Zhiyuan College Undergraduate Thesis (2012-2016)

Completing undergraduate thesis is compulsory to every student in Zhiyuan. On account of their own interest and the guidance from tutors, students will apply relevant theory and technology comprehensively to solve a specific scientific question. The wide range of topic selection embodies students' autonomy and their interest diversity.

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Zhiyuan College Undergraduate Thesis, Class of 2012

Mathematics & Applied Mathematics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Pei Liu	Zhenli Xu, Distinguished Research Fellow	Analysis of Stratification Phenomenon From Nonuniformly Size-Modified Poisson Boltzmann Model
Tao Luo	Lihe Wang, Professor	Asymptotic Behavior and The Regularity Theory of Harmonic Functions at Their Singular Points
Cheng Tai	Xiaoqun Zhang, Distinguished Research Fellow	Framelet Based Image Segmentation
Bingying Lu	Shi Jin, Professor	Gaussian Beam Methods for High Frequency Elastic Waves - Using Lagrangian and Eulerian Formulations
Qiu Yang	David Cai, Professor	Loops Induced by Adaptation of Biological Transport Networks with Continuum Sinks
Shuai Han	Shengli Liu, Professor	MRD Codes and Its Application to Proof of Retrievability
Xiaoyang Dong	Weinan E, Professor	Network Contagion in Financial Crisis
Yuzhe Zhao	Douglas Zhou, Distinguished Research Fellow	Numerical Analysis of Driven Hodgkin-Huxley Model
Jianchao Huang	Zaiwen Wen, Research Fellow	Optimization Theory and Methods for High Dimensionality Reduction
Hongbo Zhao	Lihe Wang, Professor	Regularity of Levelsets for Elliptic Partial Differential Equation
Zeying Xu	Yaokun Wu, Professor	The Reconstruction of Phylogenetic Tree
Jing Yang	Xiaoqun Zhang, Distinguished Research Fellow	Three-Dimensional Structure Determination from Cryo-EM Images
Di Qi	Shi Jin, Professor	Weighted Essentially Non-oscillatory Approach on Irregular Grids
Rujie Yin	Xiaoqun Zhang, Distinguished Research Fellow	Weighted L2 fidelity in Image Processing
Zheng Ma	Shi Jin, Professor	WENO Scheme for The Liouville Equation of Geometrical Optics with Discountinous Local Wave Speeds

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Applied Physics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Huiyu Li	Ping Ao, Professor	Analyse the Noise of Gene Oscillator Model by Using the Potential Function
Ming Han	Xiangjun Xing, Professor	Asymptotic Resuls for One-Plate Problem in Original and Size-Modified Poisson-Boltzmann Theory
He Li	Hepeng Zhang, Distinguished Research Fellow	Axial Drag Coefficient of Slender Rods and Wall Effect
Jingchen Ma	Ping Ao, Professor	Difference Between High and Low Dimensional Stochastic Model in Collective Behavior
Andi Tan	Xiangdong Ji, Professor	Experimental Study of Proportional Scintillation in Liquid Xenon
Ermao Cai	Huichun Liu, Professor	Free Carrier Absorption in 2-Dimensional Quantum Well Structures
Chenghong Zhou	Xiangdong Ji, Professor	HPGE Detector Used for Low-level Radioactivity Detection
Xiang Yang	Hepeng Zhang, Distinguished Research Fellow	Long-ranged Correlation of Fluctuations in Collective Motion
Tianmeng Wang	Kadi Zhu, Professor	Quantum Nonlinear Optical Effects in Graphene
Zhichao Li	Feng He, Distinguished Research Fellow	The Enhanced Ionization of H2+ in Wigner Representation
Yanyang Xiao	David Cai, Professor	The Granger Causality in Neuronal Network Dynamics
Yaoyu Zhang	David Cai, Professor	Theory of Granger Causality
Zhiqin Xu	Hepeng Zhang, Distinguished Research Fellow	Transition from Stokesian to Inertial Flow Regimes
Lu Ma	Xiangdong Ji, Professor	Xenon Purity Measurement based on "Cold Trap & RGA" Method

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Computer Science and Technology (SJTU ACM Class)		
Name	**Adviser**	**Thesis Name**
Qin Liu	Liqing Zhang, Professor	A Painting Learning System Based on Sketch-based Image Search
Jiajun Shen	Bo Yuan, Professor	Analysis of Interactions of Multiple Genes in Complex Disease Using Markov Chain Monte Carlo (MCMC) Method
Chunzhi Su	Minyi Guo, Professor	Building Application-specific Key-value Databases by Exploiting Demands and Usage Patterns
Lin Zhou	Huiyu Weng, Associate Professor	Building of Mobile Sensing and Analytic System and Application Usage Pattern Learning
Yangwei Wu	Liqing Zhang, Professor	Clothing Image Feature-based Clothing Search System
Hongyang Zhang	Yijia Chen, Professor	Computing the Nucleolus of Matching, Cover and Clique Games
Xin'an Wang	Bo Yuan, Professor	Convergence, Stability and Bifurcation Analysis for Cell Cycle Dynamics
Shangfu Peng	Huiyu Weng, Associate Professor	DP-Tree: Adaptive Indexing of Multi-Dimensional Data
Chenjin Liang	Sishao Shen, Professor	Image-based Landmark Search
Zejia Chen	Sishao Shen, Professor	Implementation of Adaptive and Distributed SPARQL Query Algorithm
Zhuojie Wu	Sishao Shen, Professor	Implementation of High Performance Semantic Data Extractor
Dongqing Zhang	Wujun Li, Associate Professor	Indexing of Image Search by Color Map
Jie Wu	Liqing Zhang, Professor	Inhibting Similar Regions: Saliency Detection Based on Gestalt Principles
Ye Pan	Bo Yuan, Professor	Learning Complex Bayesian Networks on FPGA
Tianwan Zhao	Dongmo Zhang, Associate Professor	Modeling of User Preferences based on Time Series Information
Zhongyang Fu	Tianfang Yao, Associate Professor	Research on Identification and Tracking for Hot and Sensitive Topics in Chinese Texts
Li Han	Yijia Chen, Professor	Revenue Maximization in Mechanism Design and Applications
Shu Rong	Yong Yu, Professor	Similarity Metric Based Instance Matching in Linking Open Data
Ruihua Sun	Baoliang Lv, Professor	Sparse Subspace Learning Based Feature Extraction for Brain-Computer Interface
Yao Chen	Shengli Liu, Professor	Study on Sequences and Their Applications
Yibing Zhao	Yuan Luo, Professor	The Selection of Best Subcode in Communication System
Zheng Zeng	Wujun Li, Associate Professor	Topic Modeling for Large Scale Datasets
Fangwei Hu	Yong Yu, Professor	Transfer Learning for Tag Recommendation

