

Tools of the Trade:

The Math Graduate (and Undergraduate) Student's Toolbox

A. J. Meir

Department of Mathematics and Statistics
Auburn University

Graduate Student Seminar 2013



Tools of the Trade I

1 Introduction

2 Literature Search and Mathematical Databases

- MathSciNet
- ZMath
- Math Genealogy Project
- L^AT_EXSearch
- Other Databases

3 Mathematics Research Tools and Mathematical Software

- Computer Algebra Systems
- Maple
- Numerical Computing Environments
- Matlab
- Statistics Software

4 Communicating Mathematics

- Writing Tools – T_EX/L^AT_EX

Tools of the Trade II

- Markup Languages
- Examples

5 TeX/LaTeX Environments and Add-Ons

- TeX Environments
- Bibliographic Database Managers

6 References and Suggested Reading

The Mathematician's Tools

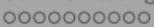
So You Want to be a Mathematician

- What do you really need to know (what tools do you need)?



Literature Search





Math Databases I

- **MathSciNet** - Mathematical Reviews (MR) provides “information on articles and books that contain new contributions to mathematical research”. “The MR Database, containing MR information back to 1940, is now maintained electronically”. <http://www.ams.org/mathscinet>
- **Zentralblatt MATH** - ZMATH Online Database. This Database is “produced by the Berlin editorial office of FIZ Karlsruhe (in cooperation with European academies and mathematical institutes)”. “The ZMATH Database contains about 2.8 million entries drawn from about 3500 journals and 1100 serials from 1868 to present”.

<http://www.zentralblatt-math.org/zmath/>



Math Databases II

- **Mathematics Genealogy Project** - “The intent of this project is to compile information about **all** the mathematicians of the world.” A service of the NDSU Department of Mathematics, in association with the American Mathematical Society. <http://genealogy.math.ndsu.nodak.edu>
- **LaTeXSearch** - “A free service provided by Springer, affords the scientific community the ability to search for LaTeX code within scientific publications.”
<http://www.latexsearch.com>

MathSciNet

MathSciNet

MR: Search Publications database

www.ams.org/mathscinet/ Reader

Apple Yahoo Google Maps YouTube Wikipedia News Popular

MR: Search Publications database

Home Preferences Free Tools About Librarians Terms of Use Auburn University, Auburn

AMERICAN MATHEMATICAL SOCIETY
MathSciNet
Mathematical Reviews

ISSN 2167-5163

Publications Authors Journals Citations

Search Terms

Author: meir, a*j and Title: and MSC Primary: and Anywhere:

Search Clear

Time Frame

Entire Database
 Year
 Year Range: [] to []

Publication Type

All Books Journals Proceedings

Review Format

PDF HTML

AMS e-products are now mobile!

Facts and Figures: 2,880,944 total publications

Help Support Mail



Mirror Sites: Providence, RI USA

Copyright 2013, American Mathematical Society
Privacy Statement



MathSciNet

MR: Publications results for "Items authored by or related to Meir, Amnon J."

www.ams.org/mathscinet/search/publications.html?pg1=ID&s1=292362

Apple Yahoo Google Maps YouTube Wikipedia News Popular

MR: Publications results for "Items authored by or related to Meir, Amnon J."

Clipboard Home Preferences Help Support Mail Terms of Use Auburn University, Auburn

ISSN 2167-5163

Matches: 18

Batch Download: [Reviews \(HTML\)](#) [Retrieve Marked](#) [Retrieve First 50](#) [Unmark All](#)

Author profile

Publications results for "Items authored by or related to Meir, Amnon J."

- MR2516158** [Reviewed](#) Meir, Amnon J.; Tuncer, Necibe Radially projected finite elements. *SIAM J. Sci. Comput.* 31 (2009), no. 3, 2368–2385. (Reviewer: J. W. Jerome) **65N30 (35J25 35P15)** [PDF](#) [Clipboard](#) [Journal](#) [Article](#)
- MR2514723** [Reviewed](#) Griesse, R.; Meir, A. J. Modelling of a magnetohydrodynamics free surface problem arising in Czochralski crystal growth. *Math. Comput. Model. Dyn. Syst.* 15 (2009), no. 2, 163–175. **76W05 (35Q35 35R35 80A20)** [PDF](#) [Clipboard](#) [Journal](#) [Article](#)
- MR2344055** [Reviewed](#) Hetzer, G.; Meir, A. J. On an interface problem with a nonlinear jump condition, numerical approximation of solutions. *Int. J. Numer. Anal. Model.* 4 (2007), no. 3–4, 519–530. **35K60 (65M60 76X05)** [PDF](#) [Clipboard](#) [Journal](#) [Article](#)
- MR2265235** [Reviewed](#) Simionescu, F.; Meir, A. J.; Harris, D. K. Approximation of an optimal convective heat transfer coefficient. *Optimal Control Appl. Methods* 27 (2006), no. 5, 237–253. (Reviewer: Vitaly A. Volpert) **80A20 (49J20 49N90)** [PDF](#) [Clipboard](#) [Journal](#) [Article](#)
- MR2107391** [Reviewed](#) Charina, M.; Meir, A. J.; Schmidt, P. G. Mixed velocity, stress, current, and potential boundary conditions for stationary MHD flow. *Comput. Math. Appl.* 48 (2004), no. 7–8, 1181–1190. (Reviewer: Manuel Núñez Jiménez) **76W05 (76D05 76M10)** [PDF](#) [Clipboard](#) [Journal](#) [Article](#)
- MR2010381** [Indexed](#) Bakker, Eric; Meir, A. J. How do pulsed amperometric ion sensors work? A simple PDE model. *SIAM Rev.* 45 (2003), no. 2, 327–344 (electronic). **92B05 (35C15 35K05)** [PDF](#) [Clipboard](#) [Journal](#) [Article](#)
- MR1979224** [Reviewed](#) Meir, A. J.; Schmidt, Paul G. On electromagnetically and thermally driven liquid-metal flows. Proceedings of the Third World Congress of Nonlinear Analysts, Part 5 (Catania, 2000). *Nonlinear Anal.* 47 (2001), no. 5, 3281–3294. (Reviewer: Stephen Wollman) **76W05 (35Q35 35Q60 76D03 76D05)** [PDF](#) [Clipboard](#) [Journal](#) [Article](#)
- MR1701784** [Reviewed](#) Meir, A. J.; Schmidt, Paul G. Analysis and numerical approximation of a stationary

MathSciNet

MR: Publications results for "Items authored by or related to Meir, Amnon J."

www.ams.org/mathscinet/search/publicdoc.html?pg1=IID&s1=292362&vpref=html&r=8&mx-pid=170

Apple Yahoo Google Maps YouTube Wikipedia News Popular

MR: Publications results for "Items authored by or related to Meir, Amnon J."

Clipboard Home Preferences Help Support Mail Terms of Use

Auburn University, Auburn

MathSciNet
Mathematical Reviews

ISSN 2167-5163

Previous Up Next

Select alternative format ↳

Publications results for "Items authored by or related to Meir, Amnon J."

MR1701784 (2000f:76140) Reviewed

Meir, A. J.(1-ABRN); Schmidt, Paul G.(1-ABRN)

Analysis and numerical approximation of a stationary MHD flow problem with nonideal boundary. (English summary)

SIAM J. Numer. Anal. 36 (1999), no. 4, 1304–1332 (electronic).

76W05 (35Q35 45K05 65N30 76M10)

PDF | Clipboard | Journal | Article | Make Link

Citations
From References: 9
From Reviews: 1

The authors consider the stationary Navier-Stokes and Maxwell equations coupled via Ohm's law and the Lorentz force which model the steady flow of a conducting fluid (confined to a bounded region). A system of integrodifferential equations that holds only in the fluid region is derived by means of the Biot-Savart law. The well-posedness of a mixed variational formulation for an associated boundary value problem is proven. A finite element approximation is analysed in the case of well-posedness and numerical results obtained by this method are presented.

