



Zhiyuan College Seminars (2010-2016)

By the September of 2016, Zhiyuan College has formally organized more than 800 academic seminars on diverse topics by inviting world's distinguished scholars to communicate with students, with the purpose of creating top-notch academic environment, broadening students' horizons, and stimulating students' curiosity. The students as well spontaneously organize a number of academic activities.





Zhiyuan College Academic Seminars, 2010 (42)

| Date | Speaker | Affiliation | Title |
|-----------|--------------------|--|--|
| 2010/3/1 | Anthony J. Leggett | <i>Nobel Laureate in Physics</i> University of Illinois at Urbana-Champaign | Ultracold Fermi Alkali Gases: Bose Condensation Meets Cooper Pairing |
| 2010/3/17 | Hushan Xu | Lanzhou Institute of Modern Physics, Chinese Academy of Sciences | National Nuclear Science Facility, HIRFL |
| 2010/3/29 | Juergen Jost | The Max Planck Institute for Mathematics | Graphs and the Mathematical Analysis of Networks |
| 2010/3/31 | Juncheng Cao | Shanghai Institute of Micro system and Information Technology, Chinese Academy of Sciences | Terahertz Physics, Devices and Its Application |
| 2010/4/7 | Yugang Ma | Shanghai Institute of Applied Physics, Chinese Academy of Sciences | The Discovery of Anti-Matter Hyper Nucleus |
| 2010/4/14 | David Gross | <i>Nobel Laureate in Physics</i> Kavli Institute for Theoretical Physics, University of California, Santa Barbara | The Future of Physics |
| 2010/4/28 | Xiaolin Lei | Department of Physics, Shanghai Jiao Tong University | Microwave Radiation in Two Dimensional Semiconductor with High Mobility, Magneto Resistive Oscillations of DC Current and Acoustic Phonon Excitation |
| 2010/5/5 | Huiqiu Yuan | Department of Physics, Zhejiang University | Magnetism and Superconductivity in Correlated Mate |
| 2010/5/12 | Ping Huai | Shanghai Institute of Applied Physics, Chinese Academy of Sciences | Photon/Particle Beam Induced Phase Transition in N |
| 2010/5/12 | Mufa Chen | Department of Mathematics, Beijing Normal University | Phase Transition and Principle Eigenvalue |
| 2010/5/14 | Qing Wang | Department of Physics, Tsinghua University | The Origin of Quality-The Understanding of Particle Physics |
| 2010/5/17 | Lin Zhao | Department of Philosophy, Wuhan University | Development of the Enlightenment Movement in the West |
| 2010/5/19 | Drew Baden | Department of Physics, Maryland University | First Look at LHC Data |
| 2010/5/20 | Dan Hu | Institute of Natural Sciences, Shanghai Jiao Tong University | Modeling and Calculation of the Adaptive Growth of Blood Vessels |



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| 2010/5/21 | Hepeng Zhang | Institute of Natural Sciences, Shanghai Jiao Tong University | The Collective Movement in the Biological System-How Fish and Birds Are Formed |
| 2010/5/28 | Xue-Zheng Cao | Department of Physics and ITPA, Xiamen University | Entropic Effects in Athermal Polymer/Nano-Particle Mixture |
| 2010/5/31 | Peidong Yang | Department of Chemistry, University of California, Berkeley | Nanotechnology and Terawatt Challenge |
| 2010/5/31 | Zhengwei Pan | University of Georgia | Controlled Growth of One-Dimensional Nanostructure |
| 2010/6/9 | Wei Cai | Department of Mathematics & Statistics, University of North Carolina at Charlotte | Numerical Algorithm Issues for Quantum Transport with Non-Equilibrium Green's Function and Wigner Distribution Methods |
| 2010/6/17 | Xiaolin Cheng | Oak Ridge National Laboratory | Multi-Scale Mathematics for Biomolecular Simulation |
| 2010/6/23 | Qinying Chen | Memorial University of Newfoundland | Organic Bulk Heterojunction Solar Cells with Impro |
| 2010/6/25 | David W. McLaughlin | New York University | Mathematical Representation of Large-Scale Neuronal Dynamics |
| 2010/6/25 | Alice Chang | Princeton University | Q-curvature-Analytic and Geometric Aspects |
| 2010/7/2 | Feng Zhao | Microsoft Research Asia | Technology |
| 2010/7/2 | Ding Mingzhou | University of Florida | Response Gain and Its Attentional Control in Visual Cortex |
| 2010/7/21 | Michael Schatz | Georgia Institute of Technology | A Dynamical Systems Approach to Turbulence: Recent Advances |
| 2010/10/18 | Shigang He | Institute of Biophysics, Chinese Academy of Sciences | Morphology, Function and Development of Retinal Ganglion Cells |
| 2010/10/19 | Kobayashi Makoto | <i>Nobel Laureate in Physics</i> High Energy Accelerator Research Organization | Violation of Matter-Antimatter Symmetry |
| 2010/11/5 | Lipo Wang | UM-SJTU Joint Institute, Shanghai Jiao Tong University | Geometrical Description of Fluid Turbulence Using Dissipation Element Analysis |
| 2010/11/11 | Zhi John Lu | Yale University | lncRNA: Integration of High-Throughput Data |
| 2010/12/1 | Haisan Wu | Fudan University | Measuring Collective Motion Using Computer Vision Techniques |
| 2010/12/3 | Yunxin Zhang | Fudan University | Biophysical Properties of Molecular |



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| | | | Motors |
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| 2010/12/10 | Xiaoming Yuan | Hong Kong Baptist University | Splitting Algorithms for Separable Convex Programming |
| 2010/12/10 | Wotao Yin | Rice University | A Feasible Method for Optimization with Orthogonality Constraints |
| 2010/12/10 | Weihua Li | Fudan University | Fantastic Self-assembly of Block Copolymers |
| 2010/12/13 | Zhiwu Lin | Georgia Institute of Technology | Nonlinear Landau Damping and Inviscid Damping |
| 2010/12/17 | Benzhuo Lu | Chinese Academy of Sciences | Continuous Modeling Method in Molecular Simulation |
| 2010/12/21 | Qing Nie | University of California, Irvine | Noise Attenuation in Biological Systems |
| 2010/12/24 | Weiguo Gao | Fudan University | Numerical Methods for Nonlinear Eigenvalue Problems Arising from Electronic Structure Calculations |



Zhiyuan College Academic Seminars, 2011 (59)

| Date | Speaker | Affiliation | Title |
|--------------------|---------------------------|---|--|
| 2011/3/16 | Tony Cai | The Wharton School, University of Pennsylvania | Several Frontier Problems in Statistics |
| 2011/3/16 | Wei Cai | University of North Carolina at Charlotte | Numerical Algorithms for Electrostatics in Biomole |
| 2011/4/18 | Zhi Lu | Tsinghua University | A Brief Introduction of Bioinformatics and Genomics |
| 2011/4/21 | Alberto Bressan | Pennsylvania State University | Differential Inclusions, Old and New |
| 2011/4/22 | Radjesvarane Alexandre | Shanghai Jiao Tong University | Homogenization, Memory/Non Local Effects, Kinetic Equations |
| 2011/4/25 | Shusang Zhu | Fudan University | Introduction on Some Financial Optimization Problems |
| 2011/4/26 | Xiangyang Zhu | School of Mechanical Engineering, Shanghai Jiao Tong University | Biological Robot and Bionic Robot |
| 2011/5/6 | Xinming Wu | Fudan University | An Adaptive Uniaxial Perfectly Matched Layer Method and Its Applications |
| 2011/5/10 | Baode Sun | Shanghai Jiao Tong University | Scientific Problems in the Study of Solidification Technology |
| 2011/5/13 | Andrew Belmonte | Pennsylvania State University | Shape-mediated Transitions of Immiscible Droplets in Electric Fields |
| 2011/5/20- 5/27 | Roger Lewandowski | University of Rennes 1 | Approximate Deconvolution Models for Turbulent Flows |
| 2011/5/27 | Wei Guo | Yale University | Flow Visualization in Superfluid ^4He Using Metastable Helium Molecules as Tracers |
| 2011/5/30 | Chongchun Zeng | Georgia Institute of Technology | Spike Dynamics of A Singular Parabolic Equation |
| 2011/5/31 | Ning Lan | Shanghai Jiao Tong University | Multi-Scale Modeling to Understand Normal and Pathological Human Movements |
| 2011/6/3 | Jie Zhang | Indiana-Purdue University | Science in the Sandbox-Shear Jammed States in Granular Materials |
| 2011/6/8 | Leo Radzihovsky | University of Colorado | Condensed Matter Physics with Cold Atomic Gases |
| 2011/6/10 | Bo Li | University of California, San Diego | Variational Implicit-Solvent Modeling of Biomolecular Solvation |
| 2011/6/13 | Jianfeng Lu | Courant Institute, New York University | Analysis of Multiscale Models of Solids |



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| 2011/6/14 | Xu Yang | Courant Institute, New York University | Constrained Stochastic Dynamics of Barotropic Flow over Topography |
| 2011/6/21 | Xu Yang | Courant Institute, New York University | Frozen Gaussian Approximation for High Frequency Wave Propagation |
| 2011/6/22 | Shijie Deng | Georgia Institute of Technology | The Application of Financial Engineering and Risk Management in the Energy Market |
| 2011/6/22 | Jingrun Chen | University of California, Santa Barbara | An Efficient Multigrid Method for Molecular Mechanics Modeling of Crystalline Solids |
| 2011/6/23 | Xu Yang | Courant Institute, New York University | Homogenized Maxwell Equation in Crystal |
| 2011/6/24 | Lin Lin | Princeton University | Quantum Effects of Protons: Momentum Distribution and Potential Energy Surface |
| 2011/6/27 | Chen Nan | The Chinese University of Hong Kong | A Non-Zero-Sum Game Approach for Convertible Bonds: Tax Benefits, Bankrupt Cost and Early/Late Call |
| 2011/6/29 | Fanghua Lin | Courant Institute, New York University | Uniform Estimates and Convergence Rates for Elliptic Homogenizations |
| 2011/7/4 | Daqing Li | Shanghai Jiao Tong University | Dimension of Spatially Embedded Networks |
| 2011/7/4 | Dalin Tang | Worcester Polytechnic Institute | Seeking Collaborations and Career Development for Better Potential: Mathematics, Modeling, Engineering and Clinical Applications |
| 2011/7/11 | Michael Shelley | Courant Institute, New York University | Novel Phenomena and Models of Active Fluids |
| 2011/7/13 | Chun Liu | Department of Mathematics, Pennsylvania State University | Electrostatics and Ion Transport for Nondiluted Ionic Fluids and Ion Channels |
| 2011/7/14 | Bokai Yan | Department of Mathematics, University of Wisconsin-Madison | Asymptotic-Preserving Schemes for Kinetic-Fluid Modeling |
| 2011/7/19 | Rongjie Lai | Department of Mathematics, University of South California | Laplace-Beltrami Eigen-Geometry and Applications to 3D Medical Imaging |
| 2011/7/25 | Xiang Cheng | Cornell University | Imaging the Microscopic Structure of Shear Thinning and Shear Thickening Colloidal Suspensions |
| 2011/7/27 | Anthony Man-Cho So | Department of Systems Engineering and Engineering Management, The Chinese University of Hong Kong | Rigidity and Localization: An Optimization Perspective |



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| 2011/8/3 | Xu Yangyang | Department of Computational and Applied Mathematics, Rice University | An Alternating Direction Algorithm for Matrix Completion with Nonnegative Factors |
| 2011/9/19 | Frédéric Hérau | Nantes University | Tunnel Effects for Semi Classical Fokker Planck Operators |
| 2011/9/26 | Karel Pravda-Starov | Université de Cergy-Pontoise | Exponential Return to Equilibrium for Hypoelliptic Quadratic Systems |
| 2011/9/28 | Guanrong Chen | City University of Hong Kong | The Story of “Chaos” |
| 2011/9/29 | Daming Li | Shanghai Jiao Tong University | Two Continuum Models for Polymer Networks |
| 2011/10/10 | Bingsheng He | Nanjing University | A Relaxed Customized Proximal Point Algorithm for Separable Convex Programming |
| 2011/10/14 | Dongdong Ge | Antai College of Economics and Management, Shanghai Jiao Tong University | Convex Relaxation Approach to Appointment Scheduling |
| 2011/10/18 | Houde Han | Tsinghua university | Tailored Finite Point Method |
| 2011/10/20 | Xiaoling Sun | School of Management, Fudan University | New Wine in Old Bottles: A Lagrangian Decomposition Approach for Quadratic Programs with Hard Constraints |
| 2011/10/20 | Jinfeng Jia | Department of Physics, Shanghai Jiao Tong University | QSE in Pb Thin Films and Topological Insulator Thin Films |
| 2011/10/26 | Alex Mogilner | Department of Mathematics and Department of Neurobiology, Physiology and Behavior, University of California, Davis | Speed and Accuracy of Mitotic Spindle Assembly |
| 2011/11/2 | Yuesheng Xu | Sun Yat-Sen University | From Matrix Representations of Integral Operators to Hyperbolic Cross App |
| 2011/11/9 | Yongzhong Huo | Department of Mechanics and Engineering Science, Fudan University | Combine Elastomers with Liquid Crystals- Liquid Crystal Elastomer: Its Unusual Mechanical Property and Smart Behaviors |
| 2011/11/14 | Zhang Yin | Rice University | Compressive Sensing: A Brief Introduction |
| 2011/11/14 | Zhi Lin | Zhejiang University | Mixing and Transport of Passive Scalars in Fluids |
| 2011/11/15 | Daniel Spector | Zhejiang University | Simple Proofs of Some Results of Reshetnyak |
| 2011/12/16 | Chengyu(Tony) Li | Institute of Neuroscience, Chinese Academy of Sciences | Modulation of Temporal Dynamics of Neural Network By Burst-Spiking of Single Neurons |
| 2011/11/18 | Chao Yang | Lawrence Berkeley National Laboratory | Computational Approaches to Large-scale X-ray Image Analysis |
| 2011/11/23 | Zhang Yin | Rice University | Hyperspectral Image Compressive Sensing and Unmixing |



