Duke University Press

Platform Guide

September 2023

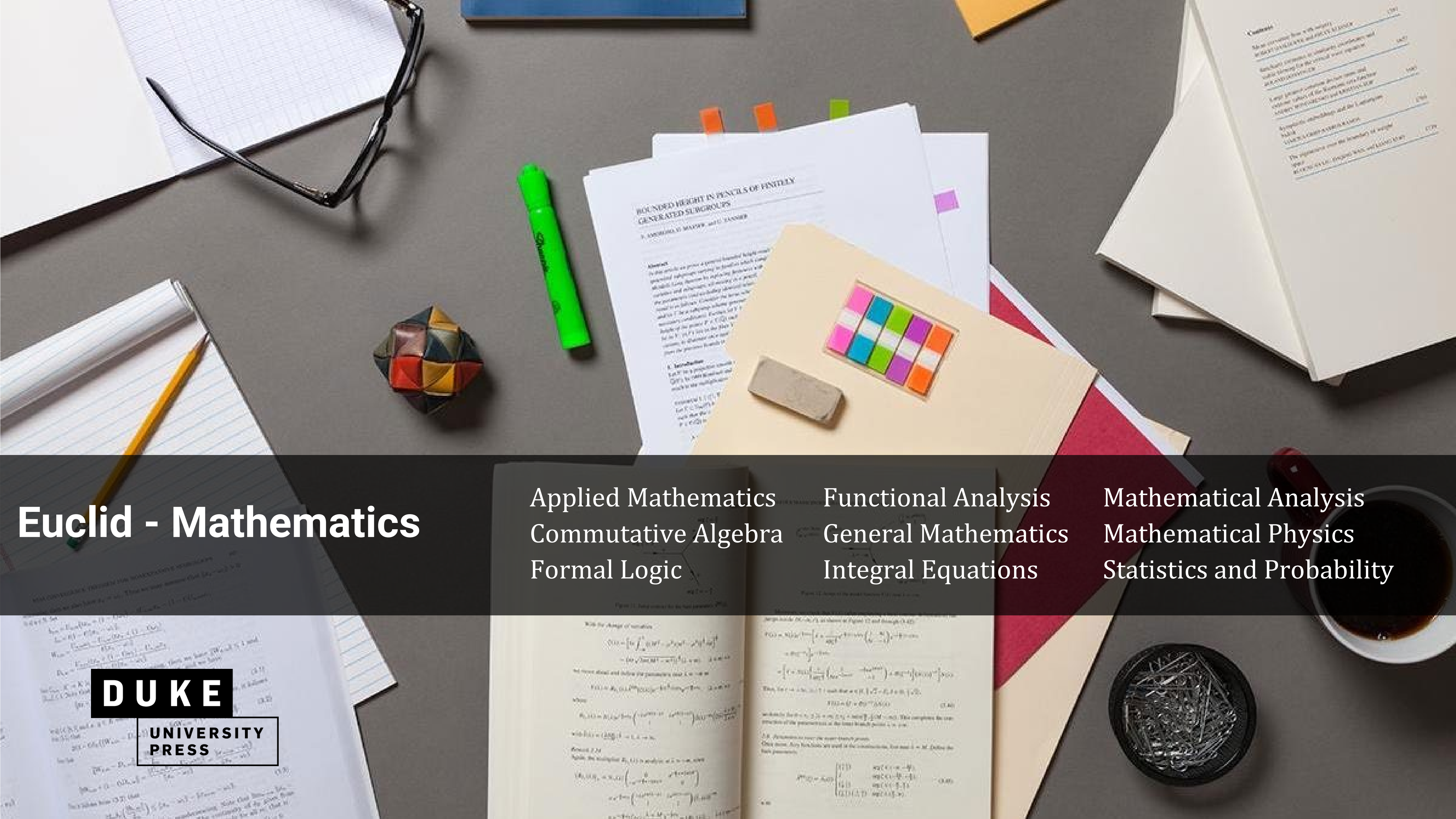
DUKE UNIVERSITY PRESS

Two Platforms

- Duke University Press content hosted on two platforms
  - Humanities and social sciences – READ platform (Silverchair) - https://read.dukeupress.edu/
  - Math – Euclid platform (SPIE) – https://projecteuclid.org/

- Features of both READ and Euclid:
  - PDF format for book chapters and journal articles for all titles
  - Table of contents alerts for new issues
  - Perpetual access to current content
  - Term access to all back issues during the year of purchase
  - No ongoing maintenance fees
  - DRM-free access and printing
  - Advanced full-text searching via keyword, author, and DOI
  - Full mobile optimization