Reviewed by Christian Rohde

References

- O. Besson, J. Bourgeois, P.-A. Chevalier, J. Rappaz, and R. Touzani, *Numerical modelling of electromagnetic casting processes*, J. Comput. Phys., 92 (1991), pp. 482–507. [MR1094260 \(91k:76105\)](#)
- F. Brezzi and M. Fortin, *Mixed and Hybrid Finite Element Methods*, Springer-Verlag, New York, 1991. [MR1115205 \(92d:65187\)](#)
- P. G. Clariet, *Basic error estimates for elliptic problems*, in *Handbook of Numerical Analysis*, Vol. II, Finite Element Methods, Part 1, P. G. Clariet and J. L. Lions, eds., North-Holland, Amsterdam, 1991, pp. 17–351. [MR1115237](#)
- G. Duvaut and J. L. Lions, *Inéquations en thermoélasticité et magnétohydrodynamique*, Arch. Rational Mech. Anal., 46 (1972), pp. 241–279. [MR0346289 \(49 #11014\)](#)
- V. Girault and P.-A. Raviart, *Finite Element Methods for Navier-Stokes Equations. Theory and Algorithms*, Springer Series in Computational Mathematics, Vol. 5, Springer-Verlag, New York, 1986.



MathSciNet

MR: Meir, Amnon J. – 292362

www.ams.org/mathscinet/search/author.html?mrauthorid=292362

Apple Yahoo! Google Maps YouTube Wikipedia News Popular

MR: Meir, Amnon J. – 292362

Clipboard Home Preferences Help Support Mail Terms of Use

Auburn University, Auburn

 AMERICAN MATHEMATICAL SOCIETY
MathSciNet Mathematical Reviews

ISSN 2167-5163

Profile Name: **Meir, Amnon J.**

MR Author ID: **292362**
Earliest Indexed Publication: **1991**
Total Publications: **18**
Total Citations: **70**
Published as: Meir, A. J.

[View Publications](#) [View Reviews](#) [Refine Search](#) [Co-Authors](#) [Collaboration Distance](#) [Mathematics Genealogy Project](#) [Citations](#)

Co-authors (by number of collaborations)

Bakker, Eric Charina, Maria Gunzburger, Max D. Harris, D. K. Herzog, Roland Hetzer, Georg Hou, L. Steven Layton, William J. Peterson, Janet S. Schmid, Paul Günter Simionescu, Florentina Tuncer, Necibe Yavneh, Irad

Publications (by number in area)

Biology and other natural sciences Calculus of variations and optimal control; optimization
Classical thermodynamics, heat transfer Fluid mechanics Geophysics Numerical analysis
Partial differential equations

Publications (by number of citations)

Biology and other natural sciences Calculus of variations and optimal control; optimization
Fluid mechanics Partial differential equations



ZMath

Zentralblatt MATH

www.zentralblatt-math.org/zmath/

Apple Yahoo! Google Maps YouTube Wikipedia News Popular

MR: Publications results for "Author=(meir, a*)"

Zentralblatt MATH

* Home * Classification * Authors * Journals * Reviewer-Service * Subscription

Zentralblatt MATH

Search in about 3 million reviews from 150 years of mathematics

Email Print

Anywhere Author Title Source Year Clear Go General Help Advanced Search

Home Simple Search Advanced Search Classification Author Database Journal Database General Help Subscription Contact About Zentralblatt Copyright Imprint Site Map

Welcome to the Zentralblatt MATH Database

The Zentralblatt MATH Database ZBMath is produced by the Berlin editorial office of FIZ Karlsruhe in cooperation with European academies and mathematical institutes.

The One-line Search gives you the easiest access to our database. Alternatively, you can use the specified search fields above or the link to the Advanced Search that offers you an even more detailed search form.

Without specifying a particular search field in the One-Line Search, search is performed over all fields. If you wish to refine your original query, you can do so without leaving the hit list.

A new feature of ZBMath is MathML, which gives you the opportunity of directly showing mathematical symbols and formulas in your search results.

Query: Go Help on query formulation Clear form

Copyright © 2013:

FIZ Karlsruhe
Leibniz Institute for Information Infrastructure

Springer

Published by:

Of course, you can also still get the TeX source for each result. If you generally prefer to get your search result displayed in TeX instead of MathML, you can switch here. Further information on MathML is available in our help section.

Terms & Conditions

The Terms and Conditions for Web Databases of FIZ Karlsruhe apply to the use of Zentralblatt MATH.
Link: webdb_en.pdf

Zentralblatt · Mile Stones

1931 - first Zentralblatt review
1986 - 1 million items indexed
2003 - 2 million items indexed
2010 - 3 million items indexed

© 2013 FIZ Karlsruhe GmbH

Contact | Copyright | Legal Details | Site Map | Webmaster

W3C XHTML 1.0 W3C CSS

ZMath

Zentralblatt MATH – Simple Search
www.zentralblatt-math.org/zmath/search/?q=au:meir.a

Apple Yahoo Google Maps YouTube Wikipedia News Popular Reader

MR: Publications results for "Author=(meir,a*)"

Zentralblatt MATH – Simple Search

* Home * Classification * Authors * Journals * Reviewer-Service * Subscription

Zentralblatt MATH

Search in about 3 million reviews from 150 years of mathematics

Anywhere Author Title Source Year Clear Email Print General Help Advanced Search

Query: au:meir.*
Help on query formulation Clear form

Result 1 to 3 of 16 total Show marked items Free access is limited to 3 results.

1 Zbl 1169.93003 Griesse, R.; Meir, A.J.
Modelling of a magnetohydrodynamics free surface problem arising in Czochralski crystal growth. (English)
Math. Comput. Model. Dyn. Syst. 15, No. 2, 163-175 (2009).
MSC 2010: 93A30 92E20 76W05
[PDF](#) [XML](#) [AMS-Tex](#) [TEXT](#) [BibTeX](#) [Full Text](#) Comment on this item WorldCat

2 Zbl 1131.35350 Hetzer, G.; Meir, A.J.
On an interface problem with a nonlinear jump condition. Numerical approximation of solutions. (English)
Int. J. Numer. Anal. Model. 4, No. 3-4, 519-530 (2007).
MSC 2010: 35K60 35Q80 35R05 65M60 35K55 35A07
[PDF](#) [XML](#) [AMS-Tex](#) [TEXT](#) [BibTeX](#) [Full Text](#) Comment on this item WorldCat

3 Zbl 1142.76506 Charina, M.; Meir, A.J.; Schmidt, P.G.
Mixed velocity, stress, current, and potential boundary conditions for stationary MHD flow. (English)
Comput. Math. Appl. 48, No. 7-8, 1181-1190 (2004).
MSC 2010: 76W05 76D05 76M10
[PDF](#) [XML](#) [AMS-Tex](#) [TEXT](#) [BibTeX](#) [Full Text](#) Comment on this item WorldCat

Result 1 to 3 of 16 total Show marked items Free access is limited to 3 results.
0.00017 sec

© 2013 FIZ Karlsruhe GmbH

Contact | Copyright | Legal Details | Site Map | Webmaster

W3C XHTML 3.0 W3C CSS



ZMath

ZMath

Zentralblatt MATH – Simple Search
www.zentralblatt-math.org/zmath/search/?q=an%3A1142.76506

Apple Yahoo! Google Maps YouTube Wikipedia News Popular Reader

MR: Publications results for "Author=(meir, a*)"

Zentralblatt MATH – Simple Search

* Home * Classification * Authors * Journals * Reviewer-Service * Subscription

Zentralblatt MATH

Search in about 3 million reviews from 150 years of mathematics

Email Print

Home | Simple Search Anywhere Author Title Source Year Clear General Help Advanced Search

Query: an:1142.76506 Go Clear form

Zbl 1142.76506 WorldCat

Charina, M.; Meir, A.J.; Schmidt, P.G.
Mixed velocity, stress, current, and potential boundary conditions for stationary MHD flow. (English)
Comput. Math. Appl., 48, No. 7-8, 1181–1190 (2004).