Linpeng Tang	Sishao Shen, Professor	User Modeling Based on Social Network Data
Jiayuan Ma	Huiyu Weng, Associate Professor	Video Registration Based on Sparse Representation and Low-rank Modeling
Jiamin Zhu	Yuxi Fu, Professor	World Wide Google Street View Application on Mobile Device

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Zhiyuan College Undergraduate Thesis, Class of 2013

Mathematics & Applied Mathematics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Xiang Hong	Wei Cai, Professor	A Parallel Method For Solving Modified Helmholtz Equation With Dirichlet Data Using Boundary Integral Equation and Random Walks
Bin Gui	Jin Liang, Professor	Basics on Von Neumann Algebras
Chuanhao Wei	Yihu Yang, Professor	Exploring Generalizations of Riemann-Roch Theorem
Kaicheng Wu	Zaiwen Wen, Research Fellow	High-dimensional Covariance Matrix Estimation FromIncomplete Data
Ming'an Hu	Jianguo Huang, Professor	High-dimensional Covariance Matrix Estimation Fromincomplete Dataincomplete Data
Xiaojun Mao	David Cai, Professor	Incomplete Data
Yiwei Yu	Dong Han, Professor	Inference and Change Point Analysis for threshold Autoregressive Models
Cuize Han	Weidong Liu, Professor	Joint Estimation of Multiple Covariance Matrices
Xun Chen	Weidong Liu, Professor	Kernel Estimation on AR Model
Yexin Li	Yongzhong Xu, Associate Professor	Morse Theory and Homology Groups
Zhaoyi Meng	David Cai, Professor	Non-uniform Discrete Fourier Transform
Yu Ning	Wenjun Ying, Research Associate	Numerically Modeling the Electrical Response of Biological Cells Under the Field Stimulation
Chaohui Wang	Kadi Zhu, Professor	Optical Probing a Majorana Fermion Via Quantum Coupled Semiconductor Nanowire
Ying Tang	Ping Ao, Research Fellow	Path Integral Approach to Stochastic Process: StartingFrom Examples
Qitao Mao	Dong Han, Professor	Research of the Stable Distribution of Inverse Sample Covariance Matraix
Minghao Guo	Ya Zhang, Associate Professor	Similarity Analysis in Coupled Behavious
Yunfei Ye	Dong Han, Professor	The Application of Complex Network in the Stocks Market
Huihong Jiang	Yongzhong Xu, Associate Professor	The Study of the Gromov Radius Problem In Symplectic Geometry

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Applied Physics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Guodong Zhang	Xiangdong Ji, Professor	A Cold-trap Residual Gas Analyzer Based Highly SensitiveMethod for Krypton Detection
Yao Ma	Xiangdong Ji, Professor	Electronic Stopping Power of Neutron ar Low Energy
Zizhuo Liu	Huichun Liu, Professor	Free-carrier Absorption in Quantum Wells at Mid-infrared and Terahertz Wavelengths
Tong Wu	Huichun Liu, Professor	Influence of Polarizationn on the Free Carriee Adsorption in the Two Dimensional Quantum Well Structure
Jun Zhang	Xiangdong Ji, Professor	Investigation of Proportional Scintillation in Liquid XEON
Yizhou Lu	Wenzhong Shen, Professor	Optimization of THz Quantum Devices
Hao Ge	Huichun Liu, Professor	Reaserch on THz Device
Mingnan Ding	Xiangjun Xing, Research Fellow	The Renormalization of the Debye Length in Asymmetric Electrolytes
Shuo Yan	Jianqiu Xu, Professor	The Research of High SNR, High Chain, Spectral Controllable Fiber Amplifier Technology
Jinzi Huang	Hepeng Zhang, Distinguished Research Fellow	The Research on Three-Link Swimmer

