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Publications

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Unique continuation property for dirac operators, revisited

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Boundary reduction of spectral invariants and unique continuation property

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Facts and fiction of the Kosovo war: new qualities of warfare?

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Symplectic functional analysis and spectral invariants

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Symplectic functional analysis and spectral invariants

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Determinants, manifolds with boundary and dirac operators

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Mathematik und die Medien: Kommentar zu einem komplizierten Verhältnis

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The Maslov index: a functional analytical definition and the spectral flow formula

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The zeta-determinant and canonical determinant on the Grassmannian in dimension one

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Grassmannian and chiral anomaly

Booss-Bavnbek, B., 1997, In: *Journal of Geometry and Physics*. 22, p. 219-244

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Go on with environmental modeling?

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Grassmannian and chiral anomaly

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Memories and memorials

Booss-Bavnbek, B., 1995, In: Mathematical Intelligencer. 17, 2, p. 15-20

Mode - prediction - action: mathematics induced changes in science, technology and public thinking

Booss-Bavnbek, B., 1995, In: Res Humanae. 1, p. 113-172

The Maslov index: a functional analytical definition and the spectral flow formula

Booss-Bavnbek, B. & Furutani, K., 1995, Roskilde: Roskilde Universitet. (Tekster fra IMFUFA; No. 305).

Perspectives on Teichmüller and the Jahresbericht

Booss-Bavnbek, B., 1994, 2 ed. Roskilde: Roskilde Universitet. 76 p. (Tekster fra IMFUFA; No. 275).

Dirac operators and manifolds with boundary

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Partitioned manifolds and invariants in dimensions 2, 3, and 4

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Perspectives on Teichmüller and the jahresbericht addendum to Schappacher, Scholz, et al.

Booss-Bavnbek, B., 1993, Roskilde: Roskilde Universitet. (Tekster fra IMFUFA; No. 249).

Pseudo-differential projections and the topology of certain spaces of elliptic boundary value problems

Booss-Bavnbek, B. & Wojciechowski, K. P., 1989, In: Communications in Mathematical Physics. 121, 1, p. 1-99 p.

Vurdering af matematisk teknologi

Booss-Bavnbek, B., Plate, G., Jensen, J. H. & Bohle-Carbonell, M., 1988, Roskilde: Roskilde Universitet, 94 p.

Desuspension of splitting elliptic symbols - addendum

Booss-Bavnbek, B. & Wojciechowski, K. P., Jan 1987, In: Annals of Global Analysis and Geometry. 5, 1, p. 87-101 p.

Machbarkeit nichtbeherrschbarer Technik durch Fortschritte in der Erkennbarkeit der Natur

Booss-Bavnbek, B. & Bohle-Carbonell, M., 1987, Roskilde: Roskilde Universitet, 31 p.

Pseudo-differential projections and the topology of certain spaces of elliptic boundary value problems

Booss-Bavnbek, B. & Wojciechowski, K. P., 1987, Roskilde: Roskilde Universitet, 17 p.

The Calderón projector for operators with splitting elliptic symbols

Booss-Bavnbek, B. & Wojciechowski, K. P., 1987, Roskilde: Roskilde Universitet, 23 p.

Desuspension of splitting elliptic symbols 11

Booss-Bavnbek, B. & Wojciechowski, K. P., 1985, Roskilde: Roskilde Universitet, p. 63.

Von Mathematik und Krieg: über die Bedeutung von Rüstung und militärischen Anforderungen für die Entwicklung der Mathematik in Geschichte und Gegenwart

Booss-Bavnbek, B. & Høyrup, J., 1984, Marburg. (Schriftenreihe Wissenschaft und Frieden ; No. 1984:1). (Tekster fra IMFUFA; No. 64).