Summary: This paper is concerned with a boundary-value problem, describing the stationary flow of a viscous, incompressible, electrically conducting fluid, confined to a bounded region of space, under mixed boundary conditions. The flow is governed by the Navier-Stokes equations, Ohm's law, and the Biot-Savart law; the boundary conditions involve the velocity field, stress tensor, electric current density, and electric potential. We derive a mixed variational formulation of the problem, which lends itself naturally to finite-element discretizations, and prove the existence and uniqueness of a (small) solution under the assumption of sufficiently small data.

MSC 2010
 76W05 Magnetohydrodynamics and electrohydrodynamics
 76D05 Navier-Stokes equations (fluid dynamics)
 76M10 Finite element methods (fluid mechanics)

Keywords
 Mixed variational methods; Finite elements; Magnetohydrodynamics; Navier-Stokes equations; Maxwell's equations

PDF XML AMS-Tex TEXT BibTeX FullText Comment on this Item

0.03086 sec

Login
 Username Password
 forgotten password Login

arXiv.org Preprints
 Try this retrieval query in arXiv.org.
 Search

History
 1: an:1142.76506 1
 2: ai:meir.amnon-j 136
 3: au:meir.a*] 16
 Clear

[Math Genealogy Project](#)

Math Genealogy Project

The Mathematics Genealogy Project – Welcome!

genealogy.math.ndsu.nodak.edu

Apple Yahoo! Google Maps YouTube Wikipedia News Popular Reader

The Mathematics Genealogy Project – Welcome!

Mathematics Genealogy Project

Quick Search [Search](#)
[Advanced Search](#)

168021 records as of 13 February 2013
View the [growth](#) of the genealogy project

Home Search Extrema About MGP Links FAQs Posters Submit Data Mirrors

A service of the [NDSU Department of Mathematics](#), in association with the [American Mathematical Society](#).

Please [email us](#) with feedback.

Search Extrema About MGP Links FAQs Posters Submit Data

The Mathematics Genealogy Project is in need of funds to help pay for student help and other associated costs. If you would like to contribute, please [donate online](#) using credit card or bank transfer or mail your tax-deductible contribution to:

Mathematics Genealogy Project
Department of Mathematics
North Dakota State University
P. O. Box 6050
Fargo, North Dakota 58108-6050

[Math Genealogy Project](#)

Math Genealogy Project

The Mathematics Genealogy Project – Amnon Meir

genealogy.math.ndsu.nodak.edu/d.php?id=36920

Apple Yahoo! Google Maps YouTube Wikipedia News Popular Reader

Mathematics Genealogy Project

Amnon Jacob Meir

MathSciNet

Ph.D. Carnegie Mellon University 1989 

Dissertation: *Existence, Uniqueness and Finite Element Approximation of Solutions of the Equations of Stationary, Incompressible MHD*

Advisor: [Max D. Gunzburger](#)

Students:

Click [here](#) to see the students listed in chronological order.

Name	School	Year	Descendants
Chadia Affane Ali	Auburn University	2007	
Maria Charina	Auburn University	2002	
Keng Jin	Auburn University	2008	
Necibe Tuncer	Auburn University	2007	

According to our current on-line database, Amnon Meir has 4 [students](#) and 4 [descendants](#).

We welcome any additional information.

If you have additional information or corrections regarding this mathematician, please use the [update form](#). To submit students of this mathematician, please use the [new data form](#).

Search Extrema About MGP Links FAQs Posters Submit Data

The Mathematics Genealogy Project is in need of funds to help pay for student help and other associated costs. If you would like to contribute, please [donate online](#) using credit card or bank transfer or mail your tax-deductible contribution to:

Mathematics Genealogy Project
Department of Mathematics
North Dakota State University
P. O. Box 6050
Fargo, North Dakota 58108-6050

Math Genealogy Project

Math Genealogy Project

The Mathematics Genealogy Project – Max Gunzburger

genealogy.math.ndsu.nodak.edu/d.php?id=12422

Apple Yahoo Google Maps YouTube Wikipedia News Popular Reader

The Mathematics Genealogy Project – Max Gunzburger

Mathematics Genealogy Project

Max D. Gunzburger MathSciNet

Ph.D. New York University 1969 

Dissertation: *Diffraction of Shock Waves by a Thin Wing - Symmetric and Anti-symmetric Problems*

Advisor: [Lu Ting](#)

Students:

Click [here](#) to see the students listed in chronological order.

Name	School	Year	Descendants
Justin Appel	Virginia Polytechnic Institute and State University	1997	
Pavel Bochev	Virginia Polytechnic Institute and State University	1994	2
John Burkardt	Virginia Polytechnic Institute and State University	1995	
Marcus Calhoun-Lopez	Iowa State University	2003	
Yanzhao Cao	Virginia Polytechnic Institute and State University	1996	
Wan-Kan Chan	The Florida State University	2007	
Ching Chang	Carnegie Mellon University	1985	
Xi Chen	The Florida State University	2012	
Zheng Chen	The Florida State University	2007	
Konstantinos Chrysafinos	Iowa State University	2002	
Jennifer Deang	Virginia Polytechnic Institute and State University	1997	
Qiang Du	Carnegie Mellon University	1988	19
Jerome Eastham, Jr.	University of Tennessee - Knoxville	1981	
Georges Guirguis	University of Tennessee - Knoxville	1983	
Peter Hoffman	Carnegie Mellon University	1985	
L. Steven Hou	Carnegie Mellon University	1989	12

A service of the [NDSU Department of Mathematics](#) in association with the [American Mathematical Society](#).

Please [email us](#) with feedback.

LaTeXSearch

LaTeX Search – Mathematical Equations in Scientific Publications.

www.latexsearch.com/#

Apple Yahoo Google Maps YouTube Wikipedia News Popular

The Mathematics Genealogy Project – Max Gunzburger

LaTeX Search – Mathematical Equations in Scientific Publications.

Springer.com | SpringerLink.com

 Springer

LaTeX Search Beta

Springer Home | About Contact Us | LaTeX Sandbox

The Springer LaTeX search lets you search through over 8,223,138 LaTeX code snippets to find the equation you need.

Latex Code

[View Advanced Search](#)

SAMPLE SEARCHES

```
\sqrt{\frac{1}{N}}
```

```
\frac{(\alpha - \gamma)}{t\beta}
```

```
\tilde{\beta}
```

```
\boxed{P(E)}
```

```
"epsilon" AND "2pi"
```

```
"bar{\delta}_q" OR "\frac{dw}{dz}"
```

SAMPLE RESULT

Self-intersections of random walks on lattices
Acta Mathematica Hungarica (2002) 96:187–220, August 01, 2002

$P(E_n^{(d)}, \text{i.e.}) = 0 \quad \text{or} \quad 1$

[Hide Latex Code](#)

$$\Pr\left(\left|E_n^{\left(d\right)}\right|^2 \geq \left(d\right)^2\right) = 0 \quad \text{and} \quad \Pr\left(\left|E_n^{\left(d\right)}\right|^2 < \left(d\right)^2\right) = 1$$


Eric Hellman ... allows researchers to search for LaTeX formatted equations in all of Springer's journals. That's something you can't do with Google, or any other search engine. The ability to connect obscure mathematical discoveries from disparate fields of science could soon be facilitating new avenues of research, perhaps even new methodologies.
Eric Hellman, <http://go-to-hellman.blogspot.com>


Dario Taraborrelli ... what it promises, using similarity algorithms "to normalize and compare LaTeX strings so that, if similar equations are written slightly differently, the outputs are normalized and matched, granting you the broadest possible results set".
Dario Taraborrelli, <http://www.academicproductivity.com>

LaTeXSearch by Springer

Home | About | Contact Us

Powered by MPS Technologies



LaTeXSearch

LaTeXSearch

LaTeX Search - Latex Code: `\nabla\!\cdot\!\left(\mathbf{times}\right)\mathbf{mathbf{B}}`

The Mathematics Genealogy Project - Max Gunzburger

Springer.com | SpringerLink.com

LaTeX Search Beta

Home | About | Contact Us | LaTeX Sandbox

SOURCE

Encyclopedia of Complexity and Systems Science	2
Handbook of Geomathematics	2
Journal of Fusion Energy	2
Metalurgical and Materials Transactions B	2
Annals of Biomedical Engineering	1