DUKE UNIVERSITY PRESS



Euclid - Mathematics

- Applied Mathematics
- Commutative Algebra
- Formal Logic
- Functional Analysis
- General Mathematics
- Integral Equations
- Mathematical Analysis
- Mathematical Physics
- Statistics and Probability

DUKE UNIVERSITY PRESS

Product Overview

- ***Duke Mathematical Journal*** One of the world's top ten mathematics journals
- ***DMJ100*** An archive of the first 100 volumes of *DMJ*, 4,830 articles published from 1935 to 1999
- **Euclid Prime collection** 31 peer-reviewed journals in 2024 from a variety of publishers

DUKE UNIVERSITY PRESS

EUCLID prime

DMJ 100 DUKE MATHEMATICAL JOURNAL

Euclid Prime

- 31 titles in 2024
- Journals published by small societies and university departments
- International journals based in Japan, Egypt, Senegal, United States, Spain, Belgium
- Hosted on the Project Euclid platform

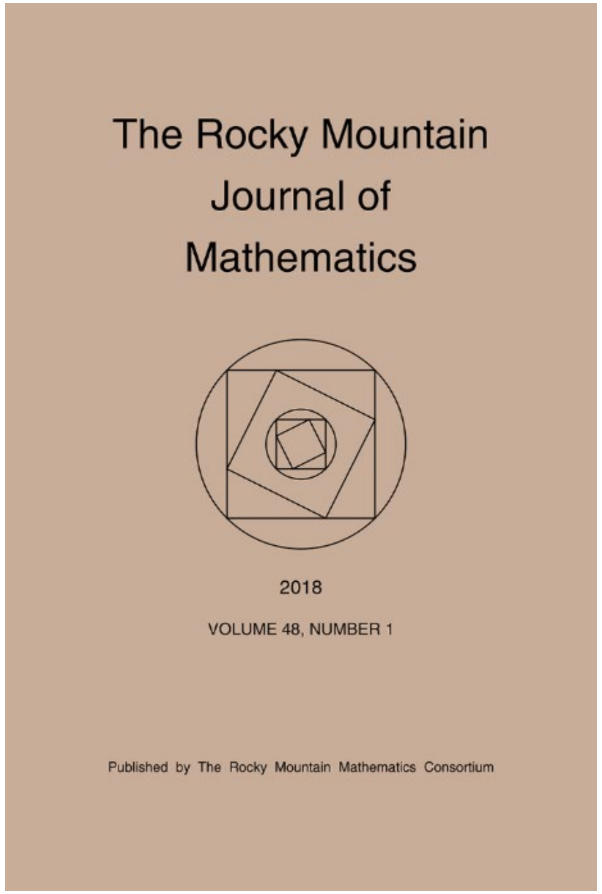
- Subjects
  - *Applied Mathematics*
  - *Commutative Algebra*
  - *Formal Logic*
  - *Functional Analysis*
  - *General Mathematics*
  - *Integral Equations*
  - *Mathematical Analysis*
  - *Mathematical Physics*
  - *Probability*

DUKE UNIVERSITY PRESS

EUCLID prime

Euclid Prime Facts

- Unique titles
  - not available in any other aggregations
- Leading journals (with 2019 impact factor):
  - *Rocky Mountain Journal of Mathematics* (0.464)
  - *Notre Dame Journal of Formal Logic* (0.554)
  - *Publicacions Matemàtiques* (1.238)
  - *Kodai Mathematical Journal* (0.311)
  - *Tokyo Journal of Mathematics* (0.216)
- Annual subscription



DUKE UNIVERSITY PRESS

EUCLID prime

Project Euclid Platform Features

- Platform designed specifically for math and well-integrated with mathematical tools
- A nonprofit, university-based online hosting platform managed by Duke University Press
- Migration to upgraded platform in early 2021, developed by SPIE
- **Over 80% of content on Project Euclid is open access**

zbMATH the first resource for mathematics

AMERICAN MATHEMATICAL SOCIETY MathSciNet Mathematical Reviews

MathJax

DUKE UNIVERSITY PRESS

EUCLID prime

Project Euclid Platform Features

ABOUT | FIRST PAGE | CITED BY | REFERENCES

DOWNLOAD PAPER | SAVE TO MY LIBRARY

GET CITATION

Abstract

We prove that any length metric space homeomorphic to a 2-manifold with boundary, also called a length surface, is the Gromov–Hausdorff limit of polyhedral surfaces with controlled geometry. As an application, using the classical uniformization theorem for Riemann surfaces and a limiting argument, we establish a general “one-sided” quasiconformal uniformization theorem for length surfaces with locally finite Hausdorff 2-measure. Our approach yields a new proof of the Bonk–Kleiner theorem characterizing Ahlfors 2-regular quasispheres.