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| 2011/12/5 | Jianwei Shuai | Department of Physics, Institute of Theoretical Physics and Astrophysics, Xiamen University | The Intracellular Calcium Modeling with the Violation of the Laws of Mass Action and the Detailed Balance |
| 2011/12/9 | George Em Karniadakis | Division of Applied Mathematics, Brown University Department of Mechanical Engineering, Massachusetts Institute of Technology | Stochastic Modeling and Uncertainty Quantification in Computational Science & Engineering |
| 2011/12/9 | Martin Ulmschneider | Birkbeck College | Burying A Charge in the Lipid Bilayer: A Dilemma Resolved |
| 2011/12/12 | Chin-Kun Hu | Institute of Physics, Academia Sinica | Theoretical Models for Biological Evolution and the Origin of Life |
| 2011/12/19 | Zheng Gan | Department of Mathematics, Rice University | Spectral Properties of Limit-Periodic Schrödinger Operators |



Zhiyuan College Academic Seminars, 2012 (128)

| Date | Speaker | Affiliation | Title |
|-----------|-------------------|---|--|
| 2012/1/4 | Tony Cai | The Wharton School, University of Pennsylvania | Several Frontier Problems in Statistics |
| 2012/1/10 | Qin Zhang | Aarhus University | Distributed Streaming |
| 2012/1/10 | John Hopcroft | <i>A.M. Turing Award Winner</i> Cornell University | Research Ideas in Spectral Methods for Community Detection |
| 2012/1/10 | Xiaoming Sun | Institute of Computing Technology, Chinese Academy of Sciences | Streaming/Communication Complexity Lower Bound for Some Graph and Linear Algebra Problems |
| 2012/2/3 | Wei-Cheng Wang | National Tsinghua University | A Null-Space Free Jacobi-Davidson Method for Maxwell's Equation |
| 2012/2/22 | Jianxi Gao | Boston University | Network of Networks |
| 2012/2/22 | Michael Engelhart | Heidelberg University | Optimization-based Analysis and Training in Complex Problem Solving |
| 2012/2/24 | J. Thomas Beale | Duke University | Numerical Methods and Error Analysis for Singular Integrals and Moving Interfaces in Fluids |
| 2012/2/29 | Wei Zhang | Peking University | Numerical Study for the Nucleation of Two-Dimensional Stochastic Cahn-Hilliard Dynamics with Landau-Brazovskii Energy Functional |
| 2012/2/29 | Pinyan Lu | Microsoft Research Asia | Classifying Computational Counting Problems |
| 2012/3/6 | Yuchun Lin | University of California, Berkeley | Multiscale Computer Simulation on Cellulase: Protein Allostery on Solid-Liquid Interface and Cellulose Deconstruction |
| 2012/3/8 | Chaohui Tong | Ningbo University | The Self-consistent Field Study of the Adsorption of Flexible Polyelectrolytes onto Two Charged Objects |
| 2012/3/16 | Hongxia Wang | Department of Mathematics and System Science, National University of Defense Technology | The Directional Sensitivity of DT-CWs with Applications in Image Processing |



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| 2012/3/21 | Weidong Li | Bio-X Institute, Shanghai Jiao Tong University | Animal Modeling Approach on the Genetic of Mental Disorders |
| 2012/3/22 | Liwei Xu | Department of Mathematical Sciences, Rensselaer Polytechnic Institute | Central Discontinuous Galerkin Methods for Ideal MHD Equations |
| 2012/3/22 | Youjin Deng | University of Science and Technology of China | Development and Applications of Worm-type Monte Carlo Methods |
| 2012/3/28 | Shengtian Li | Bio-X Institute, Shanghai Jiao Tong University | Early-Stage Epileptogenesis and Intervention |
| 2012/4/6 | Yan Liqing | Department of Mathematics, University of Florida | Liquidity Risk Measurement and Management |
| 2012/4/10 | Bernard Meyerson | IBM Technology Innovation | Innovation-the Drive for Growth and Transformation |
| 2012/4/18 | Yousheng Shu | Chinese Academy of Sciences | Studies on Neuronal Excitability and Mechanism Underlying Epilepsy |
| 2012/4/24 | Ludwig Arnold | Universität Bremen | Random Dynamical Systems-An Introduction |
| 2012/4/25 | Zuoqin Wang | University of Michigan | Some Inverse Spectral Results for Perturbed Harmonic Oscillators |
| 2012/4/25 | Qun Lin | University of Michigan | Some Inverse Spectral Results for Perturbed Harmonic Oscillators |
| 2012/4/27 | Aibin Zang | Yichun College | Vanishing Viscous Limits for 3D Navier-Stokes Equations with A Navier Slip Boundary Condition |
| 2012/4/27 | Qiman Shao | Hong Kong University of Science and Technology | The Legend of Student's T-Statistic |
| 2012/4/28 | Yihui Zhou | University of North Carolina at Chapel Hill | Empirical Pathway Analysis, without Permutation |
| 2012/5/9 | Quanxing Liu | Spatial Ecology Department Royal Netherlands Institute for Sea Research | Self-Organization Patterning in Ecosystem |
| 2012/5/9 | Jialin Zhang | University of Southern California, Los Angeles | When Selfish Agents Meet Distributed System: Distributed Consensus Resilient to Strategic Manipulations |
| 2012/5/12 | Chen Ding | Wells Fargo Securities | U.S. Mortgage Backed Securities Market |
| 2012/5/14 | Saverio Eric Spagnolie | Brown University | Swimming at the Micro-Scale. Part I: Hydrodynamics of Self-Propulsion near A Boundary |



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| 2012/5/15 | Guowei Wei | Department of Mathematics, Michigan State University | PDE Transform-A Unified Paradigm for Image Analysis and Multiscale Modeling |
| 2012/5/15 | Saverio Eric Spagnolie | Brown University | Swimming at the Micro-scale. Part II: Kinematic Optimization and the Many Roles of Flexibility |
| 2012/5/16 | Hanfang Yang and Yichuan Zhao | Department of Mathematics and Statistics, Georgia State University | Smoothed Jackknife Empirical Likelihood Inference for the Difference of Two Quantiles |
| 2012/5/18 | Jacques Froment | Université de Bretagne Sud | Space-frequency Non-local Total Variation for Image Denoising |
| 2012/5/18 | Lihong Cao | Beijing Zhi Comtech Technology Co. Ltd. | Bionic Neural Network and Its Simulation |
| 2012/5/21 | Paul Atzberger | Department of Mathematics, Department of Mechanical Engineering, University of California Santa Barbara | Stochastic Modeling and Analysis: Analytic and Computational Approaches |
| 2012/5/22 | Paul Atzberger | Department of Mathematics, Department of Mechanical Engineering, University of California Santa Barbara | Mathematical Problems in Soft Condensed Matter |
| 2012/5/22 | Periklis Papakonstantinou | Tsinghua University | Space-Bounded Communication Complexity |
| 2012/5/22 | Tao Gong | The University of Hong Kong | A Cross-Model Study on the Effect of Power-Laws on Language Evolution |
| 2012/5/22 | Lirong Xia | Harvard University | Ordinal Preference Representation and Aggregation: Game-Theoretic and Combinatorial Aspects of Computational Social Choice |
| 2012/5/23 | Paul Atzberger | Department of Mathematics, Department of Mechanical Engineering, University of California Santa Barbara | Biophysics and Biomathematics : Current Challenges and Future Directions |
| 2012/5/23 | Anita T. Layton | Duke University | How the Kidney Regulates Blood Flow-A Modeling Approach |
| 2012/5/23 | Xinfu Chen | University of Pittsburgh | Dynamics of Multi-Stable Equilibrium |
| 2012/5/24 | Anna Roe | Vanderbilt University | Functional Organization of Attentional Modulation in Primate V4 |
| 2012/5/28 | John Wesley Cain | University of Richmond | Kinematic Models of Paced |



| | | | Cardiac Fibers |
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| 2012/5/28 | Tao Luo | Tsinghua University Georgetown University | Free Surface Motion for Inviscid Incompressible MHD Equations |
| 2012/5/29 | Yuanwei Qi | University of Central Florida | Global Dynamics and Traveling Fronts of Reaction-Diffusion System Arising from Auto-Catalysis |
| 2012/5/29 | Bin Li | The University of Iowa | Default Risk of A Time-Homogeneous Diffusion Model |
| 2012/6/4 | Daniel Forger | University of Michigan | Using Mathematics to Understand Biological Timekeeping |
| 2012/6/5 | Zheng Huang | The City University of New York | An Application of Elliptic PDEs to Higher Teichmueller Theory |
| 2012/6/6 | Yueheng Lan | Tsinghua University | Bridging Steady States with the Renormalization Group Analysis |
| 2012/6/11 | Songming Hou | Louisiana Tech University | A Numerical Method for Solving the Elliptic and Elasticity Interface Problems |
| 2012/6/13 | Hong Zhu | Division of Biostatistics, College of Public Health, The Ohio State University | Inference on Bivariate Survival Data with Interval Sampling through Kendall's Tau: Testing and Association Measure |
| 2012/6/15 | Daniel T.N. Chen | Brandeis University | Hierarchical Active Matter: from Extending Bundles to Active Flows, Streaming Liquid Crystals and Self-Propelled Droplets |
| 2012/6/18 | Benyu Guo | Mathematics and Science College, Shanghai Normal University | Spectral Methods for Exterior Problems of Polygonal Domains |
| 2012/6/20 | Han Wang | Institute for Mathematics, Freie Universitaet Berlin | The Numerical Accuracy of Force Computation in Inhomogeneous and Correlated Molecular Systems |
| 2012/6/22 | Zhening Li | Shanghai University | Probability Bounds for Polynomial Functions in Random Variables |
| 2012/6/28 | Wotao Yin | Rice University | On the Global Linear Convergence of the ADM |
| 2012/7/6 | Richard T. B. Ma | National University of Singapore | Game-Theoretic Analysis for the Network Neutrality Debate |
| 2012/7/10 | John J. H. Miller | Institute for Numerical Computation and Analysis 7-9 Dame Court Dublin 2, Ireland | A Simple Mathematical Model of a Wave Energy Device |



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| 2012/7/11 | Dezhe Jin | Pennsylvania State University | The Neural Basis of Birdsong Syntax |
| 2012/7/13 | Ying Lu | Stanford University | A Longitudinal Chinese Academy of Sciences-Control Study Design to Evaluate The Odds Ratio of An Imaging Prognostic Marker |
| 2012/7/16 | John Strain | University of California, Berkeley | A Butterfly Algorithm for the Geometric Nonuniform FFT |
| 2012/7/17 | Weizhu Bao | Department of Mathematics, National University of Singapore | Modelling, Analysis and Simulation of Wave Motion in Quantum and Plasma Physics |
| 2012/7/17 | David Xiao | Universit'e Paris 7 | Lower Bounds on Information Complexity via Zero-Communication Protocols |
| 2012/7/19 | Huazhong Tang | Peking University | Relativistic Equations of Fluid Dynamics |
| 2012/7/23 | Hailiang Liu | Iowa State University | Entropy Satisfying Methods for Kinetic Fokker-Planck Equations |
| 2012/8/2 | Xu Yang | University of California, Santa Barbara | A Large Deviation Framework to Analyze Metastable Behavior in Climate Systems |
| 2012/8/7 | Guillaume Bal | Columbia University | Hybrid Inverse Problems and Systems of Nonlinear Partial Differential Equations |
| 2012/8/7 | Kui Ren | University of Texas at Austin | Inverse Problems in Photoacoustic Tomography with Differential Measurement |
| 2012/8/14 | Cheng Wang | University of Massachusetts Dartmouth | Numerical Stability of Fully Discrete Pseudo-Spectral Schemes for Nonlinear PDEs |
| 2012/8/17 | Dongsheng Yin | Tsinghua University The University of North Carolina at Chapel Hill | Gaussian Beam Method for Schrodinger Equation with Discontinuous Potentials |
| 2012/8/24 | Rich McLaughlin | The University of North Carolina at Chapel Hill | Trapping of Buoyant Particles and Plumes in Sharp Stratification |
| 2012/8/27 | Michael J. Shelley | Courant Institute, New York University | Biological Flows and Mechanics |
| 2012/8/30 | Bin Liu | School of Engineering, Brown University | Helical Swimming in Complex Fluid Media |
| 2012/9/10 | Jean-Pierre Bourguignon | École Polytechnique | Mathematics, A Thriving Science |



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| 2012/9/13 | Yimin Zou | University of California, San Diego | Mechanisms of Chemotropism-Cell Polarity Signaling in Brain Wiring |
| 2012/9/19 | Xiaofan Wang | Department of Automation, Shanghai Jiao Tong University | Social Learning on Complex Networks |
| 2012/9/21 | Hidetoshi Konno | Tsukuba University | Multiplicative Stochastic Processes for Characterizing Ventricular Fibrillation in 2D Beeler-Reuter Model |
| 2012/9/24 | Zhangsheng Yu | Department of Biostatistics, Indiana University School of Medicine | Dynamic(Time-Varying Coefficient) Modeling for Correlated Survival Data Analysis |
| 2012/9/26 | Qin Zhang | IBM Almaden Research Center | Taming the Data Deluge |
| 2012/9/27 | Noga Vardi | School of Medicine, University of Pennsylvania | Neurochemical Organization (and Disorganization) of the First Visual Synapse |
| 2012/10/10 | Shigang He | Institute of Natural Sciences, Shanghai Jiao Tong University | Development of A Neurocircuitry Coding Motion Directions in the Mammalian Retina |
| 2012/10/12 | Sijue Wu | University of Michigan, Ann Arbor | On Some Large Time Behaviors of Surface Water Waves |
| 2012/10/16 | Haiyang Fu | Bradley Department of Electrical and Computer Engineering, Virginia Polytechnic Institute and State University | Probe the Ionosphere by Active Sounding Rocket and Radio Wave Modification Experiments |
| 2012/10/17 | Pinyan Lu | Microsoft Research Asia | Correlation Decay up to Uniqueness in Spin Systems |
| 2012/10/18 | Ji Zhu | University of Michigan, Ann Arbor | Joint Estimation of Multiple Graphical Models |
| 2012/10/22 | Gen-Sheng Feng | University of California, San Diego | The Cross-Talks of Physicists, Chemists and Biologists: Products, Problems and Prospects |
| 2012/10/23 | Haiyuan Yu | Department of Biological Statistics and Computational Biology Weill Institute for Cell and Molecular Biology, Cornell University | Revealing Molecular Mechanisms of Human Disease through 3D Interactome Network Analysis |
| 2012/10/24 | Jimmy Zhou | School of Medicine, Yale University | Synaptic Function in the Developing and Mature Retina |
| 2012/10/26 | Liqing Yan | Institute of Natural Sciences, Shanghai Jiao Tong University | Discretization Errors in Simulation of Extrema of Alpha-Stable |