PUBLICATION YEAR

SEARCH RESULT

Exact Results (22) Similar Results (163)

Sort by: Relevance Results per page 10 View Latex Code

SpeedSearch << 1 2 3 >>

3 results

EXACT Magnetic-field induced electronic anapoles in small molecules
Rendiconti Lincei (2011) 22:105–112, June 01, 2011

$$\nabla \times \mathbf{B} = \mu_0 \mathbf{J} + \mu_0 \epsilon_0 \frac{\partial \mathbf{E}}{\partial t}$$

[View Latex Code](#)

4 results

EXACT $\mathbf{K} = \mathbf{A} \times (\mathbf{V} \times \mathbf{B})$
[View Latex Code](#)

4 results

EXACT
$$W - W^{(0)} = -\frac{1}{2} m_{\alpha} B_{\alpha} - \frac{1}{2} m_{\alpha\beta} B_{\beta\alpha}$$

$$= -\frac{1}{2} m_{\alpha} B_{\alpha} - \frac{1}{2} A_{\alpha} (\nabla \times \mathbf{B})_{\alpha} - \frac{1}{2} m_{\alpha\beta}^{(S)} B_{\beta\alpha}^{(S)}$$

[View Latex Code](#)

1 result

EXACT Arc Plasma Torch Modeling
Journal of Thermal Spray Technology (2009) 18:728–752, December 01, 2009

$$\nabla \times \mathbf{B} = \mathbf{J}_q$$

[View Latex Code](#)

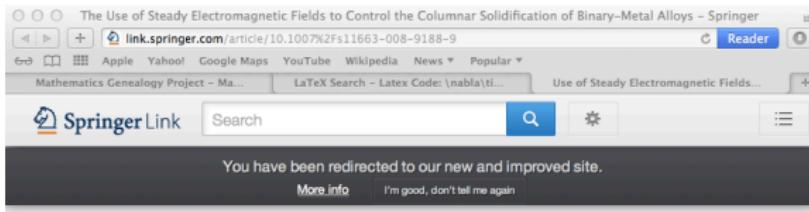
3 results

EXACT Magnetohydrodynamic Effects on Insulating Bubbles and Inclusions in the Continuous Casting of Steel
Metallurgical and Materials Transactions B (2010) 41:1240–1246, November 16, 2010

$$\nabla \times (\mathbf{V} \times \mathbf{B}) = \nabla (\mathbf{V} \cdot \mathbf{B}) - \nabla^2 \mathbf{B}$$

[View Latex Code](#)

LaTeXSearch



Metallurgical and Materials Transactions B
June 2009, Volume 40, Issue 3, pp 317-327

The Use of Steady Electromagnetic Fields to Control the Columnar Solidification of Binary-Metal Alloys

P.A. Nikirityuk, K. Eckert, R. Grundmann



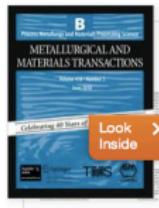
[Download PDF \(1,809 KB\)](#)



[View Article](#)

Abstract

This article considers the nondirectional solidification of a binary-metal alloy in a cylindrical cavity, which is cooled along its outer vertical wall and the bottom. To study the influence of convection within the liquid phase on the final segregation, three cases are examined: the purely buoyancy-driven convection (case 0), the impact of an external steady axial magnetic field on the melt flow during solidification (case 1), and the effect of the combination of an external magnetic field with a steady electrical current (DC) applied directly to the melt (case 2). The results show that convection in the form of multivortices caused by the thermosolutal buoyancy leads to macrosegregations in the form of V-channels. The application of an external axial magnetic field alone suppresses the multivortex structure and, thus, the



[Look Inside](#)

Share



Within this Article

- » Introduction
- » Problem formulation
- » Mathematical model
- » Results and discussion
- » Summary
- » References
- » References



Other Databases

Web of Science

Web of Knowledge [v.5.9] – Web of Science Home

apps.webofknowledge.com/WOS_GeneralSearch_input.do?product=WOS&search_mode=GeneralSearch&SID=1FD7p...

Reader

Apple Yahoo! Google Maps YouTube Wikipedia News Popular

Web of Knowledge [v.5.9] – Web of Science Home

WEB OF KNOWLEDGE™ DISCOVERY STARTS HERE

Go to mobile site | Sign In | Marked List (0) | My EndNote Web | My ResearcherID | My Citation Alerts | My Saved Searches | Log Out | Help

Web of Science Additional Resources

Search | Author Search | Cited Reference Search | Advanced Search | Search History

Web of Science®

Search

meir aj
Example: O'Brian C* OR O'Brian C*
Need help finding papers by an author? Use Author Search.

AND [] Example: O'Brian C* OR O'Brian C*
Need help finding papers by an author? Use Author Search.

AND [] Example: Cancer* OR Journal of Cancer Research and Clinical Oncology
Add Another Field >

Search | Clear Searches must be in English

Current Limits: (To save these permanently, sign in or register.)

Timespan
 All Years (updated 2013-02-08)
 Date Range From: 1999-MM-DD To: 2013-02-13 Use Processing Date instead of Publication Date

Citation Databases
 Social Citation Index Expanded (SCI-EXPANDED) -1945-present
 Social Sciences Citation Index (SSCI) -1984-present
 Arts & Humanities Citation Index (AHCI) -1984-present
 Adjust your results settings

View in: 简体中文 | 繁體中文 | English | 日本語 | 한국어

© 2013 Thomson Reuters | Terms of Use | Privacy Policy | Please give us your feedback on using Web of Knowledge.

THOMSON REUTERS

Maintenance Alert
Please be advised that scheduled maintenance will take place beginning on Saturday, February 16, 2013 at 14:00 GMT until Sunday, February 17, 2013 at 02:00 GMT. Web of Knowledge may not be available intermittently during that period. We apologize for any interruption this may cause.

Get EndNote X8 Now!
Get EndNote X8 now and search and PDFs and find full text in seconds with EndNote X8 and EndNoteSync. Try it now

Training and Support
 Download Quick Recorded Training
[Find us on Facebook](#)

What's new in Web of Knowledge?
 Data Citation Index™: Discover, use and cite research data. More information.
 More of What's New Features & Tips
 Visual citation connections at a glance with Citation Mapping (view demo).
 Identify citation trends graphically with Citation Report (view demo).
 How to update your Researcher ID profile

Customize Your Experience
[Sign In | Register](#)
 Save and manage your references
 Create EndNote Web links available and fully integrated.
 Save and run searches
 Choose your start page
 Want to know more?
 All news for the latest and most interesting developments in web sci



Other Databases

Web of Science

Web of Knowledge [v.5.9] – Web of Science Results

apps.webofknowledge.com/summary.do?SID=1FD7pmfH8GN76DLcO5&product=WOS&qid=2&search_mode=General Reader

Apple Yahoo! Google Maps YouTube Wikipedia News Popular

Web of Knowledge [v.5.9] – Web of Science Results

WEB OF KNOWLEDGE™ DISCOVERY STARTS HERE THOMSON REUTERS

Sign In | Marked List (0) | My EndNote Web | My ResearcherID | My Citation Alerts | My Saved Searches | Log Out | Help

Web of Science Additional Resources

Search Author Search Cited Reference Search Advanced Search Search History

Results Authors=(meir a) Timespan>All Years Databases=SCI-EXPANDED, SSCI, A&HCI. Create Alert RSS

Results: 19

Refine Results

Search within results

Hide Refine

Web of Science Categories

- MATHEMATICS APPLIED (14)
- COMPUTER SCIENCE (1)
- INTERDISCIPLINARY APPLICATIONS (1)
- CHEMISTRY PHYSICAL (1)
- CHEMISTRY ANALYTICAL (2)
- NEOPHYSICS (2)
- more options / values...

Document Types

- ARTICLE (19)
- PROCEEDINGS PAPER (3)
- more options / values...

