

1. Record Nr.	UNINA9910465070503321
Autore	Fitzpatrick Joseph
Titolo	The fall and the ascent of man : how Genesis supports Darwin // Joseph Fitzpatrick
Pubbl/distr/stampa	Lanham, Maryland : , : University Press of America, Inc., , 2012 ©2012
ISBN	0-7618-5755-9
Descrizione fisica	1 online resource (191 p.)
Disciplina	222.1107
Soggetti	Fall of man Sin, Original Evolution - Religious aspects - Christianity Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Acknowledgements; Introduction; Chapter One Augustine on Original Sin; Chapter Two Setting the Context; Chapter Three The Primitive Tradition; Chapter Four The Quest for Immortality; Chapter Five A Tale of Two Trees; Chapter Six Restoring Roots; Chapter Seven Some Loose Ends
Sommario/riassunto	In this groundbreaking work, Joseph Fitzpatrick challenges the traditional interpretation of chapter three of Genesis: the story of Adam and Eve in Eden. Fitzpatrick claims that this story is actually a symbolic tale about the ascent of a hominid couple to full human consciousness.

2. Record Nr.	UNINA9910143677603321
Autore	Hervouet Jean-Michel
Titolo	Hydrodynamics of free surface flows [[electronic resource] ] : modelling with the finite element method // Jean-Michel Hervouet
Pubbl/distr/stampa	Chichester ; ; Hoboken, N.J., : Wiley, c2007
ISBN	1-280-90083-0 9786610900831 0-470-31962-3 0-470-31963-1
Descrizione fisica	1 online resource (377 p.)
Disciplina	532.50151
Soggetti	Finite element method Hydrodynamics - Data processing Hydrodynamics - Mathematical models Hydrodynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Hydrodynamics of Free Surface Flows; Contents; List of figures; List of tables; List of plates; Acknowledgements; 1 Introduction; 1.1 Twenty years of development at EDF; 1.2 Some smoother pebbles...; 1.2.1 Saint-Venant equations; 1.2.2 Navier-Stokes equations; 1.2.3 Finite elements techniques and optimization; 2 Equations of free surface hydrodynamics; 2.1 Notations and concepts in geometry; 2.2 Free surface Navier-Stokes equations; 2.2.1 Non-hydrostatic Navier-Stokes equations; 2.2.2 Boundary conditions; 2.2.3 Hydrostatic pressure and the Boussinesq approximation 2.2.4 Source terms and body forces 2.2.5 Navier-Stokes equations with sigma transform; 2.2.6 Tracer equations in 3 dimensions; 2.3 Saint-Venant equations; 2.3.1 Presentation and brief review; 2.3.2 Hypotheses, approximations and calculation rules; 2.3.3 Depth-averaging Navier-Stokes equations; 2.3.4 Different forms of equations; 2.3.5 The characteristics curves; 2.3.6 Notions on hydraulic jumps; 2.3.7 Saint-Venant equations in Mercator projection; 2.3.8 Saint-Venant equations with porosity; 2.3.9 Boussinesq equations; 2.3.10

## Serre equations

2.3.11 Source terms and body forces in two dimensions 2.3.12

Boundary conditions in 2D; 2.3.13 Tracer equation in two dimensions;

2.4 Modelling of turbulence and dispersion; 2.4.1 Reynolds stress;

2.4.2 Zero-equation models; 2.4.3 Turbulence stress on the walls;

2.4.4 Equations of the k-e model; 2.4.5 Other models; 3 Principles of

the finite element method; 3.1 Introduction; 3.2 Interpolation in finite

elements; 3.3 Variational principle; 4 Resolution of the Saint-Venant

equations; 4.1 A glance at the existing methods; 4.1.1 Main properties of

a (good) numerical scheme

4.1.2 Finite difference schemes 4.1.3 Finite volume schemes for

hyperbolic equations; 4.1.4 Kinetic schemes; 4.1.5 Finite element

schemes; 4.2 Overall view of the Telemac-2D algorithm; 4.3 Fractional

steps method; 4.4 Advection stage using the method of characteristics;

4.5 Propagation, diffusion, source terms; 4.5.1 Time discretization;

4.5.2 Space discretization; 4.5.3 Variational formulation; 4.5.4 Natural

boundary conditions; 4.5.5 Sources and sinks; 4.5.6 Matrix form of the

system; 4.6 Radiation conditions; 4.7 Resolution of the Boussinesq

equations

4.8 Resolution of k-e model equations in 2D 4.8.1 Advection step; 4.8.2

Production, diffusion, source terms; 4.9 Solving the tracer equation in

2D; 4.10 Laws of conservation in 2D; 4.10.1 Mass conservation of the

fluid; 4.10.2 Conservation of the tracer; 4.10.3 Head and momentum

conservation; 4.10.4 Conservation of energy; 4.11 The treatment of

uncovered beds; 4.11.1 Option 1: correction of the free surface

gradient; 4.11.2 Option 2: masking of exposed elements; 4.12 Pseudo

wave equation; 4.13 Some validation test cases; 4.13.1 Test of a lake at

rest

4.13.2 Rapid flow over a weir with a hydraulic jump downstream

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## Sommario/riassunto

A definitive guide for accurate state-of-the-art modelling of free surface flows Understanding the dynamics of free surface flows is the starting point of many environmental studies, impact studies, and waterworks design. Typical applications, once the flows are known, are water quality, dam impact and safety, pollutant control, and sediment transport. These studies used to be done in the past with scale models, but these are now being replaced by numerical simulation performed by software suites called "hydro-informatic systems". The Telemac system is the leading software package wor

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