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| | | | Processes with Their Application in Finance |
| 2012/10/26 | Bing-Sui Lu | Institute of Natural Sciences, Shanghai Jiao Tong University | Statistical Physics of Isotropic-Fenesis Nematic Elastomers |
| 2012/10/29 | Bengt E. Eliasson | Ruhr-Universität Bochum | Quantum Effects in Relativistic Laser-Plasma Interactions and Quantum Free Electron Lasers |
| 2012/10/30 | King Wai Yau | Johns Hopkins University | Melanopsin Signaling in the Eye |
| 2012/10/31 | Bengt E. Eliasson | Ruhr-University Bochum | Kinetic Modeling of Unstable Ocean Waves |
| 2012/11/2 | Bengt E. Eliasson | Ruhr-Universität Bochum | Full-scale Simulations of Ionospheric Turbulence and Electron Heating by RF Transmitters |
| 2012/11/2 | Bengt E. Eliasson | Ruhr-Universität Bochum | Kinetic Modeling of Unstable Ocean Waves |
| 2012/11/7 | Qian Wang | School of Media and Design , Shanghai Jiao Tong University | Suppression and Cultural Dreams: Watching Hollywood Comic Films |
| 2012/11/9 | Jinglai Li | Institute of Natural Sciences, Shanghai Jiao Tong University | Predicting and Simulating Large Deviations and Rare Events in Lightwave Systems |
| 2012/11/12 | Yingfei Yi | School of Mathematics, Georgia Institute of Technology | Oscillations in a Closed Chemical Reaction System |
| 2012/11/12 | Valery Romanovski | Center for Applied Mathematics and Theoretical Physics, University of Maribor, Slovenia | Cyclicity of Polynomial Systems of ODEs |
| 2012/11/13 | Peter A. Markowich | Department of Applied Mathematics and Theoretical Physics, University of Cambridge | On Wigner and Bohmian Measures (Part II) |
| 2012/11/13 | De-Chang Dai | Institute of Natural Sciences, Shanghai Jiao Tong University | Wave, Huygens Principle and Green's Function |
| 2012/11/14 | Huichun Liu | Shanghai Jiao Tong University | Semiconductors, Microelectronics, Optoelectronics-All Those Useful Things; Plus Recent Advance |
| 2012/11/14 | Le Ma | University of Southern California | Positive and Negative Regulation in the Development of Nerve Cell Branching |
| 2012/11/19 | Oleg Musin | University of Texas at Brownsville | Packing of Congruent Spheres on A Sphere |
| 2012/11/21 | Yu Zheng | Microsoft Research Asia | Urban Computing with City |



| | | | Dynamics |
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| 2012/11/28 | Qing Tao | Shanghai Jiao Tong University | Cross-Cultural Communication and English Learning |
| 2012/12/5 | Paul M. Goldbart | School of Physics, Georgia Institute of Technology | Exploring Polymer Fiber Fluids via Their Quantum Analogs: Topological Constraints and Their Consequences |
| 2012/12/7 | Tze Leung Lai | Department of Statistics, Stanford University | Change-Point Methodology and Its Applications |
| 2012/12/10 | Shijun Liao | Department of Mathematics, State Key Lab of Ocean Engineering | Chaos: A Bridge between Micro-Level Uncertainty and Macroscopic Randomness |
| 2012/12/10 | Derek Frydel | Instituto de Fisica, Universidade Federal do Rio Grande do Sul | Electrostatic Interactions in Soft Matter: Application of the DFT |
| 2012/12/12 | Jin Yu | Beijing Computational Science Research Center | Study Physical Mechanisms of Molecular Machines |
| 2012/12/12 | Gong Chen | Pennsylvania State University | Transdifferentiation for Internal Brain Repair |
| 2012/12/13 | Xiao-Gang Wen | Massachusetts Institute of Technology | Highly Entangled Quantum Matter |
| 2012/12/13 | Samuel M. Wu | Baylor College of Medicine | Ion channels, Synapses and Neural Circuits Mediating Visual Function and Dysfunction in the Retina |
| 2012/12/14 | Eric Xing | School of Computer Science, Carnegie Mellon University | Genome-Phenome Association Analysis of Complex Diseases-A Structured Sparse Regression Approach |
| 2012/12/14 | Haiqing Lin | Beijing Computational Science Research Center | Simulation of Physical Systems |
| 2012/12/17 | Chensong Zhang | Academy of Mathematical and System Sciences, Chinese Academy of Sciences | Auxiliary Space Preconditioning for Petroleum Reservoir Simulation |
| 2012/12/17 | Jan Hesthaven | Applied Mathematics, Brown University | Towards A New Generation of PIC Modeling Tools for Maxwell-Vlasov Problems |
| 2012/12/19 | Wenjun Zhang | Shanghai Jiao Tong University | Media Network of Future |
| 2012/12/19 | Bo Zheng | Zhejiang University | The Application of Statistical Physics in the Complex System of Economic Finance; The Comparative Study of Chinese and Western Finance Markets. |



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| 2012/12/19 | Jan S Hesthaven | Brown University | Compressed Sensing and Its Application to MRI and fMRI |
| 2012/12/20 | Hao Gao | Departments of Mathematics & Computer Science, Radiology & Imaging Sciences, Emory University | Medical Imaging from A Computational Perspective |
| 2012/12/21 | Terence Hwa | Department of Physics, University of California, San Diego | Bacterial Growth Laws: Origins and Consequences |
| 2012/12/25 | Liang Hong | Center for Molecular Biophysics, Oak Ridge National Laboratory | Revealing Protein Dynamics by Integrating Molecular Dynamics Simulations with Neutron Scattering Experiments |
| 2012/12/26 | Jianfeng Feng | Warwick University | Data Driven Approaches to Mental Disorders |
| 2012/12/27 | Mario Micheli | University of Washington | A Geometric Method for Imaging through Turbulence |



Zhiyuan College Academic Seminars, 2013 (142)

| Date | Speaker | Affiliation | Title |
|-----------|-----------------|---|---|
| 2013/1/3 | Ying Zhang | Department of Biostatistics, College of Public Health, University of Iowa | Tensor-Spline-Based Sieve Nonparametric Maximum Likelihood Estimation Method for Bivariate Current Status |
| 2013/1/3 | Weinian Zhang | Sichuan University | Dynamical Systems: Analysis & Control (I) |
| 2013/1/3 | Lun Zhang | University of Leuven (KU Leuven) | The Tacnode Kernel in Non-Intersecting Brownian Motions and Its Transition |
| 2013/1/7 | Ruibin Zhang | University of Sydney | Second Fundamental Theorem of Invariant Theory for Orthogonal and Symplectic Groups |
| 2013/1/8 | Chi-Kwong Li | College of William and Mary | Quantum Operations Transforming Quantum States |
| 2013/1/8 | Shixin Liu | University of California, Berkeley Howard Hughes Medical Institute | Revealing the Complexity and Subtlety in Biology by Single-Molecule Detection and Manipulation |
| 2013/1/8 | Nung-Sing Sze | Hong Kong Polytechnic University | Preserver Problems Arising in Quantum Information Science |
| 2013/1/10 | John Hopcroft | <i>A.M. Turing Award Winner</i> Cornell University | The Mathematics Needed for Modern Computer Science |
| 2013/1/10 | Yichao Zhu | Hong Kong University of Science and Technology | Two Examples in Multiscale Modelling for Materials |
| 2013/3/6 | Yinlong Qiu | Department of Ecology and Evolution Biology, University of Michigan | Mycorrhizas and Colonization of Land by Plants |
| 2013/3/7 | John Kuzan | ExxonMobil Upstream Research Company (URC) | The Outlook for Energy |
| 2013/3/7 | Xiaohui Wu | ExxonMobil Upstream Research Company (URC) | Predicting Reservoir Performance When Subsurface Characterization is Uncertain at Multiple Scales |
| 2013/3/7 | Shige Peng | Shandong University | Path Dependent PDE |
| 2013/3/12 | Jianguo Liu | Duke University | Phase Transitions, Hysteresis, and Hyperbolicity for Self-Organized Alignment Dynamics |
| 2013/3/12 | Frederic Coquel | Ecole Polytechnique | Vanishing Phase in Baer-Nunziato Like-Models and Entropy Dissipation |
| 2013/3/13 | Hao Wang | University of Oxford | A Priori and A Posteriori Error Estimates for Quasicontinuum Approximations |



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|-----------|-----------------|---|--|
| 2013/3/13 | Manyuan Long | Department of Ecology and Evolution, The University of Chicago | Origins of New Genes and Evolution of Species |
| 2013/3/20 | Jianyuan Sun | Institute of Biophysics, Chinese Academy of Sciences | Kinetics of Vesicle Recycling at the Calyx of Held Synapse |
| 2013/3/22 | Kun Xu | Hong Kong University of Science and Technology | Direct Modeling for Computational Fluid Dynamics and Unified Gas-Kinetic Scheme |
| 2013/3/25 | Lan Wu | School of Mathematical Sciences, Peking University | Methodology and Practice for the Stress Test |
| 2013/3/27 | Xiaowen Hong | Microsoft Research Asia | Natural Calculations of 21 Century. |
| 2013/3/28 | Jingrun Chen | University of California, Santa Barbara | Quantifying Exciton Diffusion Length in Organic Solar Cells: Diffusion Model |
| 2013/3/29 | Keqing Xia | Department of Physics The Chinese University of Hong Kong | How Tabletop Turbulence Experiments Can Help Understand Large-Scale Fluid Phenomena in Nature? |
| 2013/4/3 | Minmin Luo | National Institute of Biological Sciences, Beijing | Functional Dissection of Neural Circuits |
| 2013/4/12 | Filippo Bracci | Universita di Roma | Loewner Theory in One and Several Variables |
| 2013/4/17 | Jufang He | Department of Rehabilitation Sciences, The Hong Kong Polytechnic University | Cholecystokinin: the Memory-Writing Chemical in the Brain |
| 2013/4/18 | Alexander Oron | Department of Mechanical Engineering, Technion-Israel Institute of Technology | Fluid Transport in Thin Liquid Films Using Traveling Thermal Waves |
| 2013/4/19 | Lou Yuan | The Ohio State University | Dispersal in Heterogeneous Environments: the Role of Advection |
| 2013/4/26 | Bolin Hao | Fudan University | Struggle and Opportunity in Two Different Historical Periods |
| 2013/4/26 | Hang Zheng etc. | Shanghai Jiao Tong University | All Electronic Superconductivity and the Physics of Other Exotic Electronic Systems |
| 2013/4/28 | Wonjung Lee | University of Oxford | Adaptive Approximation of Higher Order Posterior Statistics |
| 2013/5/2 | Wonjung Lee | University of Oxford | The Adaptive Patched Particle Filter and Its Implementation |
| 2013/5/6 | Yaohong Wang | University of California, Santa Barbara | Fluctuating Hydrodynamics and Fluid-Structure Interactions in Confined Geometries |



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| 2013/5/6 | FRANÇOIS E BROCHAR D-WYART | Institute Curie | Soft Matter Models of Tissue and Tumors “Wetting of Living Drops” |
| 2013/5/7 | Zhihao Ma | Shanghai Jiao Tong University | Quantum Entanglement in Quantum Information Theory |
| 2013/5/7 | Steven G. Louie | Department of Physics, University of California, Berkeley | Single-Molecule Junctions, Graphene Nanostructures, and Topological Insulators: Symmetry and Many-Body Effects |
| 2013/5/9 | Ali Faraj | Institute of Natural Sciences, Shanghai Jiao Tong University | Asymptotical An Numerical Methods for Quantum Resonant Transport |
| 2013/5/13 | Vadim Zharnitsky | Department of Mathematics and Coordinated Sciences Laboratory, University of Illinois at Urbana- Champaign | Nonlinear Dispersive Equations: High Frequency Waves, Averaging, and Ground States |
| 2013/5/13 | Xiao Zhang | Chinese Academy of Sciences Fudan University | The Positive Energy Theorem in General Relativity |
| 2013/5/14 | Jianlin Xia | Department of Mathematics, Purdue Unviersity | Matrix-Free Direct Solvers |
| 2013/5/14 | Emmanuel Frenod | Universite de Bretagne-Sud | Two-Scale Convergence and Two-Scale Numerical Methods(part1) |
| 2013/5/15 | Jun Zhang | Department of Physics, Shanghai Jiao Tong University | Cosmology and Its Large Scale Probes |
| 2013/5/15 | Liu Chen | Zhejiang University University of California, Irvine | Physics of Alfvén Waves |
| 2013/5/15 | Yipeng Jing | Institute of Natural Sciences, Shanghai Jiao Tong University | Accelerated Expansion of the Universe: Dark Energy and Future Experiments |
| 2013/5/15 | Yuehua Wu | Department of Mathematics and Statistics, York University | Entropy-Based Network Design Using Hierarchical Bayesian Kriging |
| 2013/5/17 | Emmanuel Frenod | Universite de Bretagne-Sud | Two-Scale Convergence and Two-Scale Numerical Methods(part2) |
| 2013/5/20 | Frtihjof Lutscher | University of Ottawa | Integro Difference Equations for Invasive Species in Heterogeneous Landscapes |
| 2013/5/21 | Emmanuel Frenod | Universite de Bretagne-Sud | Two-Scale Convergence and Two-Scale Numerical Methods(part3) |
| 2013/5/23 | Young-Woo Son | Korea Institute for Advanced Study | More Graphene and More than Graphene |
| 2013/5/24 | Ibrahim | Université Paris VI | Mechanical Models for Biology: Cell |



