Taewon Cho

Virginia Tech Department of Mathematics 407E McBryde Hall, 225 Stanger Street Blacksburg, VA 24061-0123		taewon88@vt.edu www.math.vt.edu/people/taewon88 Linkedin: taewon-cho Phone: +1 (540) 449-9986	
Education	Virginia Tech , Blacksburg, VA Ph.D. in Mathematics Thesis : <i>"Computational Advancements fo</i> Advisor: Julianne Chung	expected May 2021 or Solving Large-scale Inverse Problems"	
	 Virginia Tech, Blacksburg, VA M.S. in Mathematics Thesis: "Numerical Methods for Separable Constraint and Low Rank" Advisor: Julianne Chung 	Dec 2017 Nonlinear Inverse Problems with	
	Hanyang University, Seoul, South Kore B.S. in Mathematics	ea Feb 2014	
Research Interests	Numerical Analysis, Numerical Optimization, Numerical Linear Algebra, Statistical Learning Inverse Problems, Image Processing, Dynamic Sampling		
Current Research	T. Cho, J. Chung, S. Miller, and A. Saibaba "Hybrid Projection Methods for Large-scale Inverse Problems with Mean Estimation" In Progress		
Research Experiences	Industrial Math/Stat Modeling WorkshopJuly 2019SAMSI, Raleigh, NCTitle: "Coastal Imagery Analysis and Hydrodynamic Estimation with Machine Learning"		
	Graduate Research Assistant Virginia Tech, Blacksburg, VA Title: "Integrated Approaches for Fast an NSF CAREER grant (Awarded to Julian	Spring 2018 d Accurate Large-scale Inversion" ne Chung)	
	Chung Lab SeminarFall 2017 - Fall 2018Virginia Tech, Blacksburg, VAFoject: Python in Numerical Linear Algebra with NumPyProject: Ourputational Uncertainty Quantification for Inverse problems, J. BardsleyProject: Julia in Numerical Linear AlgebraProject: Overview of Machine learningTextbook: The elements of statistical learning, T. Hastie, R. Tibshirani, and J. Friedman		
	Internship Insititut Pasteur Korea, Seongnam, South Studied methods for processing and analy	Dec 2013 - Feb 2014 Korea sis of biological images	

Poster	Algorithms for Threat Detection workshop, Seattle, WA Title: "Hybrid projection methods for large-scale inverse problems			
	Modern Challenges in Imaging Medford MA	Aug 2010		
	Title: "Hybrid projection methods with data driven covariance matrices	Aug 2019		
	for large-scale inverse problems"	M 0010		
	Visitor's Day SIAM Poster Presentation, Blacksburg, VA	Mar 2018		
	Title: "Numerical Methods for Separable Nonlinear Inverse Problems with Constraint and Low Rank"			
	42nd SIAM Southeastern Atlantic Sectional Conference , Chapel Hill, No. Title: "Numerical Methods for Separable Nonlinear Inverse Problems with Constraint and Low Rank"	C Mar 2018		
Presentation	Applied Numerical Analysis Seminar, Blacksburg, VA	Oct 2020		
	Title: "Computational tools for inversion and uncertainty estimation in respirometry"			
	Program on Numerical Analysis in Data Science , SAMSI, Raleigh, NC Title: "Hybrid projection methods with data driven covariance matrices	Sep 2020		
	for large-scale inverse problems"			
	Applied Inverse Problems Conference, Grenoble, France	July 2019		
	Title: "Hybrid projection methods with data driven covariance matrices for large-scale inverse problems"			
	Applied Numerical Analysis Seminar, Blacksburg, VA	May 2018		
	Title: "Nonlinear Least Squares Problem in Dynamic Sampling"			
	Applied Numerical Analysis Seminar, Blacksburg, VA	Nov 2017		
	Title: "Structure of Point Spread Function and its Application to Image Deblurr	ring Problems"		
	Master Thesis Presentation, Blacksburg, VA Title: "Numerical Methods for Separable Nonlinear Inverse Problems with Constraint and Low Rank"	Nov 2017		
Publication	Submitted Work			
	Taewon Cho, Julianne Chung, and Jiahua Jiang, "Hybrid Projection Methods for Large-scale Inverse Problems with Mixed Gaussian Priors." Submitted 2020, arXiv:2003.13766. Technical reports			
	J. Arce-Garro, T. Cho, L. Lee, R. Moore, R. Sayre, Y. Xuan, and Z. Zhou. "Coastal Imagery Analysis and Breaking Wave Type Estimation with Machine Learning", Technical Report of the Industrial Math/Stat Modeling Workshop, pp. 78-104 July 2019			
	Theses	U		
	Taewon Cho. "Numerical Methods for Separable Nonlinear Inverse Problems wit and low rank", Master Thesis, Department of Mathematics, Virginia Tech	h Constraint Nov 2017		
Awards and	Teaching Award			
Scholarships	The Outstanding Graduate Teaching Assistant in the Department of Math Travel Award	2019-2020		
	Modern Challenges in Imaging, Medford, MA	Aug 2019		
	IMSM SAMSI workshop for graduate students. Raleigh. NC	July 2019		
	42nd SIAM Southeastern Atlantic Sectional Conference. Chapel Hill. NC	Mar 2018		
	Hanyang University Scholarship			
	Excellent Academic Scholarship	Fall 2013		
	Honor Academic Scholarship	Spring 2012		
	Top Academic Scholarship	Fall 2011		

Teaching	Instructor		
Experience	MATH 2114, Introduction to Linear Algebra	Spring 2020	
_	MATH 1226, Calculus II	Spring 2019	
	MATH 1225, Calculus I Fall 2019, Fall 2018, F	Fall 2017, Spring 2017, Fall 2016	
	MATH 1526, Elementary Calculus with matrices	Summer 2018, Summer 2017	
	Teaching Assistant		
	MATH 2214, Introduction to Differential Equations	Summer 2020	
	CMDA 2006 & CMDA 3606	Spring 2016	
	Math Emporium, Tutor for online courses	Fall 2015	
Coursework	Numerical Analysis, Numerical Analysis and Software, Matrix Theory, Applied PDEs, Calculus of Variables, Real Analysis, Abstract Algebra		
Programming Language	Proficient: Matlab, LAT _E X Experienced: Julia, C, Python		