Activities

Discrete Mathematics and Biology: the legacy of Andreas Dress

Booss-Bavnbek, B. (Participant)
26 Sept 2024 → 27 Sept 2024

Kolloquium „History of Mathematics and the Didactic Of Mathematics“
Booss-Bavnbek, B. (Participant)
23 Feb 2024

Nankai University
Booss-Bavnbek, B. (Visiting researcher)
23 Nov 2023 → 4 Dec 2023

Mathematisches Kolloquium Potsdam
Booss-Bavnbek, B. (Speaker)
25 Oct 2023

University of Copenhagen
Booss-Bavnbek, B. (Visiting researcher), Zhu, C. (Visiting researcher) & Møller, N. M. (Visiting researcher)
10 Aug 2023

34th International Workshop on Operator Theory and its Applications
Booss-Bavnbek, B. (Speaker)
31 Jul 2023 → 4 Aug 2023

Institut für Mathematik Universität Potsdam Campus Golm, Haus 9
Booss-Bavnbek, B. (Visiting researcher)
21 Jul 2023

Martin-Luther-University Halle-Wittenberg
Booss-Bavnbek, B. (Visiting researcher)
18 Jul 2023 → 20 Jul 2023

Chaofeng Zhu
Booss-Bavnbek, B. (Host)
16 Jul 2023 → 15 Aug 2023

29th Nordic Congress of Mathematicians
Booss-Bavnbek, B. (Speaker)
3 Jul 2023 → 6 Jul 2023

IMFUFA-seminar
Booss-Bavnbek, B. (Speaker)
22 Mar 2023

Differential Geometry and its Applications (Journal)
Booss-Bavnbek, B. (Editor)
2023 → 2024

Publicacions Matemàtiques (Journal)
Booss-Bavnbek, B. (Editor)
2023 → 2024

2nd Nordic Biomathematics Days
Ottesen, J. T. (Organizer), Pedersen, R. K. (Organizer), Berrig, C. (Speaker), Stiehl, T. (Speaker), Booss-Bavnbek, B. (Speaker) & Andersen, M. (Organizer)
9 May 2022 → 10 May 2022

Interfaces between Geometric Analysis and Mathematical Physics

Booss-Bavnbek, B. (Participant)

7 May 2018 → 11 May 2018

Crossroads in the process of mathematization exemplified by early astronomy

Booss-Bavnbek, B. (Speaker)

11 Oct 2017

International workshop on graphs, semigroups, and semigroup acts

Booss-Bavnbek, B. (Participant)

10 Oct 2017 → 13 Oct 2017

Emeriti-Seminar Institut for Naturvidenskab og Miljø

Booss-Bavnbek, B. (Participant)

18 Aug 2017

Analysis and Geometry of Graphs and Manifolds

Booss-Bavnbek, B. (Participant)

31 Jul 2017 → 4 Aug 2017

Interfaces between Geometric Analysis and Mathematical Physics

Booss-Bavnbek, B. (Organizer)

4 Jul 2016 → 8 Jul 2016

Udstilling på RUB "1970ernes vesttyske Berufsverbot: 'Glemte' historie. Om politisk sindelagskontrol i Forbundsrepublikken Tyskland" (in english)

Booss-Bavnbek, B. (Organizer), Englev, K. (Organizer), Johannsen, T. W. (Organizer) & Grothe, M. (Organizer)

11 Apr 2016 → 10 May 2016

Temadag

Booss-Bavnbek, B. (Organizer)

8 Apr 2016

Liv i en matematiseret verden?: Om at tælle, tænke og handle

Booss-Bavnbek, B. (Lecturer)

24 Nov 2015 → 8 Dec 2015

2015 annual meeting of the Deutschen Mathematiker-Vereinigung

Booss-Bavnbek, B. (Organizer)

22 Sept 2015 → 23 Sept 2015

Workshop on geometric and singular analysis

Booss-Bavnbek, B. (Participant)

11 Feb 2015 → 13 Feb 2015

The multi-dimensional Morse-Smale index: Analytic and Geometric Structures, Brainstorming

Booss-Bavnbek, B. (Lecturer)