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| | cheddadi | | Aggregates and Tissue Repair |
| 2013/5/24 | Tournus Magali | Université Paris VI | Hyperbolic Limit of the Heterogeneous Goldstein Taylor Model |
| 2013/5/24 | Emmanuel Frenod | Universite de Bretagne-Sud | The Geometrical Gyro-Kinetic Approximation |
| 2013/5/29 | Hepeng Zhang | Institute of Natural Sciences, Shanghai Jiao Tong University | Mechanics and Statistics of Locomotion |
| 2013/5/31 | Xiaokui Xiao | Nanyang Technological University | Data Publishing and Analysis with Differential Privacy |
| 2013/6/4 | Baofeng Feng | Department of Mathematics, University of Texas-Pan American | Bilinearizations to the Camassa-Holm equation, Degasperis-Procesi Equation and Their Short-Wave Models |
| 2013/6/4 | Wei Ku | Department of Physics, Stony Brook University | Iron-based High-Temperature Superconductors, A New “Favorite” Family in Condensed Matter Physics |
| 2013/6/4 | Dietmar Oelz | Johann Radon Institute for Computational and Applied Mathematics, Austrian Academy of Sciences | Friction Due to Protein Linkages: Multiscale Modeling And Applications in Cytoskeleton Modeling. |
| 2013/6/5 | Baofeng Feng | Department of Mathematics, University of Texas-Pan American | Complex Short Pulse Equation and Its Integrable Discretization |
| 2013/6/5 | Jean-Luc | Thiffeault Department of Mathematics, University of Wisconsin-Madison | The Topology of Fluid Mixing |
| 2013/6/6 | Jean-Luc Thiffeault | Department of Mathematics, University of Wisconsin-Madison | Biomixing: When Organisms Stir Their Environment |
| 2013/6/8 | XianMin Jin | University of Oxford Department of Physics, Shanghai Jiao Tong University | Broadband Quantum Memory and Photonic Quantum Information Processing |
| 2013/6/8 | Jie Yao | Stanford University | Manipulating Light with Novel Optical Materials |
| 2013/6/9 | Da-peng (Max) Bi | Department of Physics, Syracuse University | Energy Barriers for Cellular Rearrangements in Tissues |
| 2013/6/13 | Alberto Bressan | Pennsylvania State University | Variational Wave Equations (3) |
| 2013/6/13 | Gustavo Cruz Pacheco | Universidad Nacional Autónoma de México | Mechanical Behavior of A Prosthetic Heart Valve |
| 2013/6/13 | Dongdong He | City University of Hong Kong | Modeling and Computations for Interfacial Flows on Microfluidic Devices & Viscous |



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| | | | Thread Pinching Phenomena under Heating |
| 2013/6/14 | Gustavo Cruz Pacheco | Universidad Nacional Autónoma de México | Mathematical Modeling of West Nile Virus Infection |
| 2013/6/14 | Andrew Belmonte | Department of Mathematics, Pennsylvania State University | Non-Diffusive Spatial Pattern Dynamics in Evolutionary Games |
| 2013/6/17 | Wei Li | The University of Iowa | Investment Decisions under Ambiguity: Evidence from Mutual Fund Investor Behavior |
| 2013/6/17 | Bruce Reed | McGill University | Rooted Routing via Structural Graph Theory |
| 2013/6/18 | Alberto Bressan | Pennsylvania State University | Variational Wave Equations (4) |
| 2013/6/18 | Wei Zhu | University of Alabama | Image Denoising Using Mean Curvature of Image Surface |
| 2013/6/18 | Zhian Wang | Department of Applied Mathematics, Hong Kong Polytechnic University | Pattern Formation of Volume-Filling Chemotaxis Models |
| 2013/6/18 | Jue Yan | Department of Mathematics, Iowa State University | Maximum-Principle-Satisfying High Order Direct DG Method for Convection Diffusion Equations |
| 2013/6/19 | Bruce Reed | McGill University | Tree Decompositions from Excluded Structures |
| 2013/6/19 | Bruce Reed | McGill University | Optimizing over Well Behaved Tree Decompositions |
| 2013/6/20 | Alberto Bressan | Pennsylvania State University | Variational Wave Equations (5) |
| 2013/6/21 | Bin Cheng | University of Surrey | Analysis of Some Nonlinear PDEs from Multi-Scale Geophysical Applications |
| 2013/6/21 | Bruce Reed | McGill University | Building Tree Decompositions via Iterative Compression |
| 2013/6/25 | Chew Soo Hong | Department of Economics, National University of Singapore | Ambiguity, Familiarity, and the Equity Home Bias Puzzle: Theory and Evidence from Choice Experiments Involving Neuroimaging and Molecular Genetics |
| 2013/6/26 | Vaughan F. R. Jones | <i>Fields Medal Winner</i> | Flatland, A Great Place to Do Algebra |
| 2013/6/26 | Cédric Villani | <i>Fields Medal Winner</i> | Particles and Probabilities |
| 2013/6/26 | Peter Gumbsch, Joachim Heierli, Erik | Karlsruhe Institute of Technology | Simulation of Fracture Processes from Atoms to Snow Slab Avalanches |



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| | Bitzek, Gianpietro Moras | | |
| 2013/6/27 | Osvanny Ramos | Claude Bernard University Lyon 1 | Predicting Scale Invariant Avalanches |
| 2013/6/28 | Ellad B. Tadmor | Department of Aerospace Engineering, Mechanics University of Minnesota | 10,000,000,000,000,000,000,000 Atoms |
| 2013/7/1 | Moshe Rosenfeld | University of Washington | How Wide Can You Spread Your Chopsticks? |
| 2013/7/2 | Akil Narayan | University of Massachusetts Dartmouth | Unstructured Interpolation Strategies for Parameterized Functions: Least Orthogonal Interpolant Leja Sequences |
| 2013/7/3 | Yinghao Chu | Taiwan National Chiao Tung University | Controllable Complex Oxide Interfaces |
| 2013/7/4 | Timothy E. Kennedy | Department of Neurology and Neurosurgery, Montreal Neurological Institute, McGill University | A New Role for the Axon Guidance Protein DCC Regulating Synaptic Plasticity in the Adult Brain |
| 2013/7/4 | Adriana Di Polo | Department of Neuroscience, University of Montreal | Boosting the Survival of Retinal Ganglion Cells in Glaucoma: Novel Molecular Mechanisms and Therapeutic Targets |
| 2013/7/4 | Nicholas C. Brecha | Departments of Neurobiology and Medicine, Jules Stein Eye Institute, David Geffen School of Medicine, University of California, Los Angeles | Mammalian Horizontal Cells Mediate Outer Retina Signaling by a Ca ²⁺ -dependent Vesicular Mechanism |
| 2013/7/4 | Rozan Vroman | The Netherlands Institute for Neuroscience | Horizontal Cell to Cone Feedback: An Unexpected Synthesis of An Ephaptic and A PH-mediated System |
| 2013/7/4 | M. V. Srinivasan | Queensland Brain Institute, University of Queensland | Small Brains, Smart Minds: Vision, Perception and “Cognition” in Honeybees |
| 2013/7/9 | Xu Yang | University of California | A Path Way Based Mean Field Model for E. Coli Chemotaxis: the Mathematical Derivation and Keller Segel Limit |
| 2013/7/15 | Paul Embrechts | Department of Mathematics, ETH Zurich | Model Uncertainty and Risk Aggregation |
| 2013/7/15 | De-en Jiang | Oak Ridge National Laboratory | Electrode/electrolyte Interface in Electrochemical Energy Storage: from Supercapacitors to Li-ion Batteries |
| 2013/7/15 | Tiangang | Massachusetts Institute of | Exploiting Low Rank Structures of Large |



| | Cui | Technology | Scale Inverse Problems |
|------------|------------------------------|---|--|
| 2013/7/16 | Toan Nguyen | Division of Applied Mathematics, Brown University | Nonlinear Stability of Time-Periodic Defects |
| 2013/7/19 | Wei Xiang, | University of Oxford | Shock Diffraction Problem to the Two Dimensional Nonlinear Wave System and Potential Flow Equation |
| 2013/7/24 | Mainak Patel | Duke University | Role of Phase Delayed Inhibition in Decoding Synchronized Oscillations within the Brain |
| 2013/7/29 | Bob Behringer | Department of Physics and Center for Nonlinear and Complex Systems, Duke University | Jamming and Dynamics of Granular Materials |
| 2013/7/31 | Yana Di | Academy of Mathematics and Systems Science, Chinese Academy of Sciences | Moment Method for Vlasov-Maxwell Equations |
| 2013/9/12 | Luc Tartar | Carnegie Mellon University | Beyond PDE: Apparition of Non-local Effects by Homogenization |
| 2013/9/13 | Luc Tartar | Carnegie Mellon University | Compensation Effects in PDE |
| 2013/9/17 | Jie Ma | Department of Cornell University | Single Molecule Study of Transcription under Torsion |
| 2013/9/25 | Martin Benning | University of Cambridge | An Adaptive Inverse Scale Space Method for Compressed Sensing |
| 2013/9/27 | Juergen Jost | Max-Planck Institute for Mathematics in Sciences | Minimal Surfaces and Optimal Form |
| 2013/10/8 | Andrei Martinez Finkelshtein | University of Almería | Math is in the Eye of the Beholder |
| 2013/10/10 | Martin Ulmschneider | John Hopkins University | Mechanisms of Molecular Transport across Lipid Bilayer Membranes |
| 2013/10/15 | Luonan Chen | Shanghai Institutes for Biological Sciences | Detecting Critical Transitions during Complex Biological Processes by Big Biological Data |
| 2013/10/15 | Yi Ji | University of Delaware | Pure Spin Currents in Submicron Metallic Structures |
| 2013/10/15 | Zhouping Xin | The Chinese University of Hong Kong | On Multi-Dimensional Compressible Navier-Stokes System and Vacuum |
| 2013/10/16 | Chun-Gang DUAN | East China Normal University | Electric-field Control of Magnetism through Surface/Interface Effects |
| 2013/10/20 | Shawn Jin | Science Department, AIG | Some Chinese Academy of Sciences Studies |



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| | | | in Finance Insurance, Pharmaceuticals and Retails by Predictive Modeling and Data Mining |
| 2013/10/31 | Hehu Xie | Institute of Computational Mathematics, Chinese Academy of Sciences | A Multilevel Correction Method for Eigenvalue Problems |
| 2013/10/31 | Jing Li | Academy of Mathematics and System Sciences, Chinese Academy of Sciences | On Well-Posedness of Compressible Navier-Stokes Equations |
| 2013/11/1 | Zongming Ma | Department of Statistics, University of Pennsylvania | Estimating High-dimensional Matrices: Convex Geometry and Computational Barriers |
| 2013/11/4 | Xinbing Kong | School of Management, Fudan University | Modeling High Frequency Financial Data by Pure Jump Processes |
| 2013/11/6 | Fanghua Lin | Courant Institute, New York University | The Structure of Helicity and Global Existence of Smooth Solutions |
| 2013/11/13 | Haijun Yang | Shanghai Jiao Tong University | Discovery of the "God particle" and the Nobel Prize in Physics, 2013 |
| 2013/11/13 | Shih-Hsien Yu | Department of Mathematics, National University of Singapore | Mathematical Theories on Linear and Nonlinear Wave Motions in Viscous Compressible Fluid |
| 2013.11.20 | Jun Ye | University of Colorado The National Academy of Sciences | From Pilot Classes of SJTU to the Forefront of International Science |
| 2013/11/23 | Marie Albenque | École Polytechnique | Unified Construction between Blossoming Trees and Planar Maps |
| 2013/12/2 | Zihe Rao | Chinese Academy of Sciences | My Scientific Research Career—Talk that Starts from <i>Insulin</i> |
| 2013/12/2 | Yuan Yao | Peking University | Statistical Consistency of Early Stopping in Bregman-Type Iterative Algorithms |
| 2013/12/4 | Weidong Ji | Shanghai Jiao Tong University | The Shape of the Rule of Law in China—the Design Scheme of "Three Tial System" |
| 2013/12/5 | Li Zhang | University of Southern California | Functional Micro-Architecture of the Cerebral Cortex |
| 2013/12/9 | Jianyuan Sun | Chinese Academy of Sciences | Interpretation of this Year's Nobel prize in Physiology and Medicine-30 Years' Legendary Exploration Tells About the Story of the Moment |
| 2013/12/12 | Erik Luijten | Northwestern University | Lectures on Computational Modeling of Soft Materials (part 1) |
| 2013/12/12 | Yang Feng | Columbia University | Consistent Cross-Validation for Tuning Parameter Selection in High-Dimensional |



| | | | Variable Selection |
|------------|---------------------|---|---|
| 2013/12/13 | Erik Luijten | Northwestern University | Lectures on Computational Modeling of Soft Materials (part 2) |
| 2013/12/16 | Erik Luijten | Northwestern University | Lectures on Computational Modeling of Soft Materials (part 3) |
| 2013/12/16 | Peter A. Markowich | University of Cambridge | Free Boundary Problems in Price Formation (I) |
| 2013/12/17 | Constance Schober | University of Central Florida | Dynamical Criteria for Rogue Waves in Nonlinear Schrodinger Models |
| 2013/12/17 | Peter A. Markowich | University of Cambridge | Free Boundary Problems in Price Formation (II) |
| 2013/12/18 | Erik Luijten | Northwestern University | Lectures on Computational Modeling of Soft Materials (part 4) |
| 2013/12/18 | Yilei Zhao | Shanghai Jiao Tong University | Chemistry, Biology and Scientific Computing: the Nobel Prize in Chemistry, 2013 |
| 2013/12/19 | Peter A. Markowich | University of Cambridge | Free Boundary Problems in Price Formation (II) |
| 2013/12/23 | Chin-Yueh Liu | Department of Applied Mathematics, National University of Kaohsiung, Taiwan | Developing Kinetic Theory Models of Second Order Neuronal Networks |
| 2013/12/24 | Yang Ding | University of Southern California | Secrets of Swimming in Sand |
| 2013/12/25 | Ruqian Wu Professor | University of California | Spin-Orbit Coupling in Graphene-Based Systems |



