



Nonlinear Analysis of Gas-Water/Oil-Water Two-Phase Flow in Complex Networks SpringerBriefs in Applied Sciences and Technology SpringerBriefs on Multiphase Flow

By Ning-De Jin

Springer. Paperback. Book Condition: New. Paperback. 103 pages. Dimensions: 9.4in. x 6.1in. x 0.5in. Understanding the dynamics of multi-phase flows has been a challenge in the fields of nonlinear dynamics and fluid mechanics. This chapter reviews our work on two-phase flow dynamics in combination with complex network theory. We systematically carried out gas-water/oil-water two-phase flow experiments for measuring the time series of flow signals which is studied in terms of the mapping from time series to complex networks. Three network mapping methods were proposed for the analysis and identification of flow patterns, i. e. Flow Pattern Complex Network (FPCN), Fluid Dynamic Complex Network (FDCN) and Fluid Structure Complex Network (FSCN). Through detecting the community structure of FPCN based on K-means clustering, distinct flow patterns can be successfully distinguished and identified. A number of FDCNs under different flow conditions were constructed in order to reveal the dynamical characteristics of two-phase flows. The FDCNs exhibit universal power-law degree distributions. The power-law exponent and the network information entropy are sensitive to the transition among different flow patterns, which can be used to characterize nonlinear dynamics of the two-phase flow. FSCNs were constructed in the phase space through a general

Reviews

The publication is easy in read through safer to comprehend. It is actually loaded with wisdom and knowledge Its been printed in an extremely simple way and is particularly simply right after i finished reading through this pdf where actually modified me, affect the way i believe.

-- Ms. Clementina Cole V

This is the very best publication i have got read until now. It is definitely simplified but shocks within the fifty percent of the pdf. You may like how the article writer create this pdf.

-- Rosario Durgan

See Also



Dont Line Their Pockets With Gold Line Your Own A Small How To Book on Living Large

Madelyn D R Books. Paperback. Book Condition: New. Paperback. 106 pages. Dimensions: 9.0in. x 6.0in. x 0.3in.This book is about my cousin, Billy a guy who taught me a lot over the years and who can teach you a lot. Everyone who...



Coronation Mass, K. 317 Vocal Score Latin Edition

Petrucci Library Press. Paperback. Book Condition: New. Paperback. 56 pages. Dimensions: 9.6in. x 6.7in. x 0.1in.Otto Taubmanns classic vocal score of Mozarts Coronation Mass was first issued in the early 20th century and has become the standard edition in continuous use by...



DK Readers Invaders From Outer Space Level 3 Reading Alone

DK CHILDREN. Paperback. Book Condition: New. Paperback. 48 pages. Dimensions: 8.9in. x 5.9in. x 0.1in.Are aliens from other planets visiting Earth Read these amazing stories of alien encounters -- and make up your own mind! The 48-page Level 3 books, designed for...



Viking Ships At Sunrise Magic Tree House, No. 15

Random House Books for Young Readers. Paperback. Book Condition: New. Sal Murdocca (illustrator). Paperback. 96 pages. Dimensions: 7.4in. x 4.9in. x 0.2in.Jack and Annie are ready for their next fantasy adventure in the bestselling middle-grade seriesthe Magic Tree House! Beware of Vikings!warns...



Harts Desire Book 2.5 La Fleur de Love

Cajunflair Publishing. Paperback. Book Condition: New. Paperback. 112 pages. Dimensions: 8.0in. x 5.0in. x 0.3in.Its late 1974, and high school student, Melinda Dawson is in serious trouble. Within two hours of revealing her suspected pregnancy to her parents, shes whisked off against...



Summer Fit Preschool to Kindergarten Math, Reading, Writing, Language Arts Fitness, Nutrition and Values

Summer Fit Learning. Paperback. Book Condition: New. Paperback. 160 pages. Dimensions: 10.6in. x 8.3in. x 0.5in.Summer Fit Activity Books move summer learning beyond academics to also prepare children physically and socially for the grade ahead. Academic exercises are based on Common Core...