

# CURRICULUM VITAE

JAIGYOUNG CHOE

## Personal Data

Born November 27, 1953, Seoul, Korea

Married, two children

## Address and Telephone Numbers

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## Education

September 1981 - June 1986

Ph.D. in Mathematics, University of California, Berkeley

Thesis Advisor: Richard Schoen

March 1973 - February 1977

Bachelor's Degree in Mathematics at Seoul National

University, Korea

## Area of Research

Differential Geometry, Minimal Surface Theory,

Isoperimetric Problems, Geometric Measure Theory

## Professional Appointments

March 2006 - Present

Professor, Korea Institute for Advanced Study

March 1998 - March 2006

Professor, Seoul National University, Seoul, Korea

August 2002 - July 2003

Visiting Professor, Stanford University

June 1990 - February 1998

Postech, Pohang, Korea

October 1996 - February 1998: Professor

April 1991 - September 1996: Associate Professor

	June 1990 - March 1991: Assistant Professor
May - August 1989	Visiting Professor, Universität Bonn, Germany
July 1988 - June 1990	G.C.Evans Instructor, Rice University, Houston, USA
August 1987 - July 1988	Postdoctoral Fellow, MSRI, Berkeley, USA
October 1986 - July 1987	Postdoctor, UC San Diego, La Jolla, USA
August 1977 - July 1981	Instructor, Korea Naval Academy, Jinhae, Korea

### Publication List

- [1] *On the existence and regularity of fundamental domains with least boundary area*, J. Differential Geom. **29** (1989), 623-663.
- [2] *The isoperimetric inequality for a minimal surface with radially connected boundary*, Ann. Scuola Norm. Sup. Pisa (4), **17** (1990), 583-593.
- [3] *Index, vision number, and stability of complete minimal surfaces*, Arch. Rat. Mech. Anal. **109** (1990), 195-212.
- [4] *On the analytic reflection of a minimal surface*, Pacific J. Math. **157** (1993), 29-35.
- [5] *Isoperimetric inequalities on minimal submanifolds of space forms* (with R. Gulliver), Manuscripta Math. **77** (1992), 169-189.
- [6] *The sharp isoperimetric inequality for minimal surfaces with radially connected boundary in hyperbolic space* (with R. Gulliver), Inventiones Math. **109** (1992), 495-503.
- [7] *Sharp isoperimetric inequalities for stationary varifolds and area minimizing flat chains mod  $k$* , Kodai Math. J. **19** (1996), 177-190.
- [8] *Every stationary polyhedral set in  $R^n$  is area minimizing under diffeomorphisms*, Pacific J. Math. **175** (1996), 439-446.
- [9] *On the existence of higher dimensional Enneper's surface*, Comment. Math. Helvetici **71** (1996), 556-569.
- [10] *The isoenergy inequality for a harmonic map*, Houston J. Math. **24** (1998), 649-654.
- [11] *Nonexistence of certain complete minimal surfaces with planar ends* (with M. Soret), Comment. Math. Helvetici **75** (2000), 189-199.
- [12] *The isoperimetric inequality for minimal surfaces in a Riemannian manifold*, J. reine angewandte Math. **506** (1999), 205-214.
- [13] *Sufficient conditions for constant mean curvature surfaces to be round*, Math. Ann. **323** (2002), 143-156.

- [14] *Embedded minimal surfaces and total curvature of curves in a manifold* (with R. Gulliver), Math. Res. Letters **10**(2003), 343-362.
- [15] *Relative isoperimetric inequality for domains outside a convex set*, Archives Inequalities Appl. **1** (2003), 241-250.
- [16] *Isoperimetric inequalities of minimal submanifolds*, Global Theory of Minimal Surfaces, Clay Math. Proceedings 2 (2005), 325-369.
- [17] *The relative isoperimetric inequality in Cartan-Hadamard 3-manifolds* (with M. Ritore), J. reine angewandte Math. **605** (2007), 179-191.
- [18] *The double cover relative to a convex set and the relative isoperimetric inequality*, J. Aust. Math. Soc. **80** (2006), 375-382.
- [19] *Total Positive curvature of hypersurfaces with convex boundary* (with M. Ghomi and M. Ritore), J. Diff. Geom. **72** (2006), 129-147.
- [20] *The relative isoperimetric inequality outside a convex domain in  $R^n$*  (with M. Ghomi and M. Ritore), Calc. Var. PDE. **29** (2007), 421-429.
- [21] *First eigenvalue of symmetric minimal surfaces in  $S^3$*  (with M. Soret), to appear in Indiana U. Math. J.
- [22] *Capillary surfaces in a convex cone* (with S.-H. Park), submitted.