Zhiyuan College Academic Seminars, 2014 (121)

| Date | Speaker | Affiliation | Title |
|-------------|-----------------|---|--|
| 2014/1/2 | Rui Ni | Department of Physics, Wesleyan University Department of Mechanical Engineering & Materials Science, Yale University | Rotation Dynamics of Anisotropic Particles |
| 2014/1/8 | Simone Severini | University College London | Contextuality of Physical Theories through Combinatorial Optimization |
| 2014/1/13 | Bin Li | Iowa University | The Frequency of Drawdowns |
| 2014/2/20 | Wanming Qi | Brown University | Statistical Mechanics of Two-Dimensional Turbulence |
| 2014/3/6 | Danhua Wang | University of Vermont | DistFlow ODE: Modeling, Analyzing and Controlling Long Distribution Feeder |
| 2014/3/12 | Chaojun Yang | Shanghai Jiao Tong University | Frontier of Financial Development |
| 2014/3/19 | Hongyu Zhao | Yale University | Developing Disease Risk Prediction Models Based on Genetic Information |
| 2014/3/24 | Feng Zhao | Microsoft Research Asia | Planet-Scale Sensing: From Lab to the Real World |
| 2014/3/25 | Hua Yi | School of Mathematics and physics, Jिंगgangshan University | Morlet Wavelet and Its Application in Multi-Period Analysis of Climate Data |
| 2014/3/26 | Xiangdong Ji | Shanghai Jiao Tong University | Large Momentum Effective Field Theory of QCD |
| 2014/3/27 | Congcong Huang | Nature Communications | How to Get Published in Nature Communications (and Its Sister Titles) |
| 2014/3/28 | Zhicheng Wang | School of Mathematics and Statistics, Lanzhou University | Multi-Dimensional Traveling Fronts in Time Periodic Reaction-Diffusion Equations |
| 2014/3/31 | Qihuo Wei | Liquid Crystal Institute, Kent State University | Boomerangs That Don't Return: Translation-Rotation Coupling in Brownian Motion |
| 2014/4/2 | David Waxman | Fudan University | Thinking about Selection and Genetic Drift, in Terms of Trajectories |
| 2014/4/8 | Shanbao Tong | Med-X Research Institute and School of Biomedical Engineering, Shanghai Jiao Tong University | Imaging the Cerebral Blood Flow and Vessels |
| 2014/4/9 | Shunai Che | School of Chemistry and Chemical Engineering, Shanghai | Chiral Inorganic Materials |



| | | Jiao Tong University | |
|-----------|-----------------|--|--|
| 2014/4/10 | Jinyuan Chang | University of Melbourne | Double-Bootstrap Methods that Use A Single Double-Bootstrap Simulation |
| 2014/4/11 | Kewei Chen | Image Processing & Analysis Banner Alzheimer's Institute | Mathematical and Statistical Methods for Early Diagnosis of Alzheimer's Disease |
| 2014/4/16 | Eduard Feireisl | Institute of Mathematics AS CR | Singular Limits in Thermodynamics of Fluids |
| 2014/4/16 | Zhanzhong Shi | Shanghai Jiao Tong University | Building of Shanghai Free Trade Zone: to Promote Reform with Opening Up |
| 2014/4/18 | Jun Zhang | Department of Psychology and Department of Mathematics, University of Michigan, Ann Arbor | Learning by Samples: A Reproducing Kernel Banach Space (RKBS) Approach |
| 2014/4/22 | Haizhao Yang | Stanford University | 2D Synchrosqueezed Transforms with Applications in Geophysics and Materials Science |
| 2014/4/23 | Xiaotie Deng | Shanghai Jiao Tong University | Reductions |
| 2014/4/24 | Yujie Lu | University of Texas Health Science Center at Houston | Current Progress in Forward and Inverse Problem of Multimodal Optical Tomography |
| 2014/5/4 | Juergen Jost | Max-Planck Institute for Mathematics in Science | Variational Problems Inspired by Supersymmetric Quantum Field Theory |
| 2014/5/5 | Zhen-Gang Wang | Division of Chemistry and Chemical Engineering, California Institute of Technology | Nucleation in Membrane Pore Formation, Rupture, and Particle Translocation |
| 2014/5/7 | Shangwei Hou | Shanghai Center for Systems Biomedicine, Shanghai Jiao Tong University | Modulation of BKCa Channel by Lipids |
| 2014/5/7 | Wotao Yin | University of California | Distributed Optimization over Network |
| 2014/5/7 | Pinyan Lu | Microsoft Research Asia | Classifying Computational Counting Problems |
| 2014/5/8 | Jongmin Lee | Joint Quantum Institute, University of Maryland, College Park | Collective Atom-Photon Interactions toward A Hybrid Quantum System |
| 2014/5/9 | Ming Yan | Department of Mathematics, University of California, Los Angeles | Algorithmic Regression: A Framework of Sparse Linear Regression |
| 2014/5/9 | Sarah Hamilton | University of Helsinki | A Variety of D-Bar Methods in Electrical Impedance Tomography: Not Just for 2D Isotropic Conductivities! |



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| 2014/5/13 | Xiaodong Liu | Chinese Academy of Sciences | Reconstruction of Neumann Eigenvalues and Support of Sound Hard Obstacles |
| 2014/5/13 | Shyamal D. Peddada | National Institute of Environmental Health Sciences | Nonparametric Procedures for Testing Order among Multivariate Distributions |
| 2014/5/14 | Anthony J. Leggett | <i>Nobel Laureate in Physics</i> University of Illinois at Urbana-Champaign | Introduction to Topological Quantum Computing |
| 2014/5/14 | Bin-Bing Stephen Zhou | School of Medicine, Shanghai Jiao Tong University | Cancer Drug Resistance and DNA Damage Response |
| 2014/5/16 | Michael Moeller | Technische Universität München | Color Bregman TV |
| 2014/5/16 | Bailu Si | Shenyang Institute of Automation, CHINESE ACADEMY OF SCIENCES | Robust Path-Integration Mechanisms of Grid Cells in Medial Entorhinal Cortex: A Continuous Attractor Network Model |
| 2014/5/20 | Youssef Marzouk | Massachusetts Institute of Technology | Bayesian Filtering as Optimal Transportation |
| 2014/5/30 | Guo Jun | Columbia University | From Standard Model to New Physics |
| 2014/5/30 | Baofeng Feng | University of Texas-Pan American | General Bright-Dark Soliton Solution to the Continuous and Discrete Vector Nonlinear Schrodinger Equation |
| 2014/5/30 | Bobo Hua | Fudan University | (Discrete) Nonlinear Evolution Equations: P-Parabolic Equations on Infinite Graphs |
| 2014/6/4 | Xianting Ding | Shanghai Jiao Tong University | Multidisciplinary Implementation of Patient-Oriented Individualized Medical Care |
| 2014/6/11 | Peter Miller | University of Michigan | The Benjamin-Ono Equation in the Small Dispersion Limit |
| 2014/6/11 | Zhang Kai | Department of Statistics, University of North Carolina | Uniform Correlation Mixture of Multivariate Normal Distributions |
| 2014/6/12 | Haiguang Liu | Arizona State University | What Computational Modeling Can Help the Structural Biologists? |
| 2014/6/14 | Xin Liu | Academy of Mathematics and System Sciences, Chinese Academy of Sciences | An Efficient Gauss-Newton Algorithm for Symmetric Low-Rank Product Matrix Approximations |
| 2014/6/20 | Steven Wise | University of Tennessee | Convergence of Finite Element and Finite Difference Methods for Some Cahn-Hilliard-Flow Models |
| 2014/6/20 | Cheng Wang | University of Massachusetts - Dartmouth | Epitaxial Thin Film Growth Model and Its Numerical Simulation |
| 2014/6/27 | Wei LIU | Department of Radiation Oncology, Mayo Clinic Arizona | Robust Optimization and Robustness Quantification in Intensity Modulated Proton |



| | | | Therapy |
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| 2014/6/29 | Yuen-Ron Shen | National Academy of Sciences | Talks on Learning and Thinking |
| 2014/7/4 | Juan M. Restrepo | University of Arizona Group | Challenges in Climate and the Geosciences |
| 2014/7/9 | Wei Cai | Stanford University | 3D Phase Field Modeling of Nanowire Growth by the Vapor-Liquid-Solid Mechanism |
| 2014/7/15 | Zhongmin Wang | Reading Hospital | Radiation Therapy Physics-General Introduction & Some Latest Development |
| 2014/7/17 | Shidong Jiang | New Jersey Institute of Technology | Fast and Accurate Evaluation of Nonlocal Coulomb and Dipole-Dipole Interactions via the Nonuniform FFT |
| 2014/7/22 | Bin Cheng | University of Surrey | Time-Averaging and Error Estimates for Reduced Fluid Models |
| 2014/7/31 | Jingwei Liang | GREYC CNRS UMR 6072, Ecole Nationale Supérieure d'Ingénieurs de Caen | Convergence Rate with Nonexpansive Operators |
| 2014/8/4 | Jingwei Hu | Purdue University | Fast Algorithms for The Quantum Boltzmann Collision Operator |
| 2014/9/3 | Bo Li | Department of Mathematics and Center for Theoretical Biological Physics, University of California, San Diego | Continuum Theory of Electrostatics with Application to Biological Molecules |
| 2014/9/17 | Qing He | Department of Physics, Durham University | Combining Light and Tips-A Chinese Academy of Sciences Study of Electric and Magnetic Properties in Mixed-Phase BiFeO ₃ |
| 2014/9/22 | Jianhan Chen | Kansas State University | Multi-scale Enhanced Sampling of Protein Structure and Interaction |
| 2014/9/24 | Feifei Li | School of Computing, University of Utah | Interactive Data Analytics and Exploration on Big Data |
| 2014/10/8 | Zhong Fang | Institute of Physics, Chinese Academy of Sciences | Condensed Matter and Materials Sciences |
| 2014/10/8 | Yong Geng | School of Environmental Science and Engineering, Shanghai Jiao Tong University | Low Carbon Development in China: Challenges and Possible Solutions |
| 2014/10/13 | Kewei Chen | Banner Alzheimer's Institute, Banner Health | The Use of Neuroimaging Techniques in the Study of Alzheimer's Disease, Its Risk and as Biomarkers for Prevention(part I) |
| 2014/10/15 | Longbing Cao | Engineering and Information Technology, University of Technology Sydney | Data Science and Analytics Science: Opportunities and Challenges for Next Generation Career Planning |



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| 2014/10/15 | Kewei Chen | Core Resources, Neuroimaging Research and Analysis Lab. Banner Alzheimer's Institute, Banner Health | The Use of Neuroimaging Techniques in the Study of Alzheimer's Disease, Its Risk and as Biomarkers for Prevention(part II) |
| 2014/10/15 | Richard Milner | Massachusetts Institute of Technology | Precision Study of the Standard Model at Low Energies |
| 2014/10/21 | Zhanbin Lu | Institute of Applied Mathematics and Mechanics, Shanghai University | Combustion over Solid Fuels: the Structure and Instabilities of the Reaction Fronts |
| 2014/10/22 | Ping Ao | Shanghai Center for Systems Biomedicine, Shanghai Jiao Tong University | Emerging Darwinian Dynamics in Physics |
| 2014/10/29 | Hang Zheng | Department of Physics and Astronomy, Shanghai Jiao Tong University | Blue Led's, An Introduction to 2014 Nobel Prize in Physics |
| 2014/10/30 | Jaume Llibre | Universitat Autònoma de Barcelona | The Hilbert'S Number for Some Classes of Differential Equations |
| 2014/10/30 | Valery Romanovsky | University of Maribor | Local Integrability and Linearizability of Plane Polynomial Systems |
| 2014/10/30 | Maoan Han | Shanghai Normal University | Expansion of Melnikov Functions and Limit Cycle Bifurcation |
| 2014/10/31 | Liyang Kang | Shanghai University | Extremal Graph Theory Based on the P Spectral Radius |
| 2014/11/3 | Yuehua Wu | York University | Bayesian Spatio Temporal Modeling for Blending in Situ Observations with Satellite Precipitation Estimates |
| 2014/11/4 | Gyula O. H. Katona | Alfréd Rényi Institute of Mathematics | Introduction to Combinatorial Search |
| 2014/11/4 | Chunlei Liu | Shanghai Jiao Tong University | Satellite Communication, Quadratic Equations and Gaussian Inclusion Exclusion |
| 2014/11/5 | Hua Liu | Department of Engineering Mechanics, Shanghai Jiao Tong University | Tsunami Runup on Beach and Tsunami Warning System for South China Sea |
| 2014/11/5 | Masao Doi | Beihang University | Onsager Principle in Soft Matter Dynamics |
| 2014/11/5 | Weike Wang | Department of Mathematics, Shanghai Jiao Tong University | The Three Mathematical Crises and Gödel's Incompleteness Theorem |
| 2014/11/6 | Nancy Ryan Grey | Gordon Research Conferences | Gordon Research Conference, Expansion Initiated to Serve Scientists in Asia |
| 2014/11/6 | Simone Severini | University College London | Capabilities and Limitations of Quantum Computers |