Computer Science and Technology (SJTU ACM Class)		
Name	**Adviser**	**Thesis Name**
Chaoyang Wang	Liqing Zhang, Professor	Action Recognition Algorithm Design Based On Motion Feature
Xinjian Zhang	Liqing Zhang, Professor	Algorithm Design For Human Action Classification In Videos
Xiao Jia	Qili Zhu, Associate Professor	Automatic Program Synthesis
Ruixin Qiang	Pinyan Lu, Teacher	Budget Feasible Mechanism
Tian Tan	Kai Yu, Research Fellow	Building Acoustic Model Trainging System Based On Deep Neural Network And Algorithm Survey
Shijian Li	Hengming Zou, Professor	Cloud Drift A Model For Safe And Smoothy Cloud System Migration
Enpeng Ma	Yong Yu, Professor	Comment Extraction In Web Pages
Xuezhi Cao	Yong Yu, Professor	Context-Based Query Recommendation
Menghui Wang	Pinyan Lu, Teacher	Designing Deterministic Approximation Algorithms via Correlation Decay
Hongyu Zhu	Minyi Guo, Professor	Efficient Communication Framework in Distributed GPUs
Saining Xie	Hongtao Lu, Professor	Feedback into Pooling with Applications in Image Classification and Content-Based Image Retrieval
Heming Shou	Hai Zhao, Associate Professor	Knowledge Learning for Human-computer Dialogue Systems
Zhansheng Jiang	Wujun Li, Associate Professor	Large Scale Image Annotation Using Local Semantic Neighborhood
Weihao Kong	Wujun Li, Associate Professor	Large-Scale Image Retrieval Based on Hashing
Diyi Yang	Yong Yu, Professor	Micro Market Segmentation And Its Application in Sponsored Search
Cheng Chen	Minyi Guo/Wujun Li, Professor/Asscociate Professor	Multimodal Learning Based On Deep Neural Networks
Chunyang Wu	Kai Yu, Research Fellow	On Senone Posterior Estimation in Large Vocabulary Continuous Speech Recognition
Tao Xiao	Pinyan Lu, Teacher	Optimal auction and pricing in Bayesian setting
Bin Jin	Yong Yu, Professor	Optimization of MCTS based Go AI and Implementation of rule set
Yongzhe Zhang	Yong Yu, Professor	Price-oriented Product Recommendation in New Categories
Zhengyang Liu	Pinyan Lu, Teacher	Pricing problems in cloud computing
Yudong Yang	Yanmin Zhu, Associate Professor	Research on Data Transmissions based on Network Coding in Opportunistic Mobile Networks

Ruofei Du	Baoliang Lv, Professor	Research on Fatigue Driving Detection System Based on Video Signals
Changcheng Xiao	Liqing Zhang, Professor	Shape Based Large Scale Image Retrieval
Sizhuang Liu	Linpeng Huang, Professor	Software Architecture Driven Dependable Software Construction
Shuchang Zhang	Bo Yuan, Professor	The Decomposition of Markov Chain, Structure and Dynamics and its Applications in MCMC
Xiangru Huang	Pinyan Lu, Teacher	Trial and Error In Social Networks
Bo Chen	Yuquan Chen, Associate Professor	Ultra Parallelized Pattern Classification Algorithm Based On Big Data
Liuli Chen	Liqing Zhang, Professor	User Profiling In Social Networks

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Zhiyuan College Undergraduate Thesis, Class of 2014

Mathematics & Applied Mathematics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Feixiang Wang	Min Tang, Research Associate	A Continous Mathematical Model of the Bacteria's Biased Random Motion in the Enviroment With High Gradient
Cheng Cheng	Min Tang, Research Associate	A New Algorithm To Calculate The Convergence Velocity of Spiral Waves
Yiqing Wu	Lihe Wang, Professor	An Elementary Approach to Poisson Equations on C^(1,a) Domain
Jianhong Chen	Ping Ao, Research Fellow	Application of Path Integral in Stochastic Process: Take an Charged Particle in Electromagnetic Field
Yilun Jiang	Douglas Zhou/David Cai, Distinguished Research Fellow/Professor	Causal and Structural Analysis of Hodgkin and Huxley Neural Networks
Haihao Lu	Douglas Zhou/David Cai, Distinguished Research Fellow/Professor	Coherent excitations in FPU chains
Xiao Zhang	Shengli Liu, Professor	Cross-Authentication Codes: Constructions and Applications
Tian Wang	Weidong Liu, Professor	Data Analysis and Mining in Social Networks
Lidong Fang	Lei Zhang, Distinguished Research Fellow	Free Energy Density Calculation for a Coarse Grained Model of Crystalline Solid
Zheqing Zhang	Douglas Zhou/David Cai, Distinguished Research Fellow/Professor	Interplay Between Gap Junctions And Chemical Synapses in Synchrony
Hao Wu	Douglas Zhou/David Cai, Distinguished Research Fellow/Professor	Modeling of Electrotonic Coupling Between Pyramidal Neurons in the Neocortex
Yanchen Xiong	Eiichi Bannai, Professor	Moore Graph
Jiyue Wang	Weidong Liu, Professor	Regularized Spectral Clustering in Social Network
Jiacheng Xia	Eiichi Bannai, Professor	Several Problems And Methods in Algebraic Combinatorics
Yi Huang	Dong Han, Professor	Statistical Detection in Financial Network
Yaoyuan Zhang	Xuejia Lai, Professor	The Anti-Differential Cryptanalysis Property of Markov Ciphers
Hongbo Fan	Tong Ye, Associate Professor	The application of complex coloring bipartite graph in the Scheduling of switching system
Kaihua Sun	Zheng Yan, Professor	The Application of Robust Optimization in Power System

Applied Physics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Pengzhan Zhou	Xinbing Wang, Professor	Multicast Capacity for Cognitive Network Based on Percolation Theory
Zhenghao Zhu	Haiguang Xu, Professor	A Chandra study of ICM Temperature Profiles of 12 Cool Core Clusters
Liyang Jiang	Weidong Luo, Associate Professor	Ferroelectric polarization and magnetic property of strained BiFeO3
Xueying Guo	Haiguang Xu, Professor	Mass Function and Cosmological Parameters: A Large Cluster Sample of Chandra Observation
Beiyu Ye	Feng He, Distinguished Research Fellow	Particle Diffraction And Its Comparison With Light
Yongqian Ma	Hepeng Zhang, Distinguished Research Fellow	Simulations of Pumping Effect by Rotating Flagellum
Jiye Yu	Zhengming Sheng, Professor	Studies of Short Pulse Laser Interaction with Solid Targets by Use of the Multi-FS Code
Boyang Zheng	Lei Zhang, Distinguished Research Fellow	Temperature-related Cauchy-Born Rule---A comparison between free energy density induced by dispersion relationship and local harmonic approximation