Research Areas

Authors

Group Authors

Editors

Source Titles

Book Series Titles

Publication Years

Organizations-Enhanced

Funding Agencies

Languages

Countries/Territories

View Details Author Record Set feature is a discovery tool showing sets of papers likely written by the same person. (Tell me more)

The Details Author Record Set feature is a discovery tool showing sets of papers likely written by the same person. (Tell me more)

View abstract

Analyze Results

Create Citation Report

more options

1. Title: Modelling of a magnetohydrodynamics free surface problem arising in Czochralski crystal growth
Author(s): Gresse, R.; Meir, A. J.
Source: MATHEMATICAL AND COMPUTER MODELLING OF DYNAMICAL SYSTEMS Volume: 15 Issue: 2 Pages: 163-175 Article Number: 101986 DOI: 10.1080/13873990802551542 Published: 2009
Times Cited: 2 (from Web of Science)

ARTICLE

Full Text

View abstract

2. Title: RADIALY PROJECTED FINITE ELEMENTS
Author(s): Meir, A.; Turner, N.
Source: SIAM JOURNAL ON SCIENTIFIC COMPUTING Volume: 31 Issue: 3 Pages: 2368-2385 DOI: 10.1137/07078916TX Published: 2009
Times Cited: 9 (from Web of Science)

ARTICLE

Full Text

View abstract

3. Title: On an interface problem with a nonlinear jump condition, numerical approximation of solutions
Author(s): Heitzer, G.; Meir, A.; Hama, D. K.
Source: INTERNATIONAL JOURNAL OF NUMERICAL ANALYSIS AND MODELING Volume: 4 Issue: 3-4 Pages: 519-530 Published: 2007
Times Cited: 3 (from Web of Science)

ARTICLE

Full Text

View abstract

4. Title: Approximation of an optimal convective heat transfer coefficient
Author(s): Simionescu, F.; Meir, A. J.; Hama, D. K.
Source: OPTIMAL CONTROL APPLICATIONS & METHODS Volume: 27 Issue: 5 Pages: 237-253 DOI: 10.1002/oca.777 Published: SEP-OCT 2006
Times Cited: 1 (from Web of Science)

ARTICLE

Full Text

View abstract



Other Databases

Web of Science

Web of Knowledge [v.5.9] – Web of Science Full Record

apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=2&SID=1FD7pmfH8C

Reader

Web of Knowledge [v.5.9] – Web of Science Full Record

WEB OF KNOWLEDGE® DISCOVERY STARTS HERE

THOMSON REUTERS

Sign In | Marked List (0) | My EndNote Web | My ResearcherID | My Citation Alerts | My Saved Searches | Log Out | Help

Web of Science Additional Resources

Search | Author Search | Cited Reference Search | Advanced Search | Search History

Web of Science®

<< Back to results list | Record 5 of 19 | more options

Record from Web of Science®

ARTICLE (0) Save to: ENDNOTE WEB | ENDNOTE | Write These Publications | more options

Dynamic diffusion model for tracing the real-time potential response of polymeric membrane ion-selective electrodes

Author(s): Radu, A. (Radu, A); Mer, A. (Mer, A); Bakker, E. (Bakker, E)

Source: ANALYTICAL CHEMISTRY, Volume: 76, Issue: 21, Pages: 6432-6436, DOI: 10.1021/ac04534t, Published: NOV 1 2004

Times Cited: 26 (From Web of Science)

Cited References: 41 | View related records | Citation Map

Abstract: A new dynamic model for the prediction of the transient potential responses of a polymeric-based ion-selective electrode (ISE) is presented. The model addresses short- and long-term potential drifts that are dependent on changes in concentration gradients in the aqueous phase and organic membrane phase. This work has important implications for the understanding of the real-time response behavior of potentiometric sensors with thin polymeric membranes. The model was applied to a dynamic diffusion model for a polymeric membrane ISE. In this model, the well-known air ionophore O,O'-bis(2-methylpropionyl)-tert-butylcalix[4]arene was monitored, and the large observed potential drifts were compared to theoretical predictions. The model is based on an approximate solution of the diffusion equation for both aqueous and organic diffusion layers using a numerical finite difference method. The model includes a time-dependent parameter that is able to account for the influence of the diffusion parameters and gives time-dependent information previously inaccessible with a simpler steady-state diffusion model. For the cases studied, the model gave a very good fit to the experimental data, albeit with lower than expected diffusion coefficients for the organic phase. This model may address some open questions regarding the response time and memory effects of low-detection-limit ion-selective electrodes and for other membrane electrodes where ion fluxes are relevant.

Accession Number: WOS:002294841300037

Document Type: Article

Language: English

Keywords Plus: LOWER DETECTION LIMIT; THEORETICAL TREATMENT; SENSORS; COEFFICIENTS; POTENTIOMETRY; BEHAVIOR; TIME

Reprint Address: Radu, A (Reprint author), Auburn Univ., Dept Chem & Math, Auburn, AL 36849 USA.

Address: [1] Auburn Univ., Dept Chem & Math, Auburn, AL 36849 USA

ResearcherID Numbers: [?]

[2] researcher(s) included this record in their ResearcherID My Publication List. Click to view.]

Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA

Web of Science Categories: Chemistry, Analytical

Research Areas: Chemistry

ISSN Number: 0003-2700

ISSN: 0003-2700

<< Back to results list | Record 5 of 19 | more options

Record from Web of Science®

Output Record

Step 1: Step 2: [How do I export to bibliographic management software?]

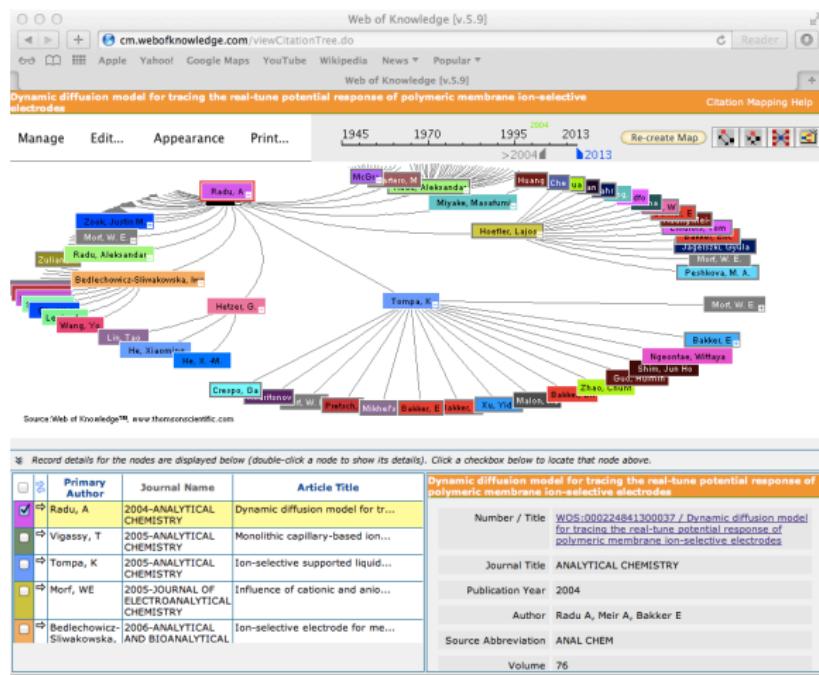
Authors, Title, Source
 plus abstract
 plus Record
 plus Cited References

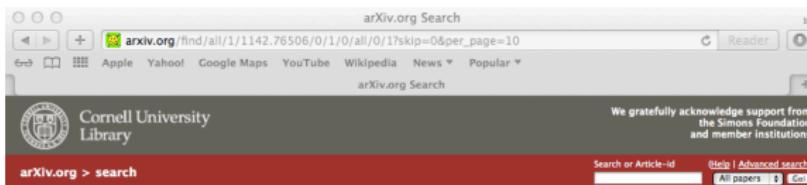
Save to: ENDNOTE WEB | Save to: ENDNOTE | Write These Publications |
Save to other Reference Software | See

◀ (0)

Other Databases

Web of Science



Other Databases**arXiv****Search arXiv.org**

Search gave no matches

No matches were found for your search: 1142.76506

Please try again.

