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equations"; "5.1. From phases to wave numbers"; "5.2. Bloch-wave analysis"; "5.3. Mode filters, and separation into critical and noncritical modes"; "5.4. Estimates for residuals and errors"; "5.5. Proofs of the theorems from A4.4"; "Chapter 6. Validity of the inviscid Burgers equation in reaction-diffusion systems"; "6.1. An illustration: The Ginzburga€?Landau equation"; "6.2. Formal derivation of the conservation law"; "6.3. Validity of the inviscid Burgers equation"; "6.4. Proof of the theorems from A6.3"; "Chapter 7. Modulations of wave trains near sideband instabilities"; "7.1. Introduction"; "7.2. An illustration: The Ginzburga€?Landau equation"; "7.3. Validity of the Kortewega€?de Vries and the Kuramotoa€?Sivashinsky equation"; "7.4. Proof of Theorem 7.2"; "7.5. Proof of Theorem 7.5"; "Chapter 8. Existence and stability of weak shocks"; "8.1. Proof of Theorem 4.10"; "8.2. Proof of Theorem 4.12"; "Chapter 9. Existence of shocks in the long-wavelength limit"; "9.1. A lattice model for weakly interacting pulses"; "9.2. Proof of Theorem 9.2"; "Chapter 10. Applications"; "10.1. The FitzHugha€?Nagumo equation"; "10.2. The weakly unstable Taylora€?Couette problem"; "Bibliography"

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