, illustrated as well as blank sheet. Every year was exactly added. This book Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) was filled with regards to science. Spend your extra time to add your knowledge about your scientific research competence. Some people has distinct feel when they reading a new book. If you know how big benefit of a book, you can feel enjoy to read a e-book. In the modern era like at this point, many ways to get book you wanted.

Walter Rojas:

A lot of e-book has printed but it differs. You can get it by web on social media. You can choose the best book for you, science, comic, novel, or whatever simply by searching from it. It is known as of book Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics). You can contribute your knowledge by it. Without leaving behind the printed book, it may add your knowledge and make you actually happier to read. It is most critical that, you must aware about e-book. It can bring you from one destination to other place.

Download and Read Online Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos #5QI9S2Z0PFM

Read Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos for online ebook

Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos books to read online.

Online Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos ebook PDF download

Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos Doc

Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos Mobipocket

Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos EPub

5QI9S2Z0PFM: Singularities: Formation, Structure, and Propagation (Cambridge Texts in Applied Mathematics) By J. Eggers, M. A. Fontelos