Author/title/abstract search

Select subject areas to restrict search (default is to search all subject areas)

Computer Science Mathematics Physics [archive: [All](#)] Quantitative Biology

Quantitative Finance Statistics

Select years to search (default is to search all years)

Past year or the year or the years from to

Authors: AND
 Title: AND
 Abstract:

Show 10 hits per page

[Do Search](#) or [Reset](#) selections to default values.

Hints for more fulfilling searches

Experimental full text search

Search for: in Everything [Do Search](#)

The full text search facility is an experimental service which may be less up-to-date than the normal search. See [full text search help](#).

Go to <http://www.cornell.edu/>

Other Databases

WorldCat

The screenshot shows the WorldCat.org homepage. At the top, there's a navigation bar with links for Home, Search, and a sign-in option. Below the navigation is the WorldCat logo. The main content area features a large search bar with dropdown menus for Everything, Books, DVDs, CDs, and Articles. Below the search bar, a message reads "Find items in libraries near you" and "1.5 billion items available here through a library". There are buttons for "Advanced search" and "Find a Library". A sidebar on the right allows users to "Sign in to create lists, bibliographies and reviews of library materials" with fields for User Name and Password, and a Remember me on this computer checkbox. It also includes links for "Forgot your password?", "Create a free account", and a "NOTICE" about data consent. At the bottom of the sidebar is a "Sign up for e-mail updates" link. The central part of the page highlights "WorldCat connects you to the collections and services of more than 10,000 libraries worldwide" with a "Learn more" link. Below this, there's a section titled "'Find in a library' on your mobile device with WorldCat Mobile" featuring a screenshot of a mobile device displaying the WorldCat app interface. It includes a "Go to www.worldcat.org/m/" link, an "iPhone or Android app" link, and a "Learn more and find an app" link. At the very bottom, there's a "WorldCat Identities Network" section with a diagram showing interconnected identities and a "Experimental" link.

Other Databases

WorldCat

Computers and mathematics with applications (Journal, magazine) [WorldCat.org]

Home Search Advanced Search Find a Library Create lists, bibliographies and reviews: Sign in or create a free account

Add to list Add tags Write a review Rate this item:  City/Export Print E-mail Share Permalink

 Computers and mathematics with applications

Edition/Format: Journal, magazine : Periodical

Rating:  (not yet rated) (0 with reviews - Be the first)

Search this publication for other articles with the following words: Search

Borrow / obtain a copy

You are connected to the Auburn University network  Hide local services for this item

Search the catalog at your library | OCLC FirstSearch

Find a copy in the library

Enter your location: 36849 Find libraries

Displaying libraries 1-2 out of 2 Show libraries holding just this edition

Library	Hold formats	Distance	
1.  Tarleton State University Dick Smith Library Stephenville, TX 76402 United States	 Journal / Magazine / Newspaper	741 miles 	 Library info  Add to favorites
2.  The British Library, Document Supply BLDSC	 Journal / Magazine / Newspaper	4200 miles 	 Library info

Mathematics Research Tools



Software Tools

Open Source - Proprietary

Computer Algebra Systems

Computer Algebra System (CAS)

Proprietary

- Magma
- Maple
- Mathematica
- MuPad (part of Matlab)

Computer Algebra System (CAS)

Open Source

- Axiom
- Maxima
- Sage <http://www.sagemath.org>
- Singular
- SymPy (and iPython) <http://code.google.com/p/sympy>
(also see: <http://www.python.org>,
<http://www.scipy.org>, <http://ipython.scipy.org>)

Computer Algebra Systems

http://en.wikipedia.org/wiki/Computer_algebra_system
<http://www.symbolicnet.org>

Maple

Maple

- Symbolic algebra package
- Programming language
- “... environment of choice for scientific and engineering problem-solving, mathematical exploration, data visualization and technical authoring”

Maple

Maple

untitled

Text Math Drawing Plot Animation

9 45 \oplus 45 \ominus 0

(1)

```
int(sin(x)^2+x^3, x);  
-  $\frac{1}{2} \sin(x) \cos(x) + \frac{1}{2} x + \frac{1}{4} x^4$   
with(plots):  
sphereplot( $\left(\frac{4}{3}\right)^{\text{theta}}$  * sin(phi), theta = -1..2*Pi, phi = 0..Pi);
```

Ready

Server: 1 Memory: 0.74M Time: 0.04s Text Mode

Numerical Computing Environment

Proprietary

- Matlab

Open Source

- GNU Octave <http://www.gnu.org/software/octave>
- R <http://www.r-project.org>
- Scilab <http://www.scilab.org>
- SciPy <http://www.scipy.org>

Numerical Analysis Software [http://en.wikipedia.org/wiki/
List_of_numerical_analysis_software](http://en.wikipedia.org/wiki/List_of_numerical_analysis_software)

Matlab

MATLAB

- Matrix laboratory
- Programming language designed for mathematical computation, analysis, visualization, and algorithm development
- Integrated development environment
- Applications include: prototyping, graphics, data analysis, GUI development
- “MATLAB The Language of Technical Computing”
- “MATLAB and companion toolboxes provide engineers, scientists, mathematicians, and educators with an environment for technical computing applications”

Matlab

MATLAB

MATLAB 7.10.0 (R2010a)

File Edit Debug Parallel Desktop Window Help

Current Folder: /Users/ajm/Stuff/Backup/ajm/Stuff/Classes/MathCompSciVis

Shortcuts ▾ How to Add ▾ What's New

Current Folder MathC... Name

- Final
- adwf128S.avi
- adwf128T.avi
- Deadlock.aux
- Deadlock.log
- Deadlock.out
- Deadlock.pdf
- Deadlock.tex
- heat1d.avi
- heat1d.m
- heat2d.m
- heat2d.m-
links.txt
- vis2d.m
- vis3d.m

heat2d.m (MATLAB Function)

Heat diffusion in a slab

- heat2d0
- u0(x, y)
- bcLeft()
- bcRight()
- bcBottom()
- bcTop()

Start

```
36 - alphax = K*dt/dx^2;
37 - alphay = K*dt/dy^2;
38 -
39 - for k=1:n
40 - for j=2:m
41 - for i=2:l
42 - u(i,j,k+1) = alphax*u(i-1,j,k) + (1 - 2*alphax - 2*alphay)*u(i,j,k)
43 -           + alphay*u(i+1,j,k) + alphay*u(i,j-1,k) + alphay*u(i,j+1,k);
44 - end
45 - end
46 - end
47 -
```

heat2d Ln 40

Command Window

```
>> heat2d
ans =
    Columns 1 through 4
    0  0.100000000000000  0.200000000000000  0.300000000000000
    Columns 5 through 8
    0.400000000000000  0.500000000000000  0.600000000000000  0.700000000000000
    Columns 9 through 11
    0.800000000000000  0.900000000000000  1.000000000000000
```

Workspace

Name	Value
ans	<1x11 double>

Figure 1

Statistics Software

Statistics Software

Proprietary

- Matlab
- Minitab
- SAS
- SPSS

Open Source

- R <http://www.r-project.org>

Statistics Software

http://en.wikipedia.org/wiki/Statistics_software

Writing



"IT'S AN EXCELLENT PROOF, BUT IT LACKS
WARMTH AND FEELING."