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Biological Sciences (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Jingchang Li	Shengtian Li, Associate Professor	A Study on the Mechanism of Essential Oil in the Regulation of Depression-like Behavior in Adult Wistar Kyoto Rats
Tianyou Yao	Shengtian Li, Associate Professor /Associate Professor	A Study on the Mechenisim for NAD+ Intervenung in Epileptogenesis
Wei Cao	Jun Xu, Research Associate	Cloning And Heterlogous Expression of a DNA Glycosylase of Pryococcus Yayanosli
Ang Li	Yong Zhang, Research Assistant	Co-expression. Purificarion and Reconstruction of the Regulator/Ego Complex In the Themtor Signaling Pathway
Jinyuan Lu	Zhaochun Wei, Associate Professor	Comparison of Biological Data on Cloud Computing Platform
Hao Cheng	Zhiyong Li, Professor	Enrichment And Cultivation of Sponge Actinomycetes
Zhongyao Ma	Linquan Bai, Professor	High Throughput Screening of Actino Bacteria and Their Natural Products From Gulong Mountain
Youli Xia	Wanqi Liang, Research Fellow	Identifying New C. Elegans Genes for The Removal of Apoptotic Cells
Mengxin Geng	Hong Yang, Professor	Isolation And Indentifiation of An Algicidal Substance, 2,5-PIPERAZINEDIONE,3-(PHENYLMETHYL), Produced By An Algicidal Bacteria, Exiguobacterium SP. GLY-3019 Isolated From Lake Taihu
Zhuofei Meng	Gang Ma, Research Associate	MD Simulation Of Fatty Acids' Transmembrane Transport In Bacterial
Jiefu Li	Weiliang Xia, Research Associate	Mechanotransduction In Wings of Drosophila Melanogaster
Hongxiang Sun	Bing Su, Professor	Mouse Model of Diet Induced Intestinal Microbiota Change and Its Impact on Local Inflammatory Cytokine, SCFA Receptors and Toll Like Receptor Expression
Zhongying Wang	Dawei Li, Professor	Signaling Pathway Research of a Tumor Marker AGR2
Cong Xu	Guoyuan Yang, Research Fellow	Study Of The Influence of A GABA(A) Receptor Antagonist On Post-Ischemic Recovery
Kaizhou Li	Xiaoxia Xia, Distinguished Research Fellow	Study on the Function of N-Terminal And C-Terminal Domains of Spider Silk Protein
Lujing Chen	Shigang He, Professor	Synaptic Physiology of Retina Circuit
Gaoyuan Yin	Ji Wu, Professor	The Construction of MVH-EMGFP Transgening Model Mouse
Ningxin Ma	Qiang Wu, Research Fellow	The Function of Neuroligin Family in Neural Progenitor Cells
Mai Shi	Zhaochun Wei, Associate Professor	The Influence of Repeat Sequences on Three-Dimensional Structures of Chromosomes
Jiayi Zhu	Zhiyong Li, Professor	The Preparation And Activity of Giant Salamander Polypeptides

Linghan Hu	Yue Zhou, Research Associate	The Study of the Gene Expression Changes in Mice With the Foregut Separation Defect

Computer Science and Technology (SJTU ACM Class)		
Name	**Adviser**	**Thesis Name**
Sizhuang Liu	Linpeng Huang , Professor	A Design And Implementation Of System Architecture Supporting Persistent Memory
Peihan Miao	Pinyan Lu , Teacher	A Game Theoretical Study Of Network Evolution
Chengyu Lin	Pinyan Lu , Teacher	Analysis Of Decentralized Algorithm For Online Secretary Problem
Jingcheng Liu	Pinyan Lu , Teacher	Approximate Counting Via Correlation Decay
Lin Li	Yong Yu , Professor	Balancing Accuracy And Diversity In Recommender Systems
Guangda Hu-Zhang	Yong Yu/Xiaomin Chen , Professor/Teacher	Classic Combinatorial Geometry Theorems Meet Hypergraphs And Metric Spaces
Wuxuan Jiang	Yong Yu , Professor	Communication Cost Optimization Algorithm For Distributed Deep Learning
Jingbo Shang	Yong Yu , Professor	Crowd Sensing Energy Consumption And Air Pollution Emission On Road Surfaces
Yuchen Fan	Kai Yu , Distinguished Research Fellow	Deep Neural Networks In Statistical Speech Synthesis
Jiejun Zhang	Tongzhen Zhang , Associate Professor	Design And Implementation Of Personalized Virtual Classroom
Xinchen Yan	Liqing Zhang , Professor	Detecting Events Based On Improved Object Detection Results
Yifei Lu	Baoliang Lv , Professor	Emotion Recognition Based On Eeg And Eye Movement Signal Fusion
Zhiming Zhou	Hongtao Lu , Professor	Gaze Correction Based On Kinect
Yan Liu	Hongtao Lu , Professor	Human Action Recognition Based On Optical Flows
Qian Yi	Yong Yu , Professor	Improving Aggregate Diversity In Recommender Systems
Binyi Chen	Xiaotie Deng , Professor	Mechanisms And Analysis In Online Advertising
Yixin Tao	Guihai Chen , Professor	Online Advertising Mechanism Design
Xuetong Sun	Liqing Zhang , Professor	Pedestrian Counting In Surveillance Videos, Algorithm Design And Implementation
Youer Pu	Qili Zhu , Associate Professor	Point Of Interest Classification
Yujun Li	Zhihua Zhang , Professor	Primary Investigation On Bayesian Shrinkage
Hongwei Wang	Yunxin Liu/Minyi Guo , Associate Professor/Professor	Real-time Monitoring And Protection Of Privacy On Smartphones
Lin Qiu	Yong Yu , Professor	Relation Extraction Algorithm Design Via Advanced Word Embedding
Qiming Chen	Baoliang Lv , Professor	Saliency Detection Based On Color Invatiance And Subspace Analysis
Yuke Liao	Liqing Zhang , Professor	Shape-based Image Retreival Algorithm Design
Tianhang He	Yanmin Qian , Assistant Professor	Structure Optimization Of Deep Neural Network In Speech Recognition