Citation

Download Citation

Dimitrios Ntalampekos. Matthew Romney. "Polyhedral approximation of metric surfaces and applications to uniformization." Duke Math. J. 172 (9) 1673 - 1734, 15 June 2023. https://doi.org/10.1215/00127094-2022-0061

Information

Received: 19 July 2021; Revised: 25 February 2022; Published: 15 June 2023

First available in Project Euclid: 4 May 2023

MathSciNet: MR4608329

zbMATH: 07714222

Digital Object Identifier: 10.1215/00127094-2022-0061

Subjects:

Primary: 53C45

Secondary: 30C65 , 53A05

Keywords: Gromov–Hausdorff convergence , length space , metric surface , quasiconformal mapping , triangle , uniformization

< Previous Article | Next Article >

Duke Math. J.

Vol.172 • No. 9 • 15 June 2023

PURCHASE IN PRINT

Duke University Press

DUKE UNIVERSITY PRESS

DUKE UNIVERSITY PRESS

Project Euclid Platform Features

zbMATH Open

Documents | Authors | Serials | Software | Classification | Formulæ

Structured Search

an:07714222

Fields | Operators

Help

Ntalampekos, Dimitrios; Romney, Matthew

Polyhedral approximation of metric surfaces and applications to uniformization. (English)

Zbl 07714222

Duke Math. J. 172, No. 9, 1673-1734 (2023).

The authors show that any length surface is the Gromov-Hausdorff limit of polyhedral surfaces with controlled geometry. A length surface is a length metric space homeomorphic to a 2-manifold, with or without boundary. A polyhedral surface is formed by gluing locally finitely many planar polygonal faces isometrically along edges, equipped with the induced length metric. A sequence of maps $f_n : X_n \to Y_n$, $n \in \mathbb{N}$, between metric spaces is an approximately isometric sequence if f_n is a ϵ_n-isometry, $\epsilon_n > 0$, for all $n \in \mathbb{N}$, and $\epsilon_n \to 0$ as $n \to \infty$. For any metric space, the Hausdorff 2-measure of a set $A \subset X$ is defined by $\mathcal{H}^2(A) = \lim_{\delta\to\infty} \mathcal{H}^2_\delta(A)$, where $\mathcal{H}^2_\delta(A) = \inf\{\sum_{j=1}^\infty C\operatorname{diam}(A_j)^2\}$, $C > 0$, and the infimum is taken over all collections of sets $\{A_j\}_{j=1}^\infty$, which $A \subset \bigcup_{j=1}^\infty A_j$ and $\operatorname{diam}(A_j) < \delta$ for each j. The authors prove the following theorems.

Theorem. Let X be a length surface. There exists a sequence of polyhedral surfaces $(X_n)_{n=1}^\infty$ each homeomorphic to X such that the following properties hold for $K \geq 1$:

(1) There exists an approximately isometric sequence of maps $f_n : X_n \to X$, $n \in \mathbb{N}$. Moreover, each f_n is a topological embedding;
(2) For each compact set $A \subset X$, $\limsup_{n\to\infty} \mathcal{H}^2(f_n^{-1}(A)) \leq K\mathcal{H}^2(A)$.

For $K \geq 1$, a mapping $h : X \to Y$ between two metric spaces of locally finite Hausdorff 2-measures is weakly K-quasiconformal if it is continuous, surjective and monotone and if it satisfies the modulus inequality $\operatorname{mod}\Gamma \leq K \operatorname{mod} h(\Gamma)$ for every path family Γ in X. Let $\mathbb{D}$ denote the open unit disk in $\mathbb{C}$ and $\hat{\mathbb{C}}$ is the Riemann sphere.

Theorem. Let X be a length surface of locally finite Hausdorff 2-measure homeomorphic to $\hat{\mathbb{C}}$, $\overline{\mathbb{D}}$ or $\mathbb{C}$. Then there is a weakly K-quasiconformal mapping $h : \Omega \to X$ for $K = 4/\pi$, where Ω is either $\hat{\mathbb{C}}$, $\overline{\mathbb{D}}$ or $\mathbb{D}$ or $\mathbb{C}$, respectively.

Also, the authors replace the definition of weak quasiconformality by other statements.

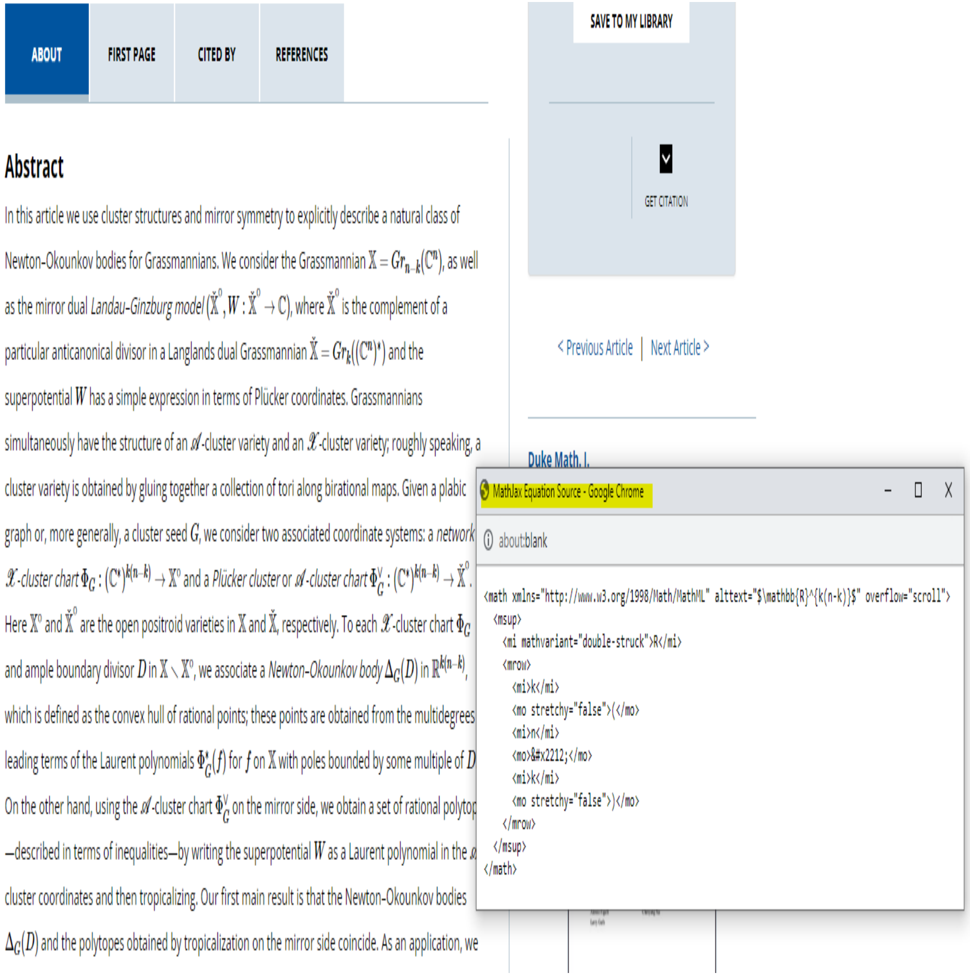
Reviewer: Dmitri V. Prokhorov (Saratov)

MSC:

Cited in 3 Documents

DUKE UNIVERSITY PRESS

Project Euclid Platform Features



DUKE UNIVERSITY PRESS

Project Euclid Platform Features

PROJECT euclid

BROWSE ▾ RESOURCES ▾ ABOUT ▾

ADVANCED SEARCH

Search

Home > Subjects > Applied Mathematics

Browse Project Euclid

Browse Project Euclid's growing database of titles, publishers, and subject categories.

TITLES | PUBLISHERS | SUBJECTS

Applied Mathematics (14)	Computer Science (3)
Logic (4)	Mathematical Physics (5)
Mathematics (54)	Statistics and Probability (25)

Abstract and Applied Analysis

Publisher: Hindawi

Abstract and Applied Analysis is devoted exclusively to the publication of high-quality research papers in the fields of abstract and applied analysis.

Current Issue | All Issues

Advances in Differential Equations

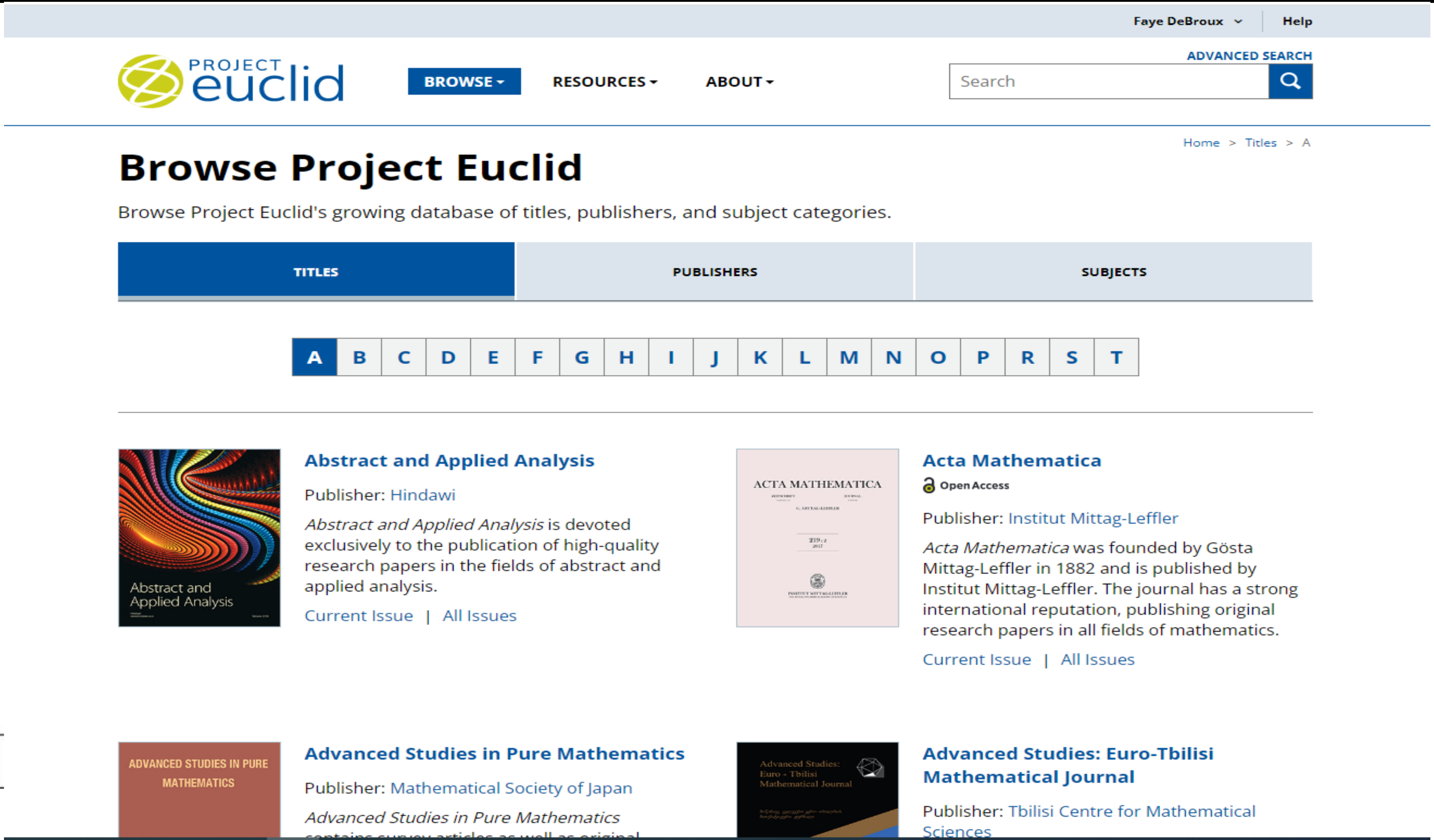
Publisher: Khayyam Publishing, Inc.

Advances in Differential Equations will publish carefully selected, longer research papers on mathematical aspects of differential equations and on applications of the mathematical theory to issues arising in the sciences and in engineering.

Current Issue | All Issues

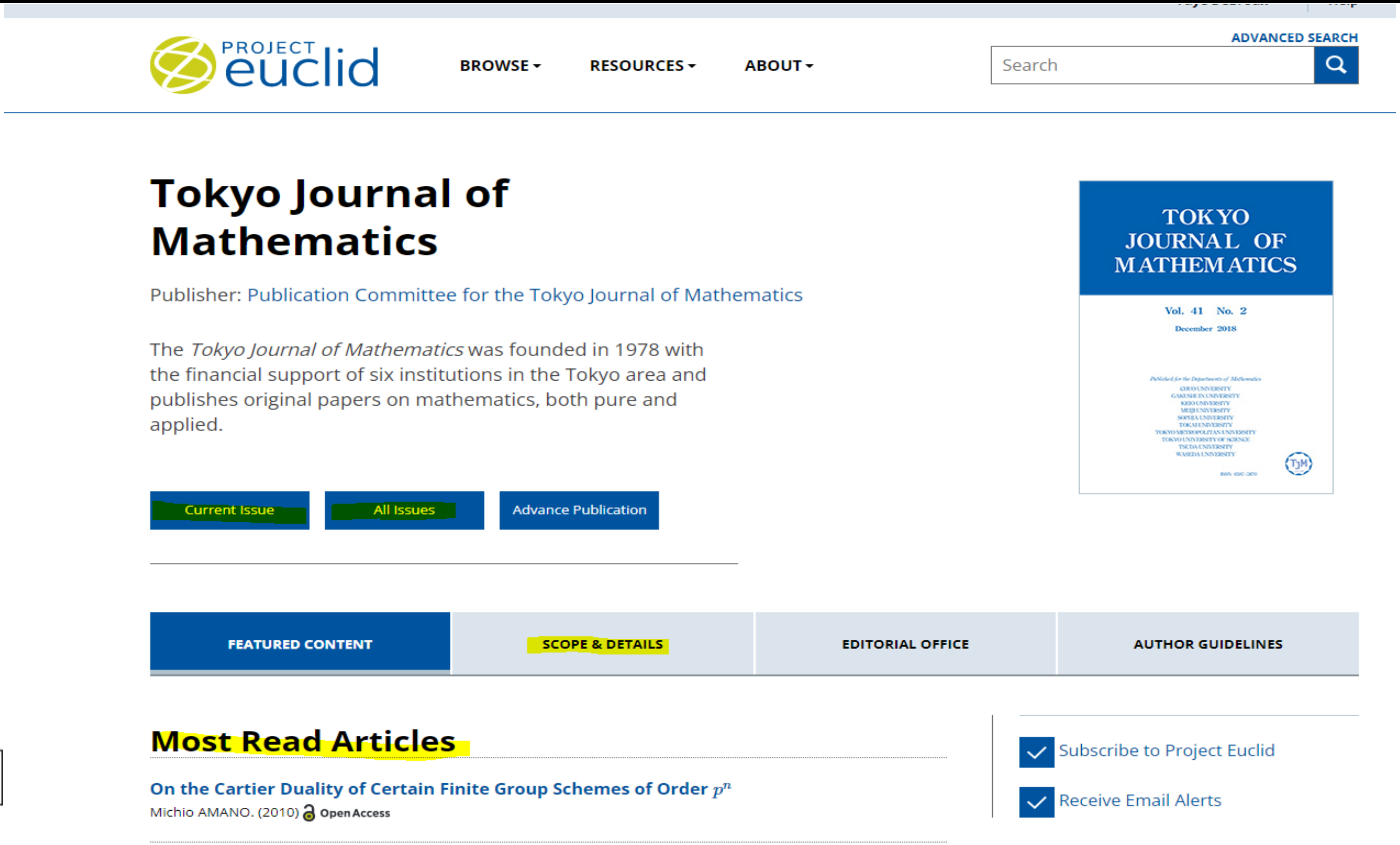
DUKE UNIVERSITY PRESS

Project Euclid Platform Features



DUKE UNIVERSITY PRESS

Project Euclid Platform Features



DUKE UNIVERSITY PRESS

Project Euclid Platform Features

Most Read Articles

On the Cartier Duality of Certain Finite Group Schemes of Order p^n
Michio AMANO. (2010) Open Access

Lefschetz Theory, Geometric Thom Forms and the Far Point Set
Mihail FRUMOSU, et al. (2004) Open Access

An Example of an Almost Kähler Manifold with Pointwise Constant Holomorphic Sectional Curvature
Takuji SATO. (2000) Open Access

On Graded Rings, II ($\mathbf{Z}^n$-graded rings)
Shiro GOTO, et al. (1978) Open Access

Generalized Besov Spaces and Their Applications
Takeshi KAWAZOE, et al. (2012) Open Access

Subscribe to Project Euclid

Receive Email Alerts

Project Euclid Platform Features

Home > Journals > Tokyo J. Math. > Volume 23 > Issue 2 > Article

Open Access

December 2000

An Example of an Almost Kähler Manifold with Pointwise Constant Holomorphic Sectional Curvature

Takuji SATO

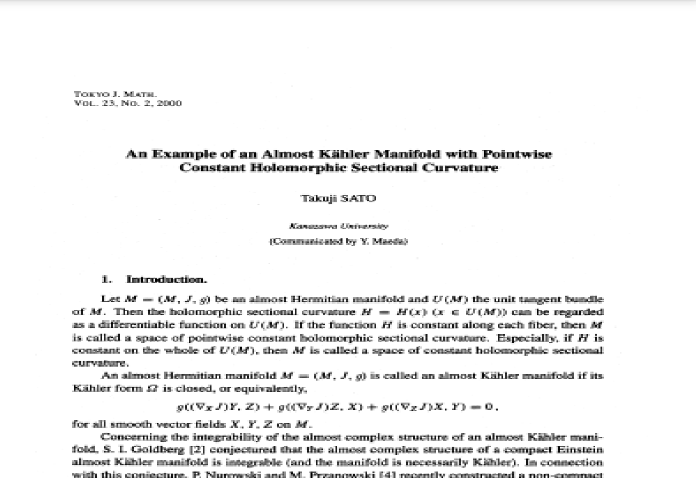
Tokyo J. Math. 23(2): 387-401 (December 2000). DOI: 10.3836/tjm/1255958678

ABOUT | FIRST PAGE | CITED BY

First Page PDF

PreviewFirstPage 1 / 1 — 50% +

1



TOKYO J. MATH.
VOL. 23, NO. 2, 2000

An Example of an Almost Kähler Manifold with Pointwise Constant Holomorphic Sectional Curvature

Takuji SATO

Kanazawa University
(Communicated by Y. Maeda)

1. Introduction.

Let $M = (M, J, g)$ be an almost Hermitian manifold and $U(M)$ the unit tangent bundle of M. Then the holomorphic sectional curvature $H = H(x)$ ($x \in U(M)$) can be regarded as a differentiable function on $U(M)$. If the function H is constant along each fiber, then M is called a space of pointwise constant holomorphic sectional curvature. Especially, if H is constant on the whole of $U(M)$, then M is called a space of constant holomorphic sectional curvature.

An almost Hermitian manifold $M = (M, J, g)$ is called an almost Kähler manifold if its Kähler form Ω is closed, or equivalently,

$$g((\nabla_X J)Y, Z) + g((\nabla_Y J)Z, X) + g((\nabla_Z J)X, Y) = 0,$$

for all smooth vector fields X, Y, Z on M.

Concerning the integrability of the almost complex structure of an almost Kähler manifold, S. I. Goldberg [2] conjectured that the almost complex structure of a compact Einstein almost Kähler manifold is integrable (and the manifold is necessarily Kähler). In connection with this conjecture, P. Nurowski and M. Przanowski [4] recently constructed a non-compact

JOURNAL ARTICLE
15 PAGES

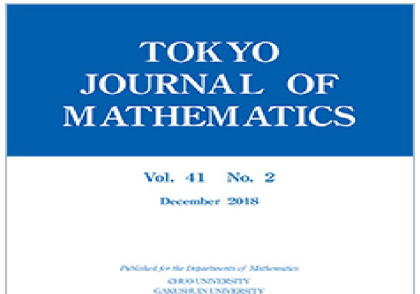
DOWNLOAD PDF

SAVE TO MY LIBRARY

GET CITATION

< Previous Article | Next Article >

Tokyo J. Math.
Vol.23 • No. 2 • December 2000



Project Euclid Platform Features

SEARCH RESULTS

1,269 results found for: ☒ (calculus)

Save Search | View Saved Searches

REFINE BY

SEARCH WITHIN RESULTS

YEAR -

Range

< >

1973 2023

Single Year

YYYY

PUBLICATION TITLE -

Start typing title

View all titles

☒ 1973-2023

Sort By Relevance Display 25 per page **1,269 results**

1 January 2007 Open Access

Calculus of functors, operad formality, and rational homology of embedding spaces

Gregory Arone, Pascal Lambrechts, Ismar Volić

Acta Mathematica Vol. 199, Issue 2, (Jan 2007) , pgs 153-198

KEYWORDS: calculus of functors, embedding calculus, embedding spaces, operad formality, orthogonal calculus

Read Abstract +

DOWNLOAD PAPER

SAVE TO MY LIBRARY

1 January 2004 Open Access

Quantum stochastic calculus with maximal operator domains

Stéphane Attal, J. Martin Lindsay

The Annals of Probability Vol. 32, Issue 1A, (Jan 2004) , pgs 488-529

KEYWORDS: chaotic representation property, Fock space, Itô calculus, Malliavin calculus, noncausal, noncommutative probability, Quantum stochastic

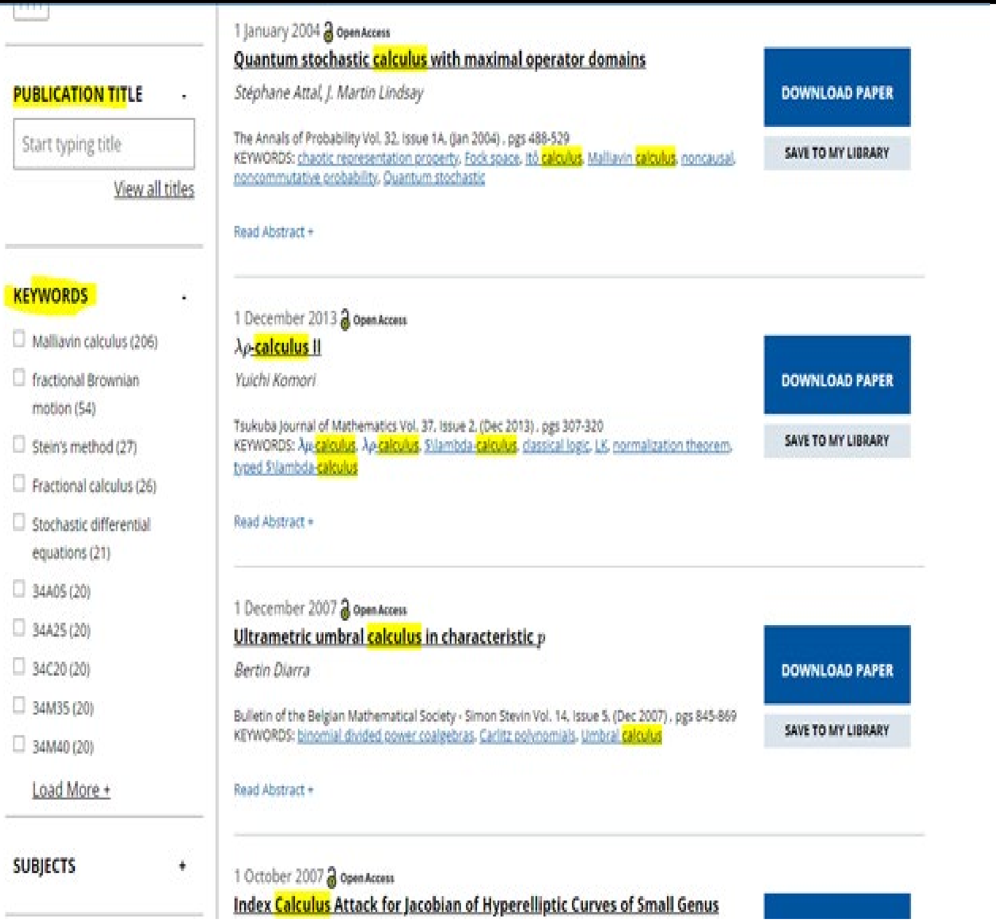
Read Abstract +

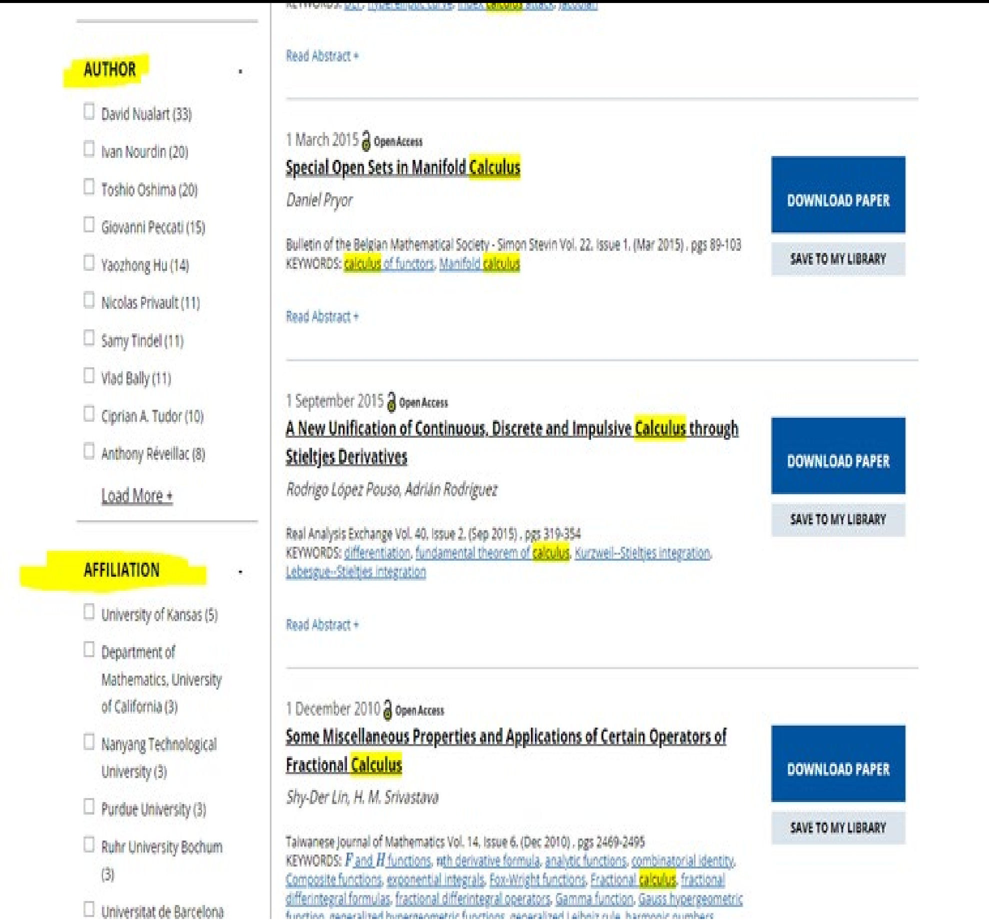
DOWNLOAD PAPER

SAVE TO MY LIBRARY

DUKE UNIVERSITY PRESS

Project Euclid Platform Features





DUKE UNIVERSITY PRESS

Thank you!

For further details, please contact:

Dup_libraryrelations@duke.edu

DUKE UNIVERSITY PRESS