Lectures



Communicating Mathematics

- Writer's Tools and Recommended Reading
- Mathematical Writing
- English Usage
- When English Is a Foreign Language
- Writing a Paper
- Revising a Draft
- Publishing a Paper
- Writing and Defending a Thesis
- Writing a Talk
- Giving a Talk
- Preparing a Poster
- TeX and LaTeX
- Aids and Resources for Writing and Research

TeX/LaTeX

- **TeX** - created by Donald E. Knuth
- It is a markup language (typesetting language), in fact a programming language
- TeX (doesn't create an image) it is a page description language
- Designed to create beautiful mathematics documents (papers, books)
- In the public domain, cross platform, very powerful, complicated, not WYSIWYG (for the most part)

T_EX/L_AT_EX

L_AT_EX

- L_AT_EX - created by Leslie Lamport
- L_AT_EX is a comprehensive set of markup commands (macros) used with the typesetting program T_EX
- In the public domain, cross platform
- Simplify the use of T_EX

Writing Tools – TeX/LaTeX

TeX/LaTeX

First Stops

For a brief overview and 10 reasons you should use TeX/LaTeX

http://www.ctan.org/what_is_tex.html

The Comprehensive TeX Archive Network <http://www.ctan.org>

The TeX Users Group <http://www.tug.org>

Markup Languages

Typographical Markup vs. Logical Markup

TeX - Typographical Markup

He took a **bold step** forward

He took a bold step forward

html

He took a {\bf bold step} forward

TeX

Markup Languages

Typographical Markup vs. Logical Markup

LaTeX - Logical Markup

Logical Markup

```
<h1>Logical Markup</h1>
```

html

```
\title{Logical Markup}
```

LaTeX

He took a *bold step* forward

```
He took a <em>bold step</em> forward
```

html

```
He took a \emph{bold step} forward
```

TeX

Examples

Examples

Equations

A displayed equation

$$b(t) = \int_{-\infty}^{\infty} k(t, s)a(s)ds$$

```
\begin{displaymath}
b(t)=\int_{-\infty}^{\infty}
k(t, s) a(s) \, ds.
\end{displaymath}
```

An inline equation $b(t) = \int_{-\infty}^{\infty} k(t, s)a(s)ds$

```
$b(t)=\int_{-\infty}^{\infty}
k(t, s) a(s) \, ds$
```

Examples

Examples

Equation Numbers and Links

$$f_n = \sum_{m=-\infty}^{\infty} k_{n-m} g_m = (k * g)_n \quad (1)$$

Recall equation (1)

Examples

Examples

Arrays

$$K = \begin{bmatrix} k_0 & k_{N-1} & \dots & k_1 \\ k_1 & k_0 & \dots & k_2 \\ \vdots & \vdots & \ddots & \vdots \\ k_{N-1} & k_{N-2} & \dots & k_0 \end{bmatrix}_{N \times N}$$

```
\begin{displaymath}
K = \left[ \begin{array}{cccc}
k_0 & k_{N-1} & \dots & k_1 \\
k_1 & k_0 & \dots & k_2 \\
\vdots & \vdots & \ddots & \vdots \\
k_{N-1} & k_{N-2} & \dots & k_0
\end{array} \right]_{N \times N}
\end{displaymath}
```

[Examples](#)

Examples

Tables and Floats

Table 7.4: Plant data for both units.

	Unit 1	Unit 2
Fresh feed flow rate, kg/s	16.782	13.476
Recycle HCO flow rate, kg/s	2.108	2.111
Combined feed ratio, CFR	1.1256	1.1566
Air feed temperature, K	436.	433
Hydrogen in coke, wt%	4.17	6.79

[Examples](#)

Examples

Tables and Floats

Table 7.4: Plant data for both units.

```
\medskip
\begin{tabular}{@{}lr@{.}lrl@{}}
\hline
&\multicolumn{2}{c}{$\quad$ Unit 1} &
\multicolumn{2}{c}{$\quad$ Unit 2}\\
\hline
Fresh feed flow rate, kg/s & $\quad$ 16&782 & $\quad$ 13.476\\
Recycle H2O flow rate, kg/s
& 2&108 & 2.111\\
Combined feed ratio, CFR&1&1256&1.1566\\
Air feed temperature, K&436&~&433\\
Hydrogen in coke, wt\%&17&6.79\\
\hline
\end{tabular}
```

TeX/LaTeX Tools

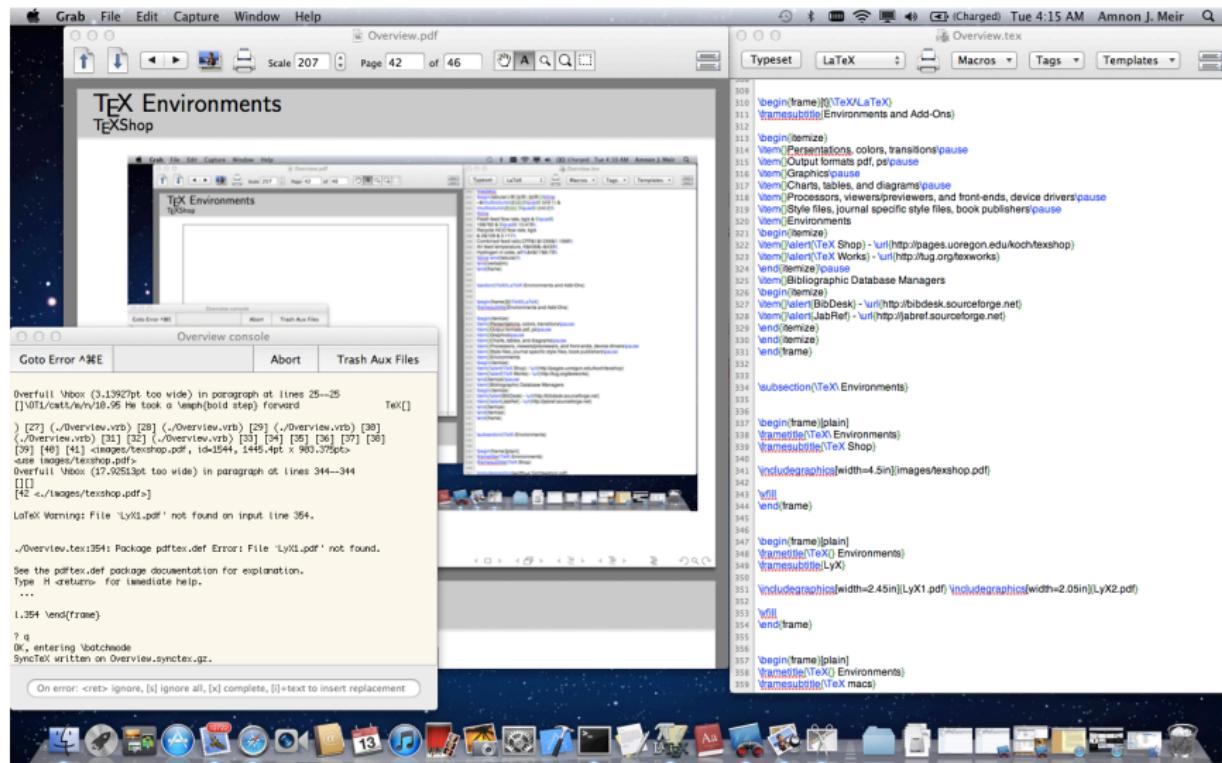
Environments and Add-Ons

- Presentations, colors, transitions
- Output formats pdf, ps
- Graphics
- Charts, tables, and diagrams
- Processors, viewers/previewers, and front-ends, device drivers
- Style files, journal specific style files, book publishers
- Environments
 - **TeXShop** - <http://pages.uoregon.edu/koch/texshop>
 - **TeXWorks** - <http://tug.org/texworks>
- Bibliographic Database Managers
 - **BibDesk** - <http://bibdesk.sourceforge.net>
 - **JabRef** - <http://jabref.sourceforge.net>

TEX Environments

TEX Environments

TEXShop



TeX Environments

TeX Environments

Environments/front-ends

- **TeXShop** - <http://pages.uoregon.edu/koch/texshop>
TeXShop is a TeX previewer for Mac OS X
- **TeXWorks** - <http://tug.org/texworks> TeXworks project is an effort to build a simple TeX front-end. It is deliberately modeled on TeXShop for Mac OS X
- **LyX** - <http://www.lyx.org> LyX is a document processor that encourages an approach to writing based on the structure of your documents (WYSIWYM; what you see is what you mean) and not simply their appearance (WYSIWYG; what you see is what you get)
- **TeXmacs** - <http://www.texmacs.org> TeXmacs is a WYSIWYW (what you see is what you want) editing platform with special features for scientist

Bibliographic Database Managers

Bibliographic Databases

BibDesk

Screenshot of BibDesk application interface showing a bibliography database.

Toolbar: Action, New, Edit, Delete, TeX Preview, MathTools.bib, Search, Cite Drawer.

Left Sidebar:

- GROUPS:** Lib... (38)
- EXTERNAL:** Web (Empty)
- SMART**
- STATIC**
- KEYWORDS:** Em... (38)

Table View: Displays a list of publications with columns: Keyword, BibTeX, Cite Key, Title, and a small preview icon.

