

Jeongho Ahn

Assistant Professor of Mathematics
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Current Position

Position Title: Assistant Professor of Mathematics
Current Academic Rank: Assistant Professor
Rank Since: Fall 2009

Degrees

Ph D	Mathematics: University of Iowa, Iowa City, Iowa 2003
MS	Mathematics: Kyung-Hee University, Seoul, South Korea 1991
BS	Mathematics: Kyunh-Hee University, Seoul, South Korea 1989

Scholarly Contributions and Creative Productions

Grants ADHE = Arkansas Department of Higher Education
SURF = Student Undergraduate Research Fellowship Program
ASGC = Arkansas Space Grant Consortium

ADHE-SURF: "The motion of particles with complementarity Conditions." January 2010 – November 2010	\$3,900
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ADHE-SURF: "Dynamic contact of particles with adhesion." January 2010 – November 2010	\$3,900
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ASGC: "The mathematical modeling of a space elevator." May 2012 – May 2013	\$3,600
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ADHE-SURF: "Numerical approaches to thermoelastic rods with dynamic contact." January 2013 – November 2013	\$3,600
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Book

"Instructor's Solutions Manual for Elementary Numerical Analysis by Kendall E. Akinson and Weimin Han", 3rd edition, joint with Dr. David Chien and Dr. Zongmi Wu, John Wiley & Sons, Inc., (350 pages)

Journal Publications

J. Ahn, J. Calhoun (2013), "dynamic contact of viscoelastic bodies with two obstacles: Mathematical and numerical

approaches", *Electronic Journal of Differential Equations*, 2013 (85), 1-23.

J. Ahn, K. Kuttler, M. Shillor (2012), "Dynamic Contact of Two Gao Beams", *Electronic Journal of Differential Equations*, 2012 (194), 1-42.

J. Ahn (2012), "A viscoelastic Timoshenko Beam with Coulomb law of friction", *Applied Mathematics and Computation*, 218, 7078-7099.

J. Ahn, D. Stewart (2009), "A viscoelastic Timoshenko beam with dynamic frictionless", *Discrete and continuous dynamic systems series B*, 12(1), 1-22.

J. Ahn (2009), "Dynamic frictionless contact in linear viscoelasticity", *IMA Journal of Numerical Analysis*, 29 (2009), pp. 43-71.

J. Ahn (2008), "Thick obstacle problems with dynamic adhesive contact", *ESAIM: Mathematical Modelling and Numerical Analysis*, 43, 1021-1046.

J. Ahn, D. Stewart (2007), "An Euler-Bernoulli beam with dynamic contact: penalty approximation and existence", *Numerical Functional Analysis and Optimization*, 28, pp. 1003-1026.

J. Ahn (2007), "A vibrating string with dynamic frictionless impact", *Applied Numerical Mathematics*, 57, pp. 861 – 884

J. Ahn, D. Stewart (2006) "Existence of solution for a class of impact problems without viscosity" *SIAM J. Math. Anal.*, 38 pp. 37 – 63 (electronic).

J. Ahn, D. Stewart (2005), "An Euler-Bernoulli Beam with dynamic contact: discretization, convergence, and numerical Results", *SIAM J. Numer. Anal.*, 43, pp. 1455 – 1480 (electronic).

J. Ahn, D. Stewart (2002), "A simplified model of impact" *Contact Mechanics*, *Proceedings of the Third Contact Mechanics International Symposium*, Kluwer Acad., pp. 309 – 316.

Recent Selected Presentations

"Analysis and simulations of a dynamic thermoviscoelastic rod and linear beam system", Euromech 514, France, March, 2012

"The motion of a Gao beam between two stops" AMMCS2011, Wilfrid Laurier University, Waterloo, Ontario, Canada, July 2011

"Vibration of a Gao beam between two stops" AMS 2011 Spring Central Section Meeting, University of Iowa, Iowa City, Iowa, March 2011

"A viscoelastic Timoshenko beam with Coulomb's law of friction"

SIAM Annual Meeting, Contributed talk, Denver, Colorado,
July, 2009 (Session Chair)

"A viscoelastic Timoshenko Beam with dynamic impact" SIAM
Annual Meeting, Minisymposium, San Diego, California, July 2008

Professional Service

University Service

Undergraduate Enrollment and Academic Policy Committee
2011-present

College Service

A judge for Science Fair 2010 – 2012
Crowley's Ridge Best Robotics Competition, Judge for
Sprit/Sportsmanship 2009 – present

Department Service

Curriculum Committee, Calculus Committee 2009 – present

Professional organizations

Mathematical Reviewer for MathSci 2009 – present
McNair Achievement Program Mentor 2011-2012
Referee for peer review journals 2008 – present
Reviewer for Sullivan, Calculus 4th edition (chapter 2-3) 2012

Teaching

Fall 2008 Courses:

MATH 2204 003 - Calculus I
MATH 2204 006 - Calculus I
MATH 2214 001 - Calculus II
MATH 2214 002 - Calculus II
MATH 2214 003 - Calculus II
MATH 2214 004 - Calculus II

Spring 2009 Courses:

MATH 2204 001 - Calculus I
MATH 2204 004 - Calculus I
MATH 3254 001 - Calculus III
MATH 3254 002 - Calculus III
MATH 4533 001 - Numerical Methods
MATH 5533 1 - NUMERICAL METHODS

Summer 2009 Courses:

MATH 2204 001 - Calculus I

Fall 2009 Courses:

MATH 2214 001 - Calculus II
MATH 2214 002 - Calculus II
MATH 2214 003 - Calculus II
MATH 2214 004 - Calculus II
MATH 3273 001 - Applied Complex Analysis

Spring 2010 Courses:

MATH 3254 001 - Calculus III
MATH 3254 002 - Calculus III
MATH 4533 001 - Numerical Methods
MATH 5533 1 - NUMERICAL METHODS

Summer 2010 Courses:

MATH 2204 001 - Calculus I

Fall 2010 Courses:

MATH 2214 001 - Calculus II
MATH 2214 002 - Calculus II
MATH 2214 003 - Calculus II
MATH 2214 004 - Calculus II
MATH 3273 001 - Applied Complex Analysis

Spring 2011 Courses:

MATH 2204 001 - Calculus I
MATH 2204 004 - Calculus I
MATH 4533 001 - Numerical Methods
MATH 459V 001 - Special Problems in Mathematics
MATH 5533 1 - NUMERICAL METHODS

Summer 2011 Courses:

MATH 3254 001 - Calculus III

Fall 2011 Courses:

MATH 2214 001 - Calculus II
MATH 2214 002 - Calculus II
MATH 2214 H03 - HNRS CALCULUS II
MATH 3273 001 - Applied Complex Analysis

Spring 2012 Courses:

MATH 4533 001 - Numerical Methods
MATH 5533 1 - NUMERICAL METHODS

Summer 2012 Courses:

MATH 3254 001 - Calculus III

Fall 2012 Courses:

MATH 2214 001 - CALCULUS II
MATH 2214 002 - CALCULUS II
MATH 2214 H03 - HNRS CALCULUS II
MATH 2214 H04 - HNRS CALCULUS II
MATH 3273 001 - APPLIED COMPLEX ANALYSIS
MATH 689V 001 - THESIS PARTIAL DIFF EQUATIONS