Huan Yang	Xin Sun / Guominyi, Teacher/Professor	The Comparison, Analysis And Improvement Between Monte Carlo Based Path Tracing Methods In Photorealistic Rendering
Bo Dai	Liqing Zhang , Professor	The Design And Implementation Of Video Preview Auto-generation Algorithm
Kelu Diao	Minyi Guo , Professor	Verifiable Cloud Computing

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Zhiyuan College Undergraduate Thesis, Class of 2015

Mathematics & Applied Mathematics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Dinghao Yin	Jinglai Li, Research Associate	Application of Machine Learning Method in Small Probability Event Simulation
Xiang Yan	Xiaotie Deng, Professor	Can Bandwith Sharing Be Truthful
Dong Lao	Guofu Yu, Assistance Professor	Complex and Coupled Negative Order AKNS System
Tianyu Wang	Dongmei Xiao, Professor	Dynamic analysis of Henon mapping
Xiaozhou Wang	Weidong Liu, Professor	False Discovery Rate Control in Mutual Fund Selection
Jiaqi Yin	Weidong Liu, Professor	Investigation the Epistatic Relationship between Genes daf-2, daf-12 and daf-16 Involved in C. elegans lifespan regulation
Hao Xu	Yi Li, Special Associate Researcher	Monge-Ampere Equation and Its Geometric Applications
Gelin Shang	Dong Han, Professor	Network Model And Its Applications in the Research of Financial Market
Junyan He	Dan Hu, Distinguished Research Fellow	Optimal Transport Network under Geometric Constraints
Lutian Zhao	Yi Li, Special Associate Researcher	Positivity and vanishing theorems in Hermitian geometry
Leiyun Bian	Dong Han, Professor	Quantitative Risk Analysis of Weather Derivatives
Qingbo Wang	Jinglai Li, Research Associate	Research on BER of optical fiber communication
Zhensheng Xia	Lihe Wang, Professor	Risk of Interest Rate
Yixuan Wang	Xiaodong Zhang, Professor	Spectrum Graph Theory in Network Science
Yuwei Li	Dong Han, Professor	Statistical Analysis of Social Network Data
Ji Chen	Xiaoqun Zhang, Distinguished Research Fellow	Study on A Class of Greedy Sparse Recovery Methods
Yikai Jiang	Guanglian Zhang, Assistance Professor	The Indecomposable Refresentations and Orbit Varieties of Dynkin Quiver
Lin Qian	Jianguo Huang, Professor	The Quasi-Monte Carlo Method for High Dimensional Numerical Integration
Yi Wei	Dan Hu, Distinguished Research Fellow	The Relationship Between Dynamical Stability In Networks And Properties Of Transport Networks
Langte Ma	Youlin Li, Lecturer	Uniruled Caps from Symplectic Divisors

Physics(SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Xinyuan You	Feng He, Distinguished Research Fellow	A Numerical Simulation Method for Ultrafast Laser Physics
Xiaobing Shi	Hepeng Zhang, Distinguished Research Fellow	A Numerical Study on the Dynamics of Bacterial Swimming
Lu Tan	Ying Liu, Professor	A Preliminary Study on the Physical Properties of Two Dimensional Crystals
Yuankai Lu (Applied Physics)	Dan Hu, Distinguished Research Fellow	Adaptation and Optimization of Biological Transport Networks in Physarum
Hui Chen	Jun Zhang, Lecturer	Control and Optimization of Quantum System under Noise Environment
Xiwa Deng	Wenzhong Shen, Professor	Controlable Self-organized Growth of Oxide under an External Magnetic Field and Applications of Solar Cells
Shidi Zhao	Jakob Ulmschneider, Research Associate	Folding And Dimerization of Molecular Receptor
Qinglin Wu	Wenjun Ying, Research Associate	Numerical Simulation of Incompressible Flow Around a Rotating Two-Dimensional Vortex Sheet
Ru Xu	Wenjun Ying, Research Associate	Numerical Simulation of Incompressible Fluid Dynamics in a Dynamic Pipeline
Donghao He	Karl Ludwig Giboni/Xiangdong Ji, Professor/Professor	Read Out of Large High Pressure Gaseous Xenon Detectors
Hongyang Tang	Jie Zhang, Distinguished Research Fellow	Research on Jamming-Unjamming Transition in Granular Materials
Pianpian Qin	Xiangjun Xing, Research Fellow	Research on Poisson Boltzman Theory
Qingnan Tang	Hepeng Zhang, Distinguished Research Fellow	Reserch on Bacterial Locomotion
Shengkai Li	Hepeng Zhang, Distinguished Research Fellow	Self Organization Phenomenon in the Cluster Movement
Fangzhou Zhao	Xiangjun Xing, Research Fellow	Statistical Physics of One Component Plasma
Yuan Yao	Ping Ao, Research Fellow	Stochastic Differential Equations from Quantum Influence Functional Perspective
Heng Lin	Karl Ludwig Giboni, Professor	Study of Proportional Scintillation in future large liquid xenon (LXe) detectors
Zhe Zhou	Jianqiu Xu, Professor	Study on the Generation of Nonlinear Frequency Comb
Boya Qin	Dong Liu, Research Fellow	The Application of Object Constraint Language in Common Information Model
Ziwei Wang	Jie Zhang, Distinguished Research Fellow	The Dynamics Of Jamming And Unjamming in Granular Valenches