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|------------|--------------------|---|---|
| 2014/11/12 | Le Luo | Indiana University and Purdue University Indianapolis | Trapped Atoms and Ions for Quantum Simulation and Quantum Information |
| 2014/11/12 | Chunpeng Wang | Jilin University | Subsonic Sonic Potential Flows (I) |
| 2014/11/12 | Wei-Qiang Gao | Shanghai Jiao Tong University | New Insights into Mechanisms of Prostate Epithelial Development, Tumorigenesis and Therapeutic Resistance |
| 2014/11/13 | Chunpeng Wang | Jilin University | Subsonic Sonic Potential Flows (II) |
| 2014/11/13 | Huaping Zhu | York University | Modeling, Dynamics, Forecasting of Mosquito Abundance and Public Health Risk of West Nile Virus Infection in Great Toronto Area |
| 2014/11/14 | Christos Flytzanis | Ecole Normale Superieure | Ultrafast High THz-field Photo Driven Carrier Dynamics and Transport in Nanostructures |
| 2014/11/14 | Jianxian Qiu | Xiamen University | Weighted Essentially Non Oscillatory Limiters for Runge Kutta |
| 2014/11/17 | Jing Li | Institute of Applied Mathematics, Chinese Academy of Sciences | Some Recent Results On Compressible NavierG Stokes Equations (I) |
| 2014/11/17 | Christos Flytzanis | Ecole Normale Superieure | Ultrafast Quantum Control Of Electrons, Atoms, And Molecules |
| 2014/11/18 | Jing Li | Institute of Applied Mathematics, Chinese Academy of Sciences | Some Recent Results on Compressible Navier Stokes Equations (II) |
| 2014/11/19 | Qian Wang | Med-X Research Institute, Shanghai Jiao Tong University | Automatic Anatomy Labeling of Brain Magnetic Resonance (Mr) Images |
| 2014/11/20 | Ondrej Kreml | Institute of Mathematics, Academy of Sciences of the Czech Republic | Uniqueness of Rarefaction Waves in Compressible Euler Systems |
| 2014/11/20 | Jing Li | Institute of Applied Mathematics, Chinese Academy of Sciences | Some Recent Results on Compressible Navier Stokes Equations (III) |
| 2014/11/24 | Chunpeng Wang | Jilin University | Subsonic Sonic Potential Flows (III) |
| 2014/11/25 | Jing Li | Institute of Applied Mathematics, Chinese Academy of Sciences | Some Recent Results on Compressible Navier Stokes Equations (IV) |
| 2014/11/25 | Chunpeng Wang | Jilin University | Subsonic Sonic Potential Flows (IV) |
| 2014/11/26 | Yong Long | UM-SJTU Joint Institute, Shanghai Jiao Tong University | Model Based Image Reconstruction for Biomedical Imaging |
| 2014/11/28 | Shidong Li | Department of Mathematics, San Francisco State University | Optimal-Dual-Frame Based Analysis Approaches in Compressed Sensing with Coherent Frames |



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| 2014/12/3 | Jicun Ren | Shanghai Jiao Tong University | Progress of Super Resolved Fluorescence Microscopy and Single Molecule Detection: Enlightenment from the Nobel Prize in Chemistry 2014 |
| 2014/12/8 | Douglas NC Lin | University of California, Santa Cruz | Ubiquity of Planets and Diversity of Planetary Systems: Origin and Destiny of Multiple Super Earths and Gas Giants |
| 2014/12/9 | Zhiqiang Sheng | Institute of Applied Physics and Computational Mathematics | The Finite Volume Scheme Preserving Maximum Principle for Diffusion Equation on Distorted Meshes |
| 2014/12/10 | Shuyun Zhou | Tsinghua University | Electronic Structures Of Near Free Standing Graphene and Van Der Waals Heterostructure |
| 2014/12/10 | Fang Xiao | National University of Singapore | Rates of Convergence for Poisson Approximation for Scan Statistics |
| 2014/12/10 | Songliang Chen | UM-SJTU Joint Institute, Shanghai Jiao Tong University | Optical Detection of Ultrasound and Its Applications to Photoacoustic Imaging and Detection |
| 2014/12/12 | Joshua Dijkstra | Wageningen University | Bridging the Micro Macro Response of Granular Materials: 3D Experiments and Non Local Numerics |
| 2014/12/12 | Haizhang Zhang | Sun Yat-sen University | Reproducing Kernel Banach Spaces with the ℓ^p -norm |
| 2014/12/15 | Ming Han | Northwestern University | Collective Behavior of Colloids in External Fields |
| 2014/12/16 | Xiangjun Xing | Shanghai Jiao Tong University | The Long Scale Properties of Dense Electrolytes |
| 2014/12/17 | Shenggao Zhou | University of California, San Diego | Variational Implicit Solvation Model for Charged Biomolecules |
| 2014/12/19 | Tian Hui Zhang | Suzhou University | Polydispersity and Gelation in Colloids with Competing Interactions |
| 2014/12/19 | Zexin Zhang | Suzhou University | Video Microscopy of Colloidal Glasses |
| 2014/12/22 | Ke Chen | Chinese Academy of Sciences | Measuring Phonon Modes in Dense Colloids and Its Applications |
| 2014/12/22 | Mingcheng Yang | Chinese Academy of Sciences | Mesosopic Fluid Simulation of Phoretic Colloids and Active Colloids |
| 2014/12/23 | Akito Arima | Musashi University | Symmetries in Nature and Culture |
| 2014/12/26 | Pan Zhang | Santa Fe Institute, Santa Fe | Statistical Mechanics beyond the Realm of Statistical Physics |
| 2014/12/29 | Shuangliang Zhao | East China University of Science and Technology | Unified Framework of Density Functional Theories and its Recent Applications |



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| 2014/12/29 | Xin Zhou | University of Chinese Academy of Sciences | Equilibrium and Non Equilibrium Simulations for Exploring Conformational Space |
| 2014/12/29 | Paul E. Schupp | University of Illinois at Urbana-Champaign | Computability, Complexity and Group Theory |



Zhiyuan College Academic Seminars, 2015 (130)

| Date | Speaker | Affiliation | Title |
|-------------|--------------------|---|--|
| 2015/1/4 | Yaxiang Yuan | Chinese Academy of Sciences | Recent Advance in Trust Region Algorithms |
| 2015/1/5 | Stephen Wolfram | Wolfram Research | The Future of Computation & Knowledge |
| 2015/1/15 | Jingyuan Li | Chinese Academy of Sciences | Molecular Modeling about the Biological Effect of Nanomaterial |
| 2015/1/19 | Xinliang Xu | Beijing Computational Science Research Center | Modeling Mechanical Properties of DNA: Allosteric Protein Binding, Loop Formation, and Longitudinal Fluctuations |
| 2015/1/22 | Matthieu Wyart | New York University | The Memory of Sand |
| 2015/1/22 | Xinsheng Sean Ling | Southeast University and Brown University | The Nanopore DNA Sequencing Problem and the Second Law: the Answer was in Schrodinger's other Equation |
| 2015/3/16 | Joel Moser | Institute of Photonic Sciences | Force Detection and Frequency Fluctuations in Carbon Nanotube Mechanical Resonators |
| 2015/3/18 | Meng Zhou | Institute of Oceanology, Shanghai Jiao Tong University | Age of Exploration: Nature, Ecosystem, Nature Resources and Climate Change of the Southern Ocean and Antarctica Region |
| 2015/3/20 | Dongzhuo Zhou | Shanghai Jiao Tong University | Bilinearity in Spatiotemporal Integration of Synaptic Inputs |
| 2015/3/20 | Peng Zhang | Shanghai Jiao Tong University | Critical Points of the N Dimensional Ginzburg Landau Functional |
| 2015/3/30 | Sufei Shi | UC Berkeley/Lawrence Berkeley National Laboratory | Manipulating Strong Light Matter Interactions in Graphene and 2D Semiconductors |
| 2015/4/1 | Derek Frydel | School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University | Discrete Structure of Fluids |
| 2015/4/7 | Yang Ding | Beijing Computational Science Research Center | Numerical Studies on the Fluid Mixing and Particle Capture By Cilia |
| 2015/4/8 | Guojun Sheng | RIKagaku KENkyusho/Institute of Physical and Chemical Research | Symmetry Breaking in Early Development |
| 2015/4/8 | Sze-Bi Hsu | National Tsinghua University | A Nonlocal Problem from Conservation Biology |
| 2015/4/16 | Qifeng Liao | ShanghaiTech University | Reduced Basis Collocation Methods for Partial Differential Equations with |



| | | | Random Coefficients |
|-----------|----------------------|--|---|
| 2015/4/22 | Ian H. Sloan | The University of New South Wales | Computing Integrals in Many Dimensions What's New? |
| 2015/4/22 | Guanrong (Ron) Chen | City University of Hong Kong | Spectral Analysis and Optimal Synchronizability of Complex Networks |
| 2015/4/22 | Mikhail V. Volkov | Ural Federal University | Synchronizing Finite Automata: A Problem Everyone Can Understand but Nobody Can Solve (So Far) |
| 2015/4/29 | Daizhan Cheng | Chinese Academy of Sciences | From STP to Logical Dynamic Systems |
| 2015/4/29 | Hendrik Heinz | Department of Polymer Engineering, University of Akron | Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment |
| 2015/5/4 | Kai He | Brookhaven National Laboratory | Probing Dynamical Phenomena by Time Resolved Electron Microscopy |
| 2015/5/5 | Lingti Kong | Shanghai Jiao Tong University | Phonon Dispersion Measured Directly from Molecular Dynamics Simulations |
| 2015/5/8 | Zhouping Xin | The Chinese University of Hong Kong | On the Uniqueness of Weak Solutions for Multi Dimensional Euler Equations |
| 2015/5/8 | Zexian Cao | Institute of Physics, Chinese Academy of Sciences | A Simple Algebraic Equation, Diophantine Numbers and Patterns of Nature |
| 2015/5/8 | Junpeng Cao | Institute of Physics, Chinese Academy of Sciences | Beautiful Models: Introduction to Quantum Integrable Systems |
| 2015/5/12 | Xiliang Lv | Department of Mathematics, Wuhan University | A Primal Dual Active Set Algorithm for Sparse Optimization Problems |
| 2015/5/13 | Yum-Tong Siu | Harvard University | Some Interactions Between Partial Differential Equations and Several Complex Variables |
| 2015/5/13 | Lian Yong | Shanghai Jiao Tong University | Wearable Wireless Biomedical Sensors: Challenges and Future |
| 2015/5/15 | Yukun Wang | Shanghai Jiao Tong University | A Chinese Academy of Sciences Study on the Mechanism of Antimicrobial Peptides |
| 2015/5/19 | Matthias Sperl | German Aerospace Center (DLR) | Granular Gases, Fluids, and Glasses |
| 2015/5/19 | Hong Zhu | Shanghai Jiao Tong University | High Throughput Computational Materials Design for Energy Related Materials |
| 2015/5/20 | Yuanbo Zhang | Fudan University | Electronic Properties of Novel Two Dimensional Materials |
| 2015/5/20 | Professor Mats Selen | Department of Physics, University of Illinois at Urbana- | Introduction of Physics-Optics |



| | | Champaign | |
|-----------|-----------------------|---|--|
| 2015/5/22 | Peng Zhang | Shanghai Jiao Tong University | Vortices in The Ginzburg Landau Model |
| 2015/5/26 | Benjamin Lindner | Shanghai Jiao Tong University | Markov Models and Scattering Functions |
| 2015/5/27 | George Huntly Lorimer | The National Academy of Sciences | Face-to-face Talk with the Academic Masters |
| 2015/5/28 | Peihong Zhang | Department of Physics, University at Buffalo | Hole-Lattice Coupling and Insulator-metal Transition in VO ₂ |
| 2015/5/29 | Aihua Chen | East China Normal University | Causal Links between Vestibular, but Not Intraparietal, Cortex in Heading Perception |
| 2015/6/3 | Georg StadlerG | Courant Institute, New York University | Computational Methods for Bayesian Inverse Problems Governed by PDEs, with Application to Studying the Dynamics of Ice Sheet |
| 2015/6/3 | Jeffrey Erlich | New York University Shanghai | Model Based Quantification of Frontal and Parietal Contributions to Spatial Decision Making |
| 2015/6/4 | Katherine Newhall | University of North Carolina, Chapel Hill | The Causes of Metastability and Their Effects on Transition Times |
| 2015/6/5 | Xiang Zhou | City University of Hong Kong | Explore Stochastic Instabilities of Periodic Points by Transition Path Theory |
| 2015/6/5 | Richard M. McLaughlin | University of North Carolina at Chapel Hill | Symmetry Breaking in Advective Diffusive Transport |
| 2015/6/8 | Yongqin Liu | North China Electric Power University | Decay of Solutions to Nonlinear Timoshenko System with Memory |
| 2015/6/8 | Shangkun Weng | Pohang University of Science and Technology | On Multi Dimensional Steady Subsonic Flows Determined by Physical Boundary Conditions |
| 2015/6/11 | Hui Ji | National University of Singapore | Image Recovery via Geometrically Structured Approximation |
| 2015/6/11 | Xiangqiang Chu | Department of Physics and Astronomy, Wayne State University | Protein Dynamics on Multiple Time Scales Detected by Neutron Scattering |
| 2015/6/12 | M. Gregory Forest | University of North Carolina at Chapel Hill | Dynamic Organization of the Yeast Genome |
| 2015/6/12 | Ken McLaughlin | Department of Mathematics, University of Arizona | Examples from Integrable Mathematics: Asymptotic Analysis of Random Matrix Models, Partition Function Expansions, Singular Limits of Integrable PDEs, and Maybe Some Rudimentary Approximation |



