

XIAORONG SHEN

Associate Professor

Merrimack College
Department of Math.
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PERSONAL DATA

Sex: Female
Citizenship: U.S. citizen

OBJECTIVE

To pursue a career involving teaching and research in an academic setting

EDUCATION

Iowa State University, Ames, Iowa
Ph.D. in Mathematics, 1991
MS. in Mathematics, 1987
Shanghai Normal University, Shanghai, China
B.S. in Mathematics, 1982

RESEARCH INTERESTS

Linear and Multilinear Algebra, Universal Algebra,
Differential Geometry, and Combinatorics

DOCTORAL THESIS

Topic: Comtrans Algebras
Advisor: J.D.H.Smith

TEACHING EXPERIENCE

Assistant Professor, Merrimack College,
1995 – 2000
Associate Professor, Merrimack College.
2000--present
Courses taught:
Real Analysis, Abstract Algebra,
Calculus I, II and III, Discrete Mathematics,
Precalculus, Business Calculus,
Applied College Algebra, Topology and Fractals.
Topics in Algebra.
Visiting Assistant Professor, John Carroll University
1992 - 1995
Courses taught:
Graduate Abstract Algebra I and II,
Junior and Senior Abstract Algebra,
Linear Algebra,
Calculus and Analytic Geometry I, II and III,

Business Calculus I and II,
Basic Statistics,
Applied Mathematics,
College Algebra.

Visiting Instructor, Iowa State University, 1991 - 1992

Courses taught:

Linear Algebra, Calculus I, II and III.

Teaching Assistant, Iowa State University, 1985 - 1991

Courses taught:

Calculus I and II, Differential Equations,
Business Calculus, College Algebra,
Trigonometry.

HONORS

Association for Women in Mathematics Travel Grant,
January 1997

Faculty Development Grant, Merrimack College,
Summers, 1996, 1997, 1998, 2000, 2001, 2002,
2003, and 2004.

One of the ten women Mathematicians selected and
funded to attend Joint Mathematics Meetings and
to give a talk at the AWM Workshop--Baltimore,
January 1992

Graduate College Research Fellowships, Spring 1991

Iowa State University Teaching Excellence Award, 1990

Iowa State University Research Fellowships,
Summers, 1987 to 1990

PUBLICATIONS

1. "Simple Algebras of Invariant Operators"
(with J.D.H. Smith), published in *Algebra Colloquium*.
8:3 (2001) pp285—291
2. "Construction of Right Universal Multiplication Croup
of Right Quasigroups" (with T.S.R. Fuad and
J.D. Phillips), published in
Southeast Asian Bulletin of Mathematics, 24, 2000,
pp. 217-224
3. "Simple multilinear algebras and hermitian operators"
(with J.D.H. Smith, T.S.R. Faud and J.D. Phillips)
published in "*Commentationes Mathematicae
Universitatis Carolinae*", 41,2, 2000, pp. 251-259
4. "Fourier Series with Maple" (with Moorthy M. V. and
Vicumpriya Perera), published in *Proceedings of
Technology Strategies Workshops*, Ohio State
University, 1996
5. "Simple algebras of Hermitian operators"
(with J.D.H. Smith), published in *Achives of
Mathematics*, 65, 1996, pp. 534-539

6. "Classification of the comtrans algebras of low dimensionalities", published in *Communications in Algebra*, 23, 1995, pp. 1751-1780
7. "Simple multilinear algebras, rectangular matrices and Lie algebras" (with J.D.H.Smith), published in *Journal of Algebra*, 160, 1993, pp. 424-433
8. "Representation theory of comtrans algebras" (with J.D.H.Smith), published in *Journal of Pure and Applied Algebra*, 80, 1992, pp. 177-195
9. "Comtrans algebras and bilinear forms" (with J.D.H.Smith), published in *Achives of Mathematics*, 59, 1992, pp. 327-333
10. "On diassociative A-loops", (with J.D. Phillips and T.S.R.Faud), submitted.
11. "Simplicity of Comtrans Algebras", to be submitted.
12. "Sufficient and necessary conditions on simplicity of a linear combination of simple comtrans algebras", under preparation.
13. "Comtrans algebras and its applications" under preparation.