Yinqiao Wang	Jie Zhang, Distinguished Research Fellow	The Rheology in Granular Systems

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Biological Sciences (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Zhaowen Wang	Xiaoxia Xia, Distinguished Research Fellow	A Study on the Self Assembly of the C-Terminal Domain of Spider Silk Protein
Ningzhen Fu	Weiliang Xia, Research Associate	Adjudin Attenuates Cell Senescence by Activation of Sirt3 Signaling Axis
Yulong Li	Xianting Ding, Distinguished research fellow	Bio-statistical analysis for the optimization of drug combinations
Ruiling Tang	Xianting Ding, Distinguished research fellow	Drug Classification Based on Data
Weijian Xu	Yongting Wang, Research Associate	Functions of CXCL12 Monomer and Dimer on Migration and Proliferation of Stem Cells
Yongning Xu	Weidong Li, Assistance Professor	Knockdown Of BCL9 in Mouse Embryos Imparis Cortical Neuronal Migration And Ultrasonic Vocalization
Qiang Su	Weiliang Xia, Research Associate	Mechanisim of Lipopoly SACCHARIDE Recognition by Caspace-4 Card Domains
Wenhan Chang	Wanqi Liang, Research Fellow	Patterns of biodiversity in response to climate change in the Arctic and Pacific Northwest after the Last Glacial Maximum
Mingchao Zhang	Weihai Yin, Research Fellow	Skin Damaging Mechanisims of SR X-Ray and Its Protection
Zhenhao Guo	Yue Zhou, Research Associate	Structural Analysis of Mechanotransduction Channel NOMPC and Its Ankyrin Repeats
Jiayu Wang	Xianting Ding, Distinguished research fellow	The Application of Data Mining in the Dianosis and Therapy of Breast Cancer
Yiming Wang	Bing Su, Professor	The Role of MEKK3: CCM2 Complex in CCM-related Vascular Function And Pathogenesis
Jianxuan Wu	Bing Su, Professor	The Role of T cell Receptor Signal in the Homeostasis of Dentritic Epidermal T cell
Tingxu Chen	Yue Zhou, Research Associate	The Study on the Structure and Function of TMEM16A
Xu Wang	Shigang He, Professor	Treating retinopathy of prematurity by regulating intraocular pressure

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Computer Science and Technology (SJTU ACM Class)		
Name	**Adviser**	**Thesis Name**
Guanru Li	Bin Yao, Lecturer	Large Scale Machine Learning System Based on Spark
Xingkai Wang	Zhenfu Cao, Professor	A Design And Implementation of Tamperroof Index System on Online Data Management
Min Wang	Yong Yu, Professor	A Handwriting Recognition With Normalizer Based on HMM-DBLSTM
Yitong Li	Hai Zhao, Assistance Professor	A Learning Approach to the Automatic Recognition of Machine Translation Text
Siyi Yang	Xiaotie Deng, Professor	Analysis of Path Following Algorithms for Combinatorial Problems
Xiaoxu Guo	Yong Yu, Professor	Application of Deep Learning in Time Series
Minshen Zhu	Pinyan Lu, Teacher	Approximation Algorithm for Multi-spin System Counting Problem
Kuan Yang	Pinyan Lu, Teacher	Approximation Algorithms for Hypergraph Model Counting Problems
Zhipeng Chen	Xiaotie Deng, Professor	Auction Optimization with Signaling Schemes
Bonan Dong	Baoliang Lv, Professor	Complementary Discuss for Emotion Recognition Based on Egg And Eye Movement Signals
Shuang Chen	Xiaoyao Liang, Professor	Complementary Optimization between Register File and Cache in GPUs
Nanxin Chen	Kai Yu, Research Fellow	Deep Learning for Audio-based Speaker Characteristics Analysis
Shuo Li	Hongtao Lu, Professor	Deep learning on Face Alignment
Huichu Zhang	Yong Yu, Professor	Detecting Collective Anomalies From Multiple Spatio-Temporal Data Sources Across Different Domains
Dong Xie	Bin Yao, Lecturer	Deterministic Main-Memory Database System
Kai Sun	Kai Yu, Research Fellow	Dialogue State Tracking in Statistical Dialogue Management
Tianxing Jin	Yong Yu, Professor	Exploration of Comsumer Review Display Method
Haoran Wang	Liqing Zhang, Professor	Object Motion Detection with Deep Networks
Qi Liu	Yong Yu, Professor	Offline Sequence Recognition Based on RNN-CTC
Shunning Jiang	Xiaoyao Liang, Professor	Power- and Area-Efficient GPU Architecture
Huihuang Zhang	Xuejia Lai, Professor	Quick Judgement of MDS Matrices on GF(2^m)
Zheyi Pan	Yong Yu, Professor	Rule Generation and Conflict Detection in IoT System
Fangkui Zhang	Xiaotie Deng, Professor	Selfish Routing Game and the Price of Anarchy
Hang Wu	Baoliang Lv, Professor	Stable Pattern Analysis on Eye Movement Signal for Motion Recognition
Xuan Luo	Hongtao Lu, Professor	Stereo Matching Algorithm Based on Hierarchical Structure