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| 2015/6/15 | Xinfu Chen | University of Pittsburgh | Singular Control Approximation and Minimal Viscosity Solution Selection Principle in Consumption and Investment with Tax |
| 2015/6/18 | Xing Wei | Princeton University | Rotating Magneto Hydrodynamics in Planetary and Stellar Interiors |
| 2015/6/19 | Shixin Liu | The Rockefeller University | Detection and Manipulation of Single Biomolecular Machines |
| 2015/6/19 | Roberto Camassa | University of North Carolina, Chapel Hill | Settling in Stratified Fluids: A Tortoise and Hare Experimental and Mathematical Tale |
| 2015/6/24 | Sun Jian | Morgan Stanley New York | Implied Remaining Variances Surfaces |
| 2015/6/24 | Lan Wu | School of Mathematical Sciences, Peking University | Empirical Analysis of Risk Free Interest Rates in Chinese Financial System |
| 2015/6/24 | Yunyun Li | Tongji University | Active Brownian Motion in a Narrow Channel |
| 2015/6/24 | Changjiang Zhu | South China University of Technology | Global Classical Solutions to Compressible Navier Stokes Equations |
| 2015/6/29 | Dario Ringach | University of California, Los Angeles | Cortical Maps, Receptive Fields and the Specificity of Brain Connections |
| 2015/7/1 | Xiaolin Cheng | Oak Ridge National Laboratory | Lateral Organization and Inter-Leaflet Coupling of Biological Membranes from Simulation and Neutron Scattering |
| 2015/7/2 | Wei Wang | University of California, San Diego | Deciphering and Engineering Chromatin Reader Proteins |
| 2015/7/2 | Anxo Sánchez | Universidad Carlos III de Madrid | The Interaction Based Approach to Socio Economic Behavior |
| 2015/7/3 | Rosalía Serna | Instituto de Optica , CSIC | Integrating Nano Scale Elements for the Building of Active Optical Metamaterials |
| 2015/7/3 | Peter Miller | University of Michigan | Semiclassical Initial Boundary Value Problems for the Defocusing Nonlinear Schrödinger Equation |
| 2015/7/6 | Stefano Bianchini | Scuola Internazionale Superiore di Studi Advanzati | Quadratic Interaction Potential and Lagrangian Representation for Conservation Laws |
| 2015/7/7 | Rafi Blumenfeld | National University of Defense Technology, China Imperial College London Cambridge University | Towards a Stress Theory for Real Granular Materials |



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| 2015/7/8 | Jinxing Zhang | Beijing Normal University | Probe Based Technique: A Pathway to Control Multiple Ferroic Orders at Nanoscale |
| 2015/7/10 | Wei-Min Zhang | Taiwan Cheng Kung University | Non Equilibrium Quantum Transport For Nano Scale Devices |
| 2015/7/13 | Andy Wathen | Oxford University | Preconditioning: A Review |
| 2015/7/20 | Yaohang Li | Old Dominion University | Revisit of Monte Carlo Methods on Large-Scale Numerical Linear Algebra Problems |
| 2015/7/22 | Longnian Lin | Institute of Brain Functional Genomics, East China Normal University | Neural Information Coding in the Amygdala and Hippocampus |
| 2015/7/28 | Wei Zhang | Free University of Berlin | Model Reduction in Solving Optimal Control and Sampling Problems for Diffusion Processes |
| 2015/7/29 | Jingwei Liang | Ecole Nationale Supérieure d'Ingénieurs de Caen | Activity Identification and Local Linear Convergence of Forward Backward Type Methods |
| 2015/7/30 | Chunxiong Zheng | Tsinghua University | Optimal Error Estimates for Gaussian Beam Approximations to the Schrodinger Equation |
| 2015/7/31 | Guanglian Li | University of Bonn | An Adaptive GMsFEM for High Contrast Flow Problems |
| 2015/8/1 | Lexing Ying | Stanford University | Sparsifying Preconditioners |
| 2015/8/3 | Jae Kyu Choi | Yonsei University | Inverse Problem in Qsm from Theory to Application |
| 2015/8/11 | Yifei Lou | The University of Texas at Dallas | The Difference of L1 and L2 Norms for Compressive Sensing and Image Processing |
| 2015/8/17 | Hermann Riecke | Department of Engineering Sciences and Applied Mathematics, Northwestern University | Neuronal Networks in Sensory Processing in The Brain |
| 2015/8/18 | Oscar P. Bruno | California Institute of Technology | Fast Spectral Frequency and Time Domain PDE Solvers |
| 2015/8/18 | Andreas Hauptmann | University of Helsinki, Finland | Enhancing the D-bar Method for Electrical Impedance Tomography with Diffusive Image Segmentation |
| 2015/8/18 | Robert Krasny | University of Michigan | Lagrangian Particle Methods for Vortex Dynamics |



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| 2015/8/19 | Chao Yang | Lawrence Berkeley National Laboratory | Absorption Spectrum Estimation via Linear Response Time Dependent Density Functional Theory |
| 2015/8/19 | Eugene Tyrtshikov | Marchuk Institute of Numerical Mathematics, Lomonosov Moscow State University | Advanced Low Rank Approximations For Tensors And Matrices |
| 2015/8/21 | Yoshiyuki Kagei | Kyushu University | On Chorin's Method for Stationary Solutions of the Oberbeck-Boussinesq Equation |
| 2015/8/24 | Yimin Yang | Protiviti Inc | Normal Space for Model Risks in Finance |
| 2015/8/27 | Huazhong Tang | School of Mathematical Sciences, Peking University | High-Order Accurate Physical-Constraints-Preserving Finite Difference WENO Schemes for Special Relativistic Hydrodynamics |
| 2015/9/24 | Changjuan Zhang | Suzhou University | Multiscale Modeling for Chemical Vapor Infiltration Process |
| 2015/9/24 | Xue-Cheng Tai | Department of Mathematics, University of Bergen | Continuous Max Flow and Global Minimization for Classification of High Dimensional Data |
| 2015/9/30 | Jianlan Wu | Department of Physics, Zhejiang University | Highly Efficient Energy Transfer in Light Harvesting Complex |
| 2015/10/8 | Fabio Marchesoni | University of Camerino | Diffusion of Unstable Microswimmers |
| 2015/10/14 | Keke Zhang | University of Exeter | Probing Jupiter's Interior via Gravitational Sounding |
| 2015/10/20 | Yi Peng | Department of Chemical Engineering and Materials Science, University of Minnesota | Diffusion of An Ellipsoid in Quasi-2D Active Fluid |
| 2015/10/22 | William D. Ratcliff | National Institute of Standards and Technology | Magnetic Order in Multiferroic Hexagonal LuFeO ₃ |
| 2015/10/26 | Abdul Qadeer Khan | University of Azad Jammu & Kashmir | Global Dynamics of Two Systems of Exponential Difference Equations by Lyapunov Function |
| 2015/11/3 | Richard N. Zare | Stanford University | Human Alcoholysis: the Chemistry Behind Drinking to Excess |
| 2015/11/4 | Gennady Samorodnitsky | School of Operations Research and Information Engineering, Cornell University | Tail Inference: Where Does the Tail Begin? |



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| 2015/11/5 | Yongxing Shen | SJTU Michigan Joint Institute, Shanghai Jiao Tong University | The Phase Field Method for Brittle Fracture: Advantages, Drawbacks, and Possible Solutions to Alleviate the Latter |
| 2015/11/8 | Jun Ye | University of Colorado The National Academy of Sciences | The Manufacture of the World's Most Advanced Atomic Cduidelocks |
| 2015/11/10 | Daniel Peterseim | University of Bonn | Numerical Homogenization by Localized Orthogonal Decompositions |
| 2015/11/11 | Daniel Peterseim | University of Bonn | Eliminating the Pollution Effect in Helmholtz Problems by Local Subscale Correction |
| 2015/11/11 | Jianglai Liu | Shanghai Jiao Tong University | Massive Neutrinos 2015 Nobel Prize in Physics |
| 2015/11/11 | Carlos J. Bustamante | Department of Physics, University of California, Berkeley | The Long Detour: Reflections of A South American Scientist in the US |
| 2015/11/18 | Andreas Dress | Chinese Academy of Sciences-MPG Partner Institute for Computational Biology | A Cognitive Network for Oracle Bone Characters Related to Animals |
| 2015/11/18 | Shaoyuan Li | Shanghai Jiao Tong University | Intelligent Manufacturing and Knowledge Automation |
| 2015/11/19 | Raymond H. Chan | Department of Mathematics, The Chinese University of Hong Kong | Point Spread Function Reconstruction in Ground Based Astronomy |
| 2015/11/20 | Wonjung Lee | Department of Mathematics, City University of Hong Kong | Reduced Complex Dynamical System Models and Applications to Data Driven Un-certainty Quantication |
| 2015/11/24 | Irith Hartman | University of Haifa New York University Shanghai | Matchings, Star Partitions, and Clique Covers in Interval Graphs: Graph Theoretical Tools in Transportation Science |
| 2015/11/25 | Wanbin Zhang | Shanghai Jiao Tong University | Artemisinin: From Extraction to Mild Chemical Synthesis |
| 2015/11/27 | Mark Wolters | Shanghai Center for Mathematical Sciences | Autologistic Regression Models, with Application to Segmentation of Hyperspectral Satellite Imagery |
| 2015/12/1 | Xu Zhu | Shanghai Jiao Tong University | The Cycle Descent Statistics of Permutations |
| 2015/12/2 | Xinbing Wang | Shanghai Jiao Tong University | How to Plan Future for Oneself |



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| 2015/12/8 | Xianmin Xu | Chinese Academy of Sciences | Unfitted Finite Element Method for Convection Diffusion Equation on Surfaces |
| 2015/12/8 | Dexter Kozen | Cornell University | Hoare Logic and Kleene Algebra with Tests |
| 2015/12/10 | Young-Woo Son | Korea Institute for Advanced Study | Manifestation of Axion Electrodynamics Through Magnetic Ordering on Edges of Topological Insulator |
| 2015/12/10 | Shuo Zhang | Chinese Academy of Science | On the Structure of Finite Element Spaces and Its Application |
| 2015/12/10 | Benling Li | Ningbo University | Finsler Metrics with Special Scalar Flag Curvature |
| 2015/12/11 | Jingwei Liang | Ecole Nationale Supérieure d'Ingénieurs de Caen | Activity Identification and Local Linear Convergence of Douglas-Rachford/ADMM |
| 2015/12/14 | Zhiwen Zhang | University of Hong Kong | A Dynamically Bi-Orthogonal Method for Time Dependent Stochastic Partial Differential Equation |
| 2015/12/14 | Xinsheng Sean Ling | Southeast University Brown University | The Nanopore DNA Sequencing Problem and the Second Law: Schrodinger's other Equation |
| 2015/12/14 | Yuxun Wang | Tsinghua University | Non-Existence in Sobolev Space to the Cauchy Problem of the 1-D Isentropic Navier Stokes Equations |
| 2015/12/18 | Likun Hou | Institute of Natural Sciences, Shanghai Jiao Tong University | Two Topics on Multichannel Image Restoration |
| 2015/12/18 | Hui Zhang | School of Mathematical Sciences, Beijing Normal University | The Micro Structure and Phase Transition Process of Macromolecular Microsphere Composite (Mmc) Hydrogel |
| 2015/12/21 | Zhen Zhang | the South University of Science and Technology of China | Modeling and Simulation of Moving Contact Line Problem for Two Phase Complex Fluids Flow |
| 2015/12/22 | Shenggao Zhou | Suzhou University | Implicit-Solvent Models for Biomolecular Solvation |
| 2015/12/22 | Zecheng Gan | Shanghai Jiao Tong University | Hybrid Method for Systems of Closely Spaced Dielectric Spheres and Ions |
| 2015/12/22 | Wenyuan Dai | 4Paradigm | About Data |
| 2015/12/28 | Jingwei Hu | Purdue University | Asymptotic Preserving Schemes for the Semiconductor Boltzmann Equation with Two Scale Collisions |



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| 2015/12/30 | Weijun Xu | Warwick University | What do Infinities in Stochastic PDEs Mean? |
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Zhiyuan College Academic Seminars, 2016 (158)

| Date | Speaker | Affiliation | Title |
|-----------|--------------------|--|---|
| 2016/1/6 | Lei Xu | Department of Physics, The Chinese University of Hong Kong | The Secret of Splashing |
| 2016/1/11 | Xing Wei | Institute of Natural Sciences, Shanghai Jiao Tong University | Rotating Magneto Hydrodynamics in Planetary and Stellar Interiors |
| 2016/1/13 | Xinwei Yu | University of Alberta | On Stationary Solutions to Doi-Onsager Models |
| 2016/2/2 | Fanlong Meng | University of Cambridge | Rheological Response of A Transient Network Under Deformations |
| 2016/2/23 | Hyoung-In Lee | Seoul National University | Plasmonics of Lossy Nanowires: Multiple Complex Roots |
| 2016/2/23 | Ivan Sutherland | <i>A.M. Turing Award Winner</i> Portland State University | Science and Life |
| 2016/3/2 | Leonid Berlyand | Pennsylvania State University | Sharp Interface Limit in a Phase Field Model of Cell Motility |
| 2016/3/3 | Leonid Berlyand | Pennsylvania State University | Homogenization and Multiscale Problems: Theory and Applications (I) |
| 2016/3/4 | Leonid Berlyand | Pennsylvania State University | Homogenization and Multiscale Problems: Theory and Applications (II) |
| 2016/3/11 | Jianzhong Su | Department of Mathematics, University of Texas at Arlington, USA | Globally Convergent Methods for Inverse Problems in Diffuse Optical Tomography and Its Applications |
| 2016/3/14 | Cunquan Zhang | West Virginia University | Neighbour Distinguishing Edge Weighting |
| 2016/3/15 | Doron Levy | Department of Mathematics, University of Maryland | Modeling the Role of the Immune Response in Chronic Myelogenous Leukemia |
| 2016/3/16 | Doron Levy | Department of Mathematics, University of Maryland | Modeling Group Dynamics in Phototaxis |
| 2016/3/18 | Daqing Wan | University of California, Irvine | Rational Roots of Sparse Polynomials |
| 2016/3/21 | Ulugbek S. Kamilov | Mitsubishi Electric Research Laboratories | Learning Approach to Optical Tomography |
| 2016/3/21 | Fanhai Zeng | Division of Applied Mathematics, Brown University | Spectral Collocation Methods for Fractional Boundary Value Problems |
| 2016/3/28 | Avy Soffer | Rutgers University | Soliton Theory of the Nonlinear Schroedinger Equation (1) |
| 2016/3/29 | Tao Luo | Department of Mathematics, City University of Hong Kong | On the Free Surface Motion Of Highly Subsonic Heat Conducting Flows |