### Invited Talks

January, 1987	Special Section, AMS meeting at San Antonio
September, 1987	Differential Geometry Seminar, UC Berkeley
December, 1987	Differential Geometry Seminar, UCLA
February, 1988	Differential Geometry Seminar, Brown University
February, 1988	Differential Geometry Seminar, University of Utah
May 12, 1989	Differential Geometry Seminar, University of Utah
June 15, 1989	Differential Geometry Seminar, Bonn University
July 5, 1989	Geometry of minimal submanifolds and related topics, CIRM, Luminy, France
November 9, 1989	Colloquium, University of Minnesota
December 2, 1989	Texas Conference on Topology and Geometry, Austin
December 14, 1989	Differential Geometry Seminar, University of Chicago
September 7, 1991	Workshop on Minimal Surfaces, Universidad de Granada, Spain
October 8, 1991	Differential Geometry Seminar, University of Tokyo
October 9, 1991	Differential Geometry Seminar, Tokyo Metropolitan University

October 13, 1991	Autumn Meeting, Japanese Society of Mathematics, Sapporo
January 6, 1992	Differential Geometry Seminar, University of Utah
January 15, 1992	Differential Geometry Seminar, Stanford University
January 21, 1992	Differential Geometry Seminar, Stanford University
January 23, 1992	Differential Geometry Seminar, University of California, Irvine
July 21, 1993	Conference on Geometry and Global Analysis, Tohoku University
February 14, 1994	Differential Geometry Seminar, Stanford University
December 13, 1994	Pacific Rim Geometry Conference, Singapore
January 17, 1995	Differential Geometry Seminar, Chinese University of Hong Kong
August 1, 1995	Differential Geometry Seminar, Université de Paris 7
January 24, 1996	Differential Geometry Conference, Tokyo Institute of Technology
January 29, 1996	Colloquium, Tohoku University
January 13, 1997	Differential Geometry Seminar, Université de Paris 7
January 30, 1997	Colloquium, Université de Tours
July 16, 1998	Differential Geometry Conference, Chinese University of Hong Kong
July 21, 1998	Differential Geometry Conference, Chinese University of Hong Kong
March 17, 1999	Conference of Japan-America Mathematics Institute, Johns Hopkins University
July 9, 1999	Global Theory of Minimal Surfaces in Flat Spaces, CIME, Martina Franca, Italy
June 6, 2000	Differential Geometry Seminar, Bonn University
October 26, 2000	GANG Seminar, University of Massachusetts
December 13, 2000	AMS-HKMS Conference, Hong Kong Baptist University
July 10, 2001	The Global Theory of Minimal Surfaces, MSRI, Berkeley
February 4,5,6, 2002	Journées du GDR 0677, Université de Tours
February 18, 2002	Differential Geometry Seminar, Université de Paris 7
October 2, 2002	Differential Geometry Seminar, Stanford University
December 18, 2002	Pacific Rim Geometry Conference, Chinese University of Hong Kong
February 19, 2003	Topology Seminar, University of California, Berkeley
March 27, 2003	Differential Geometry Seminar, University of Minnesota
April 5, 2003	Applications of Teichmüller Theory, AMS Sectional Meeting, Bloomington
April 21, 2003	Analysis Seminar, Cornell University
April 23, 2003	Differential Geometry Seminar, Stanford University
May 13, 2003	Differential Geometry Seminar, University of California, Irvine
July 20-30, 2004	Series of Special Lectures for Graduate Students, Beijing University
June 20, 2005	Conference on Calculus of Variations and Nonlinear PDE, Zhejiang University

July 20, 2005	4th Asian Mathematical Conference, National University of Singapore
August 17, 2005	Differential Geometry Seminar, Rice University
August 22-25, 2005	Karcher Special Lectures, University of Oklahoma
February 17, 2006	Colloquium, Tohoku University
February 20, 2006	SNU-RIMS Joint Symposium, Kyoto University
September 6, 2006	Special Geometry Seminar, Stanford University
September 13, 2006	Workshop on Geometric Flows and Function Theory, MSRI
September 20, 2006	PDE Seminar, University of Minnesota
March 2, 2007	Geometry Seminar, Université de Tours
March 5, 2007	Geometry Seminar, Université de Paris 7
March 21, 2007	Geometry Seminar, Universidad de Granada
March 28, 2007	Colloquium, Universidad de Granada
August 24, 2007	International Congress on Minimal and CMC Surfaces, IMPA
December 9, 2007	Workshop on Minimal Submanifolds and Related Topics, BIRS
December 20, 2007	The Fourth International Congress of Chinese Mathematicians, Hangzhou
May 30, 2008	Recent Advances in Geometry of Submanifolds, Università di Roma
June 16, 2008	Differential Geometry Seminar, Université de Paris 7
July 1, 2008	Conformal Geometry, CIRM, Roscoff
December 11, 2008	The Ninth Pacific Rim Geometry Conference, National Taiwan University