10 Feb 2015

Elliptic operators on manifolds with boundary and pseudo-differential projections: Dedicated to Matthias Lesch

Booss-Bavnbek, B. (Lecturer)

17 May 2014

Geometric Structures and Spectral Invariants

Booss-Bavnbek, B. (Organizer)
16 May 2014 → 19 May 2014

Geometric and Singular Analysis

Booss-Bavnbek, B. (Speaker)
28 Mar 2014

The Maslov index in symplectic Banach spaces

Booss-Bavnbek, B. (Lecturer)
28 Mar 2014

The *mathematical microscope* in bio-medicine: Organs, populations, metabolic diseases

Booss-Bavnbek, B. (Lecturer)
23 Oct 2009

International Conference on "New Developments in Spectral Theory"

Booss-Bavnbek, B. (Participant)
5 Oct 2009 → 6 Oct 2009

Tokyo University of Science

Booss-Bavnbek, B. (Visiting researcher)
2 Oct 2009 → 8 Oct 2009

MoNa-ansøgningen til *Villum Kann Rasmussen Fund*: Model-based Nanoparticle Labelling of Pancreatic β -cells (MoNa)

Booss-Bavnbek, B. (Participant)
1 Apr 2009 → 30 Sept 2009

REx Workshop "Systems Biology of Regulated Exocytosis in Pancreatic Beta-Cells"

Booss-Bavnbek, B. (Organizer)
16 Feb 2009 → 19 Feb 2009

FP7-NMP Proposal *SCAN*: System for Cellular Analysis by Nanotechnology

Booss-Bavnbek, B. (Participant)
1 Dec 2008 → 31 May 2009

FP7-HEALTH Proposal *REx*: Systems Biology of Regulated Exocytosis in Pancreatic Beta-Cells

Booss-Bavnbek, B. (Participant)
31 Oct 2008 → 28 Feb 2009

Quantum Gravity - An Assessment

Booss-Bavnbek, B. (Speaker)
17 May 2008 → 18 May 2008

FP7-NMP Proposal *CIGN*: Capturing Insulin Granule Dynamics by Nanotechnology

Booss-Bavnbek, B. (Participant)
1 Dec 2007 → 31 Dec 2008

Kriegens neue Qualität

Booss-Bavnbek, B. (Speaker)
8 Oct 1999 → 9 Oct 1999

Intersection indices in Lagrangian analysis and spectral invariants of partitioned manifolds

Booss-Bavnbek, B. (Speaker)

29 Aug 1999 → 3 Sept 1999

Sécurité, liberté et qualité de recherche en modèles mathématiques d'environnement fondé sur les obligations courantes de l'enseignement

Booss-Bavnbek, B. (Speaker)

10 Dec 1998 → 11 Dec 1998

Zukunftsorientierung durch simulationen und modellberechnungen?

Booss-Bavnbek, B. (Speaker)

17 Oct 1995 → 20 Oct 1995

Elliptic boundary problems and chiral symmetry breaking

Booss-Bavnbek, B. (Speaker)

2 May 1995

Model-prediction-action: mathematics induced changes in science, technology and public thinking

Booss-Bavnbek, B. (Speaker)

18 Feb 1995

Press / Media

3/14: Nu skal pi fejres

Booss-Bavnbek, B.

14/03/2014

1 item of Media coverage

3/14: Nu skal pi fejres

Booss-Bavnbek, B.

14/03/2014

1 item of Media coverage

3/14: Nu skal pi fejres: I dag er det pi-dag, og det forunderlige tal fejres over hele kloden. Pi fascinerer, fordi det har uendelig mange decimaler, og fordi det dukker op, ja, utallige steder. Her er et portræt af »den matematiske skønhed«.

Booss-Bavnbek, B.

14/03/2014

1 Media contribution

Ekstotisk matematik giver nyt syn på det uforklarlige

Booss-Bavnbek, B.