Qinglin Li	Liqing Zhang, Professor	Video based crowd density estimation method
Jianfu Zhang	Liqing Zhang, Professor	Video Event Detection Algorithms Analysis Based on Motion Feature Extraction

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Zhiyuan College Undergraduate Thesis, Class of 2016

Mathematics & Applied Mathematics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Zhewei Yao	Jinglai Li, Research Associate	A Non-Gaussian Prior for Infinite-dimension Bayesian Inverse Problem
Zixi Hu	Jinglai Li, Research Associate	An adaptive preconditioned Crank-Nicolson MCMC algorithm for infinite-dimensional Bayesian inferences
Jiaxi Li	Guihai Chen/Xiaofeng Gao, Professor/Teacher	Anglecut: A Hashing Scheme for Distributed Metadata Management
Junda Xiong	Xiaoqun Zhang, Distinguished Research Fellow	Application of Bayesian Inference in Image Analysis
Xin Tong	Chunlei Liu, Professor	Arithmetic of Algebraic Curves
Zefan Li	Bingbing Ni, Associate Professor	Deep Learning under Constraint and Its Applications in the Field of Intelligent Video Processing
Zhangxuan Gu	Liqing Zhang, Professor	Design and implementation of video movement features extraction algorithm based on recursive deep neural network
Zijun Zhuang	Hongtao Lu , Professor	Face Recognition in Unconstrained Environment Using Deep Distance Metric Learning
Wenqing Liu	Xiaoqun Zhang, Distinguished Research Fellow	Gaussian graph model and its application in medical image analysis
Yankai Zhou	Dan Hu, Distinguished Research Fellow	Global Optimization of Biological Transport Networks
Siting Liu	Shi Jin, Professor	Numerical Methods for Non-conservation Hyperbolic Conservation Laws
Wenhua Ma	Wenjun Ying, Research Associate	Numerical Simulation for Stefan Problem
Zhe Feng	Xiaotie Deng, Professor	Parallel Computing in Machine Learning
Da Zhao	Eiichi Bannai, Professor	Research on combinatorial designs
Yuncong Zhang	Dawu Gu, Professor	Research on General Number Field Sieve
Hongfei Chen	Min Tang , Research Associate	Scheme Desige for Anisotropic Scattering Neutron Transport Equation
Weihao Huang	Liqing Yan, Distinguished Research Fellow	Several Gamma Random Number Generator
Zongchen Chen	Yaokun Wu, Professor	Some problems on discrete dynamical systems
Yanzhe Liu	Eiichi Bannai, Professor	Study of spherical codes and designs
Keyi Wu	Liang Hong , Distinguished Research Fellow	Study of the Anomalous Diffusion of Water Molecules in Irregular Interface
Jiashuo Sun	Xiaoqun Zhang, Distinguished Research Fellow	Tensor Decomposition Application in Multi-Spectral Image/Video Processing

Zhenman Yuan	Jinglai Li, Research Associate	The Application of Reduced Basis Method in Optimal Control Problem
Hai Chi	Lei Zhang, Distinguished Research Fellow	The high performance realization of numerical homogenization
Yunbo Gao	Dong Han , Professor	Two kinds of lottery prediction method
Dong Li	Jianguo Huang, Professor	Variatonal Methods and Application for Solving Nonparameter Estimation

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Physics (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Yiju Zhao	Xiangjun Xing, Research Fellow	A Multi-scale Monte Method for Asymmetric Electrolytes
Siyuan Wang	Dan Hu, Distinguished Research Fellow	Cascading Failure of Nodes in the Interdependent Networks
Haoqi Ci	Li Zhan, Professor	Characteristic optimization of ultrafast fiber laser oscillator
Jiaxing Yuan	Xiangjun Xing, Research Fellow	Charge Renormalization in Asymmetric Polyelectrolyte Solution
Yang Cui	Jie Zhang, Distinguished Research Fellow	Coarse Granning for 2D Grannualr System
Siyuan Yang	Hepeng Zhang, Distinguished Research Fellow	Dynamics of Catalytic Nanomotors
Fan Xu	Jie ZHang, Distinguished Research Fellow	Effext of the Structure on the Stability of the Two Dimensional Grannular System
Xuefei Cai	Dan Hu, Distinguished Research Fellow	Elastic Structure Optimization of Insect Wings
Binghong Wu	Xianmin Jin, Distinguished Research Fellow	Experimental Quantum Percolation
Zheng Zhang	Weidong Luo, Distinguished Research Fellow	First Principle Study on Phase Transition in Doped IrTe2
Dongying Wang	Ying Liu, Professor	Growth of nanowires of Bi and other materials
Zhuoran Ma	Dao Xiang, Professor	Interaction Between Laser and Relativistic Election Bean and Its Applications
Xulai Sun	Jie Zhang, Distinguished Research Fellow	Jamming of a 2D Granular Hopper in Gravity Field
Cheng Wang	Yonglin Ju, Professor	Numerical Simulation of Cold Helium Pressurization System of First Stage Oxygen Tank
Chen Huang	Xiangjun Xing, Research Fellow	Phase Separation on lipid bilayers
Jie Bao	Hang Zheng, Professor	Reconstruction of the Dynamical Suppression of Decoherence in a Qubit
Yuxi Zhao	Hepeng Zhang, Distinguished Research Fellow	Relativistic Effect in Realistic Galaxy Survey
Zhe Wang	Dao Xiang, Professor	Study in Laser-based Intense THz Sorce Generation, Detection and Its Applications
Lin Xin	Feng He, Distinguished Research Fellow	The Numerical Simulation of Atoms and Molecules in Strong Laser Fields