PRESENTATIONS

1. "Simple multilinear algebras, hermitian operators" Loops 99 International Conference, Prague, Czech Republic, July, 1999
2. "Simple algebras of Invariant Operators", AMS-MAA Joint Mathematics Meetings, San Antonio, January, 1999
3. "Simple algebras of Hermitian operators over arbitrary field", AMS-MAA Joint Mathematics Meetings, San Diego, January, 1997
4. "Characteristic theorems for simple comtrans algebras," AMS-MAA Joint Mathematics Meetings, Orlando January 1996
5. "Simple algebras of Hermitian operators," AMS-MAA Joint Mathematics Meetings, San Francisco, January 1995
6. "Classification of comtrans algebras of low dimensionalities," AMS-MAA Joint Mathematics Meetings, Cincinnati, January 1994
7. "Comtrans algebras and bilinear forms," AMS-MAA Joint Mathematics Meetings, San Antonio, January 1993
8. "Comtrans Algebras," AWM Workshop, Baltimore, January 1992

9. " Simple comtrans algebras,"
AMS-MAA Joint Summer Mathematics Meetings,
Bangor, August 1991
10. "Quadratic forms and ternary algebras,"
MAA Iowa Section Meeting, Des Moines, April 1991

SCHOLARLY ACTIVITIES

Chaired AMS Section on Algebra II for contributed papers at Annual AMS-MAA Joint Mathematics Meetings, San Diego, California, January, 1997

Reviewed a proposal for funding by ND EPSCoR, February, 2000

Attended MAA Massachusetts Section Meeting
Merrimack College, June, 1997

Attended MAA Massachusetts Section Meeting,
University of Massachusetts at Boston, November, 1996

Attended MAA Massachusetts Section Meeting, Salem State College, November, 1995

Participated in Summer Workshop on Technology Strategies in classroom, Ohio State University, June 20-July 1, 1994, July 10 -July 20, 1995

Participated in IMA Summer Workshop on Algebra, University of Michigan, July 2-27, 1990

Attended AMS-MAA Joint Mathematics Meetings, Baltimore, January 2003.

Attended IMST 2007-Fim XV.
Shanghai, China, May 2007

Attended AMS-MAA Joint Mathematics Meetings, Washington DC, January 2009.

Attended AMS-MAA Joint Mathematics Meetings, Boston, MA, January 2012.

OTHER PROFESSIONAL ACTIVITIES

AP Calculus reader, Colorado, June 2003.

AP Calculus reader, Colorado, June 2004.

AP Calculus reader, Colorado, June 2005.

AP Calculus reader, Colorado, June 2006.

Idea Math Summer Program teacher, MA, July 2013.

SERVICE

1. Department of Mathematics Co-Chair (2012—2014)
2. Faculty Development Grant Committee (2012—2014)
3. Faculty Grievance Committee (2014-2015, 2011-2012, 2010—2011, 2007— 2008, 2006—2007, 2005—2006, 2004—2005, 2003—2004, 1997—2000, 2014, 2015, 2017)
4. Faculty Dismissal Hearing Committee (2007-2008)
5. College Wide Council Committee (2004-2005, 2003—2004, 1996-1998)
6. Multicultural Center Proposal Committee (2002-2003)
7. Salary and Benefit Committee (1999—2001)
8. Curriculum and Educational Policy Committee, Merrimack College (1998-1999)
9. Faculty Advisory Committee on Continuing Education, Merrimack College (1998-1999)
10. Member of Review of the American Language Academy Program at Merrimack College Committee.
11. Women's Studies Committee, Merrimack College (1997-1999)
12. Nominations and Elections Committee, Merrimack College (1997-1998)
13. Honorary Degree Committee, Merrimack College (1999-2000)
14. Ad Hoc Committee on Teacher Education, Merrimack College (1998-1999)
15. Faculty advisor of Sorority $\chi\lambda\psi$, Merrimack College (1998-1999)
16. Participated in the Workshops on Developing an Initial Student Outcomes Assessment Plan, Organized by the Commission on Institutions of Higher Education, New England Association of School and College, Bridgewater State College, Bridgewater, MA 1998.
17. Graduate Student Council, Iowa State University (1990-1991)