Keyword	BibTeX	Cite Key	Title
url	AMS2009	Mathscinet Mathematical Reviews on the Web	1
article	Boas1981	Can We Make Mathematics Intelligible?	1
article	Folland1998	Reviews: Handbook of Writing for the Mathematical Sciences // A Primer of Mathematical Writing (article)	1
book	Gillman1987	Writing Mathematics Well: A Manual for Authors	1
book	Goossens1993	The LaTeX Web Companion: Integrating TeX, HTML, and JavaScript	1
book	Goossens2003	The LaTeX Graphics Companion	2
book	Gratzer2007	More Math Into \LaTeX	2
article	Gratzer2009a	What Is New in \LaTeX? I. Breaking Free	2
article	Gratzer2009b	What Is New in \LaTeX? II. \TeX Implementations	2
article	Gratzer2009c	What Is New in \LaTeX? III. Formatting References	2
book	Griffiths1997	Learning \LaTeX	1
article	Hefferon2009	The TEX Family in 2009	2

Preview Panel: Shows details for the publication "Reviews: Handbook of Writing for the Mathematical Sciences // A Primer of Mathematical Writing" by Gerald B. Folland.

Details:

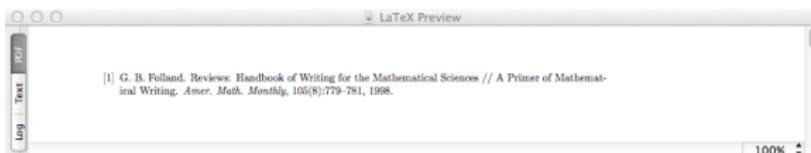
- Author:** Gerald B. Folland
- Journal:** Amer. Math. Monthly
- Year:** 1998
- Volume:** 105
- Number:** 8
- Pages:**

Bottom status bar: 38 publications, 100% zoom.

Bibliographic Database Managers

Bibliographic Databases

BibDesk



A screenshot of the BibDesk application interface showing a detailed view of a citation entry. The citation details are as follows:

Cite Key	Folland1998	Type	article
Author	Gerald B. Folland		
Title	Reviews: [H]andbook of [W]riting for the [M]athematical [S]ciences //		
Journal	Amer. Math. Monthly		
Year	1998		
Volume	105		
Number	8		
Pages	779--781		
Month			
Keywords			
Url	http://www.jstor.org/stable/2589013		

To the right of the citation details, there is a preview pane showing a snippet of LaTeX code and a URL link:

http://www.jstor.org/sta...

Below the preview pane, there is a small image of a person's face and the name "G. B. Folland".

References I

-  AMS.
Mathscinet mathematical reviews on the web.
-  R. P. Boas.
Can we make mathematics intelligible?
Amer. Math. Monthly, 88(10):727–731, 1981.
-  T. A. Davis.
MATLAB Primer.
Chapman & Hall/CRC, Boca Raton, FL, eighth edition, 2010.
-  G. B. Folland.
Reviews: *Handbook of Writing for the Mathematical Sciences*
// *A Primer of Mathematical Writing*.
Amer. Math. Monthly, 105(8):779–781, 1998.

References II

-  L. Gillman.
Writing Mathematics Well: A Manual for Authors.
The Mathematical Association of America, 1987.
-  M. Goossens, F. Mittelbach, S. Rahtz, D. Roegel, and H. Voss.
The LaTeX Graphics Companion.
Addison-Wesley Professional, second edition, 2007.
-  M. Goossens, S. Rahtz, E. M. Gurari, R. Moore, and R. S. Sutor.
The LaTeX Web Companion: Integrating TeX, HTML, and XML.
Addison-Wesley Professional, 1999.

References III

-  G. Grätzer.
More Math Into L^AT_EX.
Springer, 4th edition, 2007.
-  G. Grätzer.
What is new in L^AT_EX? I. Breaking free.
Notices Amer. Math. Soc., 56(1):52–54, 2009.
-  G. Grätzer.
What is new in L^AT_EX? II. T_EX implementations, evolution or revolution.
Notices Amer. Math. Soc., 56(5):627–629, 2009.
-  G. Grätzer.
What is new in L^AT_EX? III. Formatting references.
Notices Amer. Math. Soc., 56(8):954–956, 2009.

References IV

-  D. F. Griffiths and D. J. Higham.
Learning L^AT_EX.
Society for Industrial and Applied Mathematics (SIAM),
Philadelphia, PA, 1997.
-  J. Hefferon and K. Berry.
The tex family in 2009.
Notices Amer. Math. Soc., 56(3):348–354, 2009.
-  R. Hersh.
Math lingo vs. plain english: Double entendre.
Amer. Math. Monthly, 104(1):48–51, 1997.

References V

-  D. J. Higham and N. J. Higham.
MATLAB guide.
Society for Industrial and Applied Mathematics (SIAM),
Philadelphia, PA, second edition, 2005.
-  N. J. Higham.
Handbook of writing for the mathematical sciences.
Society for Industrial and Applied Mathematics (SIAM),
Philadelphia, PA, second edition, 1989.
-  A. Jackson.
Chinese acrobatics, an old-time brewery, and the “much
needed gap”: The life of *Mathematical Reviews*.
Notices Amer. Math. Soc., 44(3), 1997.

References VI



D. E. Knuth.

Computers & Typesetting, Volume A: The TeXBook,
volume A.

Addison-Wesley Professional, 1986.



D. E. Knuth.

Computers & Typesetting, Volume B: TeX: The Program,
volume B.

Addison-Wesley Professional, 1986.



D. E. Knuth.

Computers & Typesetting, Volume C: The Metafont Book.

Addison-Wesley Professional, 1986.

References VII

-  D. E. Knuth.
Computers & Typesetting, Volume D: Metafont: The Program.
Addison-Wesley Professional, 1986.
-  D. E. Knuth.
Computers & Typesetting, Volume E: Computer Modern Typefaces.
Addison-Wesley Professional, 1986.
-  D. E. Knuth, T. Larrabee, and P. M. Roberts.
Mathematical Writing.
Number 14 in MAA Notes. The Mathematical Association of America, 1989.

References VIII

-  H. Kopka and P. W. Daly.
Guide to LaTeX.
Addison-Wesley Professional, fourth edition, 2004.
-  S. G. Krantz.
A Primer of Mathematical Writing.
American Mathematical Society, Providence, RI, 1997.
-  S. G. Krantz.
A mathematician's survival guide: Graduate school and early career development.
American Mathematical Society, Providence, RI, 2003.
-  S. G. Krantz.
Mathematical Publishing: A Guidebook.
American Mathematical Society, Providence, RI, 2005.

References IX

-  S. G. Krantz.
How to write your first paper.
Notices Amer. Math. Soc., 54(11):1507–1511, 2007.
-  L. Lamport.
LaTeX: A Document Preparation System.
Addison-Wesley Professional, second edition, 1994.
-  Maple.
Maplesoft documentation center.
-  Mathworks.
Documentation for mathworks products.

References X

-  T. Merz.
Web Publishing with Acrobat/PDF.
Springer, Berlin, 1998.
-  F. Mittelbach, J. Braams, D. Carlisle, and C. Rowley.
The LaTeX Companion.
Addison-Wesley Professional, second edition, 2004.
-  T. Oetiker, H. Partl, I. Hyna, and E. Schlegl.
The not so short introduction to $\text{\LaTeX} 2_{\varepsilon}$. Or $\text{\LaTeX} 2_{\varepsilon}$ in 141 minutes.
-  R. Seroul and S. Levy.
A Beginner's Book of TeX.
Springer-Verlag, New York, NY, 1995.
Corrected third printing.

References XI

-  N. E. Steenrod, P. R. Halmos, M. M. Schiffer, and J. A. Dieudonné.
How to Write Mathematics.
American Mathematical Society, Providence, RI, 1973.
-  N. Walsh.
Making TeX Work.
O'Reilly & Associates, Inc., Sebastopol, CA, 1994.
-  YMN.
Young mathematicians network.