Biological Sciences (SJTU Science Class)		
Name	**Adviser**	**Thesis Name**
Yichen Si	Zhaochun Wei, Assistance Professor	Assessing the importance of epistasis in the estimation of genetic variance and prediction of quantitative phenotype
Boqian Wang	Xianting Ding, Distinguished Research Fellow	Computer assisted optimizing of the combination of single drug components from traditional Chinese medicine Sijunzi Soup
Lulu Shang	Jing Li, Assistance Professor	Discovery of Disease-related Genes Using Bayesian Sparse Group Selection
Ziyang Tan	Xianting Ding, Distinguished Research Fellow	Early detection of pancreatic adenocarcinoma basing on microfluidic chip
Yuexin Dong	Weiliang Xia, Research Associate	Effects of replication-transcription conflict on transcription
Mingzhao Chen	Weiliang Xia, Research Assistance	Functional Coonectivity in the Mammalian Retina
Jiayang Xie	Xiaoyao Liang, Professor	Genetic and physiological property of maize leaf epidermal traits related to abiotic stress tolerance
Feiyan Mo	Yongting Wang, Research Associate	GPCR antagonists as early viral entry inhibitors in filoviral infection
Xiaoyun Ding	Shigang He, Professor	In Vivo Direct Reprograming of Reactive Glial Cells into Functional Neurons after Spinal Cord Injury
Yan Xiang	Huai Sun, Professor	Metadynamics and the treatment of inhomogeneous fluids beyond the mean-field approximation
Yitian Yao	Douglas Zhou, Distinguished Research Fellow	Molecular Diagnosis of Relapse-Specific Mutations in Pædiatric Acute Lymphoblastic Leukemia
Qingtao Xu	Hongbo Hu/Xuehong Zhang, Assistance Professor /Professor	Production of acetol from glycerol by recombinant in Escherichia Coli Lin43
Xiangtao Yang	Xiaoxia Xia, Distinguished Research Fellow	Purification and Biomimetic Spinning of Large Recombinant Spider dragline Silk Protein MaSp2
Hui Ji	Shigang He, Professor	Recognition of degenerating dendrites by phagocytes during dendrite remodeling and injury
Ke Shen	Shigang He, Professor	The efficacy of IOP reducing medicine in a rat model for ROP
Yalu Chen	Huai Sun, Professor	Theoretical Study of Activation Mechanism in Sweet Taste Receptor

上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

Computer Science and Technology (SJTU ACM Class)		
Name	**Adviser**	**Thesis Name**
Yao Li	Yong Yu, Professor	A Crowdsorcing-based Data Collecting Platform
Zhuoyue Zhao	Qili Zhu, Assistance Professor	A New CodeGen Module for InferSpark
Boyu Tian	Zhihua Zhang, Professor	Acceleration of the Online EM Algorithm
Wenkang Yu	Xiaoyao Liang, Professor	An Optimized Framework for Approximate Computing with Neural Network
Hao Chen	Xiaoyao Liang, Professor	Automatic Compiling Optimization by Neural Networks
Yiqing Hua	Chao Li, Distinguished Research Associate	Autonomous Resource Management for Green Data Centers
Siji Feng	Yong Yu, Professor	Cirrus: Automated Fuzzing Based on Program State Analysis
Chuan Jiang	Liqing Zhang, Professor	Clothing Retrieval System Design based on Deep Learning
Shuang Liu	Zhihua Zhang, Professor	Collaborative Regret Minimization
Yu Chen	Xiaotie Deng, Professor	Computational Implementational Issues in Optimal Auction
Yiming Liu	Yong Yu, Professor	Conformity Analysis of Online Rating Site
Xutong Chen	Yong Yu, Professor	Connecting Devices Across Platforms Based on Analysis of History Behavior
Yanqing Peng	Fan Wu, Assistance Professor	Data Pricing Mechanism Design on Internet
Zhen Wei	Hongtao Lu , Professor	Deep Learning based Hashing Method for Large-scale Image Retrieval
Wengong Jin	Kai Yu, Research Fellow	Deep learning based language model adaptation
Qizhe Xie	Kai Yu, Research Fellow	Deep Learning for Conversation Systems
Zeng Huang	Hongtao Lu , Professor	Depth Estimation based on Neural Networks
Kaichun Mo	Zhihua Zhang, Professor	Enrich Material Annotation for Large-scale Shape Datasets
Tongliang Liao	Liqing Zhang, Professor	Event Detection Algorithm based on Deep Learning
Ying Sheng	Hongtao Lu , Professor	From Matrix Factorization to Deep Learning
Wenhan Huang	Xiaotie Deng, Professor	Incentive Analysis in Allocation Problems
Jiachen Shi	Bin Yao, Lecturer	K Hit Query on Distributed System
Zhengbo Li	Yong Yu, Professor	Label Aggregation in Crowdsourcing: Survey and Improvement
Shi Feng	Qili Zhu, Assistance Professor	Multistage Clustering Method for Unsupervised Aspect Mining
Ziwei Ji	Xiaotie Deng, Professor	Online Bundle Recommendation
Yiding Feng	Xiaotie Deng, Professor	Priority right pricing in online advertisement
Jun Ma	Yong Yu/Xiaomin Chen, Professor/Teacher	Research on Frankl Conjecture

Maofan Yin	Kai Yu, Research Fellow	Structured Deep Learning and its Application to Speech and Language Processing
Siqi Chen	Yong Yu, Professor	The Analysis and Evaluation of Distributed Machine Learning Algorithm
Chao Liao	Pinyan Lu, Teacher	The Sum-of-Squares Hierarchy in Approximation Algorithms
Hao Tan	Hongtao Lu , Professor	Video Sementic Segmentation based on Low-Rank Decomposition
Wen Xu	Yuanyuan Zhang, Research Fellow	Visualized Kernel Protection Approach