

1. Record Nr.	UNINA9910480646603321
Autore	Bemelmans Josef
Titolo	On the steady motion of a coupled system solid-liquid // Josef Bemelmans, Giovanni P. Galdi, Mads Kyed
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , 2013 ©2013
ISBN	1-4704-1060-5
Descrizione fisica	1 online resource (102 p.)
Collana	Memoirs of the American Mathematical Society, , 1947-6221 ; ; Volume 226, Number 1060
Disciplina	530.4/17
Soggetti	Solid-liquid interfaces Coupled mode theory Elastic solids Navier-Stokes equations Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Volume 226, Number 1060 (first of 5 numbers)."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	""Contents""; ""Chapter 1. Introduction""; ""Chapter 2. Notation and Preliminaries""; ""2.1. Notation""; ""2.2. Preliminaries""; ""Chapter 3. Steady Free Motion: Definition and Formulation of the Problem""; ""3.1. Equations of Motion for the Elastic Body""; ""3.2. Equations of Motion for the Liquid""; ""3.3. Definition of a Steady Free Motion""; ""3.4. Non-dimensionlization""; ""Chapter 4. Main Result""; ""4.1. Strategy of Proof""; ""4.2. Isolated Orientation""; ""4.3. Statement of the Main Theorem""; ""4.4. Perturbation Parameter""; ""4.5. The Stokes Problem"" ""4.6. Perturbing Around an Isolated Orientation"" ""4.7. Compatibility Conditions""; ""Chapter 5. Approximating Problem in Bounded Domains""; ""5.1. Fixed-Point Approach""; ""5.2. Validity of the Compatibility Conditions""; ""5.3. Solvability of the Fluid Equations""; ""5.4. Solvability of the Elasticity Equations""; ""5.5. Existence in a Bounded Domain""; ""Chapter 6. Proof of Main Theorem""; ""Chapter 7. Bodies with Symmetry""; ""7.1. Symmetry Function Spaces""; ""7.2. Main Theorem for Symmetric Bodies""; ""7.3. Stokes Problem for a Symmetric Body""

""7.4. Reformulation of the Equations of Motion""""7.5. Compatibility Conditions""; ""7.6. Approximating Problem in Bounded Domains""; ""7.7. Fixed-Point Approach""; ""7.8. Validity of the Compatibility Conditions""; ""7.9. Solvability of the Fluid Equations""; ""7.10. Solvability of the Elasticity Equations""; ""7.11. Existence in a Bounded Domain""; ""7.12. Proof of Main Theorem for Symmetric Bodies""; ""7.13. Examples""; ""Appendix A. Isolated Orientation""; ""Bibliography""