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| 2016/3/29 | Yanjin Wang | Department of Mathematics, Xiamen University | Nonlinear Stability and Instability for Two Compressible Viscous Fluids |
| 2016/3/29 | Avy Soffer | Rutgers University | Soliton Theory of the Nonlinear Schroedinger Equation (2) |
| 2016/3/30 | Avy Soffer | Rutgers University | Nonlinear Long Range Scattering and Normal Form Analysis |
| 2016/3/31 | Avy Soffer | Rutgers University | Soliton Theory of the Nonlinear Schroedinger Equation (3) |
| 2016/4/1 | Avy Soffer | Rutgers University | Soliton Theory of the Nonlinear Schroedinger Equation (4) |
| 2016/4/6 | Xiao Yun Xu | Department of Chemical Engineering, Imperial College London | Transport Processes in Biological Systems: From Blood Flow in the Aorta to Drug Transport in Solid Tumour |
| 2016/4/6 | Rongjun Chen | Department of Chemical Engineering, Imperial College London | Cross-Membrane Delivery for Cell Therapy |
| 2016/4/6 | Qihua Wang | Academy of Mathematics and Systems Science, Chinese Academy of Sciences | A Consistent Jackknife Empirical Likelihood Test for Distribution Functions |
| 2016/4/6 | Jürgen Jost | Max Planck Institute for Mathematics in the Sciences | The Bernstein Problem |
| 2016/4/7 | Valery ROMANOVSKI | University of Maribor & CAMTP | Centers and Integrability in Polynomials Systems of ODEs |
| 2016/4/8 | Yimei Zhu | Brookhaven National Laboratory | Face-to-face with Famous Alumni Yimei Zhu-Listen to Talk on Advanced Nano Science and Introduction on the Brook Brookhaven National Laboratory Given by Academic Master |
| 2016/4/12 | Wei-Jun Xu | University of Warwick | Singular Stochastic PDEs and Regularity Structures (1) |
| 2016/4/13 | Yi Zhou | Fudan University | Structure of Helicity and Global Solutions of Incompressible Navier Stokes Equation |
| 2016/4/14 | Jin Yu | Complex Systems Division, Beijing Computational Science Research Center | Non-equilibrium Physics in Bio-physical Systems |
| 2016/4/14 | Wei-Jun Xu | University of Warwick | Singular Stochastic PDEs and Regularity Structures (2) |
| 2016/4/19 | Wei-Jun Xu | University of Warwick | Singular Stochastic PDEs and Regularity Structures (3) |



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| 2016/4/21 | Wei-Jun Xu | University of Warwick | Singular Stochastic PDEs and Regularity Structures (4) |
| 2016/4/21 | Eiichi Bannai | Shanghai Jiao Tong University | On Spherical Designs: A Survey |
| 2016/4/26 | Yijin Ren | W.J.Kolff Institute of Biomedical Engineering and Materials Science, University Medical Center Groningen, University of Groningen | Health Aging-Contribution of the Assets of Biomedical Engineering and Biomaterials |
| 2016/4/26 | Akil Narayan | University of Utah | High Dimensional Approximation Using Equilibrium Measures |
| 2016/4/27 | Ruirui Lin | Peking University | Topological Matters in Electron Hole Double Layers |
| 2016/4/27 | Richard McCray | University of California, Berkeley | Supernova 1987 A |
| 2016/4/27 | Zhongping Chen | University of California | Advances in Optical Coherence Tomography: Translation of OCT Technology from Bench to Bedside |
| 2016/4/28 | Freddy Dumortier | Hasselt University | Slow Fast Systems: General Setting and Intrinsic Notions |
| 2016/4/29 | Shengfu Deng | Lingnan Normal University | Multi Hump Solutions with Small Oscillations At Infinity for Stationary Swift Hohenberg Equation |
| 2016/5/3 | Dezheng Sun | Department of Applied Physics , Stanford University | Manipulation of Valley Coherence and Many-Body Interaction in Monolayer Tmdc Using Ultrafast Laser Pulses |
| 2016/5/3 | Jianbo Hu | California Institute of Technology | 4D Visualization of Ultrafast Lattice Deformation in Solids |
| 2016/5/3 | Hanghuig Chen | Columbia University | Charge-Transfer-Driven Emergent Phenomena in Oxide Heterostructures |
| 2016/5/4 | Bei Ding | University of Pennsylvania | Probing Site-Specific Orientations and Dynamics Of Biomolecules via Vibrational Probes |
| 2016/5/4 | Lianao Wu | Department of Theoretical Physics and History of Science, Basque Country University | One Component Quantum Mechanics and A Universal Control Theory |
| 2016/5/4 | Freddy Dumortier | Hasselt University | Slow Fast Systems with Singularities in the Slow Dynamics |
| 2016/5/6 | Mohamed Atia | University of Gabes | Linearization Coefficients of Bessel Polynomials and Applications |
| 2016/5/6 | Fengnan Gao | Leiden University | On the Estimation of the Preferential |



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| | | | Attachment Network Model and More |
| 2016/5/9 | Weibo Cai | University of Wisconsin-Madison | Molecular Imaging, Image Guided Drug Delivery, and Theranostics |
| 2016/5/11 | Guofu Yu | Shanghai Jiao Tong University | A Glimpse At Integrable Combinatoricsg |
| 2016/5/11 | Richard M. Wilson | California Institute of Technology | Algebraic Techniques in Extremal Set Theory |
| 2016/5/11 | Zhongping Chen | Beckman Laser Institute, Department of Biomedical Engineering, University of California | Frontier of Biophotonics Lecture Series |
| 2016/5/13 | Zhiming Zhang | Beijing Computational Science Research Center | Superconvergence: An Old Field with New Territories |
| 2016/5/16 | Jianda Wu | Department of Physics, University of California, San Diego | Quantum Critical Dynamics in Many Body Systems |
| 2016/5/16 | Shmuel Friedland | University of Illinois at Chicago | Tensors and Entanglement in Quantum Physics |
| 2016/5/17 | John Erik Fornaess | Norwegian University of Science and Technology | Complex Dynamics in Higher Dimension(1) |
| 2016/5/19 | John Erik Fornaess | Norwegian University of Science and Technology | Complex Dynamics in Higher Dimension(2) |
| 2016/5/19 | Li Chen | Department of Mathematics, University of Mannheim | Analysis on A Nonlocal Fisher-KPP Reaction Diffusion Equation |
| 2016/5/20 | John Erik Fornaess | Norwegian University of Science and Technology | Complex Dynamics in Higher Dimension(3) |
| 2016/5/23 | Honglang Wang | Indiana University-Purdue University Indianapolis | Unified Empirical Likelihood Ratio Tests for Functional Linear Models and the Phase Transition from Sparse to Dense Functional Data |
| 2016/5/24 | John Erik Fornaess | Norwegian University of Science and Technology | Complex Dynamics in Higher Dimension(4) |
| 2016/5/24 | Jian-Guo Liu | Duke University | Euler Sprays and Wasserstein Geometry of the Space of Shapes |
| 2016/5/25 | Lilin He | Oak Ridge National Laboratory | Application of Small Angle Neutron Scattering on Soft Matters |
| 2016/5/25 | Ren Yuan Zhu | California Institute of Technology | The Next Generation of Crystal Detectors for Future High Energy Physics Calorimetry |
| 2016/5/25 | Xingjie Li | University of North Carolina at Charlotte | Coarse Graining, Dynamic Renormalization and the Kinetic Theory of Shock Clustering |



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| 2016/5/25 | Jing Li | Chinese Academy of Sciences | Serrin-Type Criterion and Large Time Behavior for Full Compressible Navier Stokes System |
| 2016/5/26 | Changming Dong | School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University | Stimuli Responsive Polypeptides and Their Nanomedicines |
| 2016/5/27 | John Erik Fornæss | Norwegian University of Science and Technology | Complex Dynamics in Higher Dimension(5) |
| 2016/5/27 | Sam Stechmann | University of Wisconsin-Madison | Modeling the Madden Julian Oscillation: Nonlinear Waves, Stochastic Dynamics, and Data Analysis |
| 2016/5/30 | Wei Xue | Massachusetts Institute of Technology | Dark Photon Search At Lh Cb |
| 2016/6/1 | Xiaohua Zhu | Peking University | Asymptotic Behavior of κ Noncollapsed Steady Ricci Solitons |
| 2016/6/1 | Radu Constantinescu | Department of Physics, University of Craiova | First Order Systems of Nonlinear ODEs with Chaotic Behavior |
| 2016/6/1 | Liqun Zhang | Academy of Mathematics and System Sciences, Chinese Academy of Sciences | Continuous Weak Solutions of Boussinesq Equations |
| 2016/6/2 | Roman Puzniak | Polish Academy of Sciences | Anisotropy and Phase Separation in Iron Based Superconductors |
| 2016/6/5 | Ning Jenny Jiang | Department of Biomedical Engineering, University of Texas at Austin | Immune Repertoire Profiling by High Throughput Sequencing and Single Cell Analysis |
| 2016/6/6 | Kyung Hyun Ahn | Seoul National University | A New Paradigm of Materials Processing |
| 2016/6/6 | Xiao He | Dalian Minzu University | Global Boundedness in Quasilinear Attraction Repulsion Chemotaxis System with Logistic Source |
| 2016/6/7 | Xiangdong Ji | Shanghai Jiao Tong University | Dark Matter |
| 2016/6/7 | Ke Han | Shanghai Jiao Tong University | Neutrino Physical Experiment |
| 2016/6/7 | Yong Yang | Shanghai Jiao Tong University | Data Collection of Particle Experiment and Electronics System |
| 2016/6/7 | Tao Sun | Shanghai Jiao Tong University | The biological basis of nervous system diseases |
| 2016/6/7 | Gabriele Floris | Shanghai Jiao Tong University | Circular RNA, An Emerging Noncoding RNA |
| 2016/6/8 | Jie Zhang | Institute of Natural Sciences, | Density of Vibrations in Granular Solids |



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| | | Shanghai Jiao Tong University | Ranging from Crystals to Glasses |
| 2016/6/8 | Dong Lai | Cornell University | Extreme Exoplanetary Systems: From Hot Jupiters to Tatooine Planets |
| 2016/6/9 | Wei Xiang | City University of Hong Kong | Convexity of Transonic Shock in the Self Similar Coordinates and the Applications |
| 2016/6/12 | Fuzhen Zhang | Nova Southeastern University | Polytopes of Stochastic Tensors |
| 2016/6/14 | Hongbin Shen | Shanghai Jiao Tong University | Biological Complex Networks |
| 2016/6/14 | Dan Czajkowsky | Shanghai Jiao Tong University | Single Molecule Biophysics |
| 2016/6/14 | Xiaowei Li | Shanghai Jiao Tong University | Seeing is believing, from Nano to Macro |
| 2016/6/14 | Wanbin Zhang | Shanghai Jiao Tong University | Development and Application of Highly Effective Asymmetric Catalysis for Synthesis of Important Medicines Including Artemisinin |
| 2016/6/14 | Xianmin Jin | Shanghai Jiao Tong University | Photonic Integration and Quantum Information: Photonic Chips and Quantum memory |
| 2016/6/14 | Hao Tang | Shanghai Jiao Tong University | Two Dimensional Quantum Walk Based on Waveguide Arrays |
| 2016/6/14 | Zhen Feng | Shanghai Jiao Tong University | Infinite Probabilities on Photonic Chips |
| 2016/6/14 | Michael Berry | the National Academy of Science of the USA | Divergent Series: From Thomas Bayes's Bewilderment to Today's Resurgence via The Rainbow |
| 2016/6/15 | Jinwu Ye | University of Mississippi and Capital Normal University | Strongly Interacting Spinor Bosons or Fermions with Spin Orbit Couplings in Lattice Systems |
| 2016/6/15 | Eric King-Wah Chu | Monash University | Structure Preserving Doubling Algorithms-Rediscovery, Redevelopment and Applications |
| 2016/6/16 | Ruibao Ren | Shanghai Jiao Tong University | Targeting RAS in Cancer |
| 2016/6/16 | Jianbo Wu | Shanghai Jiao Tong University | Nanocatalyst Material |
| 2016/6/16 | Chengyi Song | Shanghai Jiao Tong University | Bionic Thermal Conversion Material |
| 2016/6/16 | Junliang Zhang | Shanghai Jiao Tong University | Fuel Cells with Ultra-Low Platinum: Challenges and Solutions |
| 2016/6/16 | Baofu Qiao | Argonne Nation Laboratory | A Multiscale Understanding of Solvent Extraction for Rare Earth Elements Refinery |
| 2016/6/16 | Qunying Liao | Sichuan Normal University | Several Classes of Errors Correction Codes |
| 2016/6/19 | Man-Duen Choi | University of Toronto | The Principle of Locality Made Simple but Hard (1) |



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| 2016/6/20 | Nedeljkov Marko | University of Novi Sad | Non Classical Solutions to Conservation Law Systems (1) |
| 2016/6/21 | Weijia Jia | Shanghai Jiao Tong