Brendan Foreman, Ph. D.

Assistant Professor
John Carroll University
Department of Education and Allied Studies
Department of Mathematics and Computer Science

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University Heights, Ohio 44118

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PROFESSIONAL CREDENTIALS

Ph.D., Michigan State University, East Lansing, Michigan, Mathematics, August 1996
B.A., Eastern Michigan University, Ypsilanti, Michigan, Major: mathematics, April 1990

PROFESSIONAL EXPERIENCE

Assistant Professor
Fall 2001-present
Department of Education and Allied Studies
Department of Mathematics and Computer Science
John Carroll University
University Heights, Ohio

Assistant Director, Mathematics Education
Summer 2000-Spring 2001
Center for Science and Mathematics Education
Case Western Reserve University
Cleveland, Ohio

NSF Educational Postdoctoral Fellow, Mathematics Education
Fall 1996-Summer 2000
Case Western Reserve University
Cleveland, Ohio

Program Coordinator
Fall 1995-Spring 1996
Math Enrichment Program
Department of Mathematics
Michigan State University
East Lansing, Michigan

Teaching Assistant
Fall 1990-Summer 1995
Department of Mathematics
Michigan State University
East Lansing, Michigan

CURRENT TEACHING RESPONSIBILITIES

Mathematics content for early childhood education majors

> This is a general course reviewing both instruction and pedagogy of mathematics in the early childhood classroom. Heavy emphasis on discovery and inquiry-based learning.

Mathematics content for middle childhood education mathematics majors

> This is a sequence of two courses, which highlight the content of the mathematics of the middle childhood curriculum through an advanced perspective.

Graduate courses for Cleveland Municipal School District mddle school mathematics teachers

> This is part of the Mathematics and Science Partnership grant awarded to John Carroll University, Cleveland State University, Case Western Reserve University, and the Cleveland Municipal School District by the National Science Foundation. Enrollees in the JCU part of this grant will receive a Masters of Arts in Middle Childhood Mathematics at the end of two years. There are three other JCU mathematics faculty members (M. T. Edwards, D. Norris, and D. Olson) who were also involved with designing this program and teaching its courses.

Middle Childhood education philosophy and instruction

> This is a general education course for all middle childhood education majors, which reviews the history, goals and philosophy of middle grades education.

Introduction to education

This is a general education course that introduces the critical issues in education. There is a heavy field experience component to this course.

PUBLICATIONS

Curvature characterizations of twistor spaces over four-dimensional Riemannian manifolds, *Kodai Mathematical Journal*, **25** (2002), 167-190.

Decompositions and the complex contact structures of Sl(2,C), *Kyungpook Mathematical Journal*, **42**, no. 2 (2002).

Boothby-Wang fibrations on complex contact manifolds*, Differential Geometry and its Applications, **13** (2000), 179-196.*

Complex contact manifolds and hyperkaehler geometry, *Kodai Mathematical Journal*, **23** (2000), 12-26.

Three-dimensional complex homogeneous complex contact manifolds, *Balkan Journal of Geometry and its Applications*, **4** (1999), 53-67.

PRESENTATIONS

Flat immersions in hyperbolic 3-space, Cleveland Geometry/Topology Seminar, Case Western Reserve University, Cleveland, Ohio, April 7, 2003.

Moebius transformations and Sl(2,H), Cleveland Geometry/Topology Seminar, Case Western Reserve University, Cleveland, Ohio, September 30, 2002.

Decompositions and the complex contact structures of Sl(2,C), Special session in complex, contact, and quaternionic geometry, First Joint AMS-UMI Meeting, Pisa, Italy, June 16, 2002.

Twistor spaces over Riemannian four-manifolds, Cleveland Geometry/Topology Seminar, John Carroll University, University Heights, April 3 and 17, 2000.

RESEARCH FUNDING

National Science Foundation Eastern European Program Grant, #INT9903302, Summer 1999-Summer 2002.

National Science Foundation Postdoctoral Fellowship Grant, NSF DMS95-20481, Fall 1996-Summer 2000.

CURRENT RESEARCH INTERESTS

Moebius transformations and quaternionic matrices
Observational and case studies of middle childhood mathematics educators

PROFESSIONAL MEMBERSHIPS

American Mathematical Society
Mathematical Association of America