05/10/2010

1 item of Media coverage

Ekstotisk mtematik giver nyt syn på det uforklarlige

Booss-Bavnbek, B.

18/10/2010

1 item of Media coverage

Et univers af uforenelige størrelser

Booss-Bavnbek, B.

22/10/2010

1 item of Media coverage

Hvorfor matematikere fejrer pi-dagen året

Booss-Bavnbek, B.

14/03/2015
1 item of Media coverage

Kommunister forbudt i Nazi-lærerværelset

Booss-Bavnbek, B.
24/04/2016
1 item of Media coverage

Lange Haare, kurzer Verstand? Die 68er: Wie sehen Alt-68er am Beginn des Rentenalters die Rebellion von damals? Was haben sie erreicht? Interview und Talkshow mit Prof. Dr. Bernhelm Booß-Bavnbek, Mathematiker, ehemaliger AStA-Vorsitzender Bonn

Booss-Bavnbek, B.
24/11/2007
1 Media contribution

Matematikere vil hjælpe diabetikere

Booss-Bavnbek, B.
15/06/2011
1 item of Media coverage

Systemkritiker: Demokratiet må kunne tåle kritik

Booss-Bavnbek, B.
16/04/2016
1 item of Media coverage

The number π : Interview on π -Day 3/14_15

Booss-Bavnbek, B.
14/03/2015
1 Media contribution

Bernhelm Booß-Bavnbek [booss@ruc.dk] is an emeritus at Roskilde Universitet (Denmark). He was educated at Universität Bonn (Germany) where in 1966 he was elected as president of the AStA (the student council) on a liberal program. He demanded a normalization of the relations to West Germany's eastern neighbors, including a higher appreciation of the scientific results achieved in these countries, and a wider range of possibilities for students to comment and criticize classes and to raise questions – all achievements quite common in Departments of Mathematics, but rather rebellious in humanities, law and economics. He wrote his PhD thesis under Fritz Hirzebruch as adviser and became director of an interdisciplinary center for the mathematization of the individual sciences at Universität Bielefeld (Germany). Without success, he ran for the Federal Parliament and for the Parliament of the state North-Rhine-Westphalia on a ticket of the Communist Party, and earned a Berufsverbot – professional interdiction. In the Western part of the divided Germany that was not so seldom at that time, the 1970s. To continue his academic career he had to leave the Federal Republic of Germany. In 1977, he found a challenging position at the newly founded Roskilde Universitet where he taught and researched since then. Challenging because half of the mathematics and science teaching in Roskilde is not in courses but in student initiated problem-oriented projects, organized by group work and under the supervision of an academic teacher.

Hence, besides of the scheduled rather standard classes, he had to learn something new in each semester in 40 years. Consequently, he earned a wide view on the full range of the history of mathematics and of the use (and misuse) of mathematical models in mathematics supported technology and research fields. While giving his teaching the priority in all these years, he struggled to keep the blood rolling in the umbilical cord connecting him with some of the most advanced segments of modern mathematical research, the geometric analysis and spectral geometry of global boundary value problems for Dirac type operators. He authored several books on index theory, low-dimensional geometry and mathematical physics and edited two anthologies, which became standard in the respective fields, one on Mathematics and War, the other on Systems Theory of Regulated Exocytosis of Pancreatic β Cells. In The Mathematical Intelligencer, he wrote occasionally about these two topics. His most recent book is joint work with ZHU Chaofeng (Tianjin). It is on The Maslov index in symplectic Banach spaces, in press with the Memoirs of the Amer. Math. Soc.. Presently he is working on a textbook *Leben in einer mathematisierten Welt?* [Life in a mathematized world?] to summarize his experiences with project work and mathematics applications - in his German mother tongue.

Since his retirement, he lives and works parts of the year in Italy and in different places of Eastern Europe that are favored by him and his wife, a military historian. To him, having fun with his grandchildren is the best relaxation and the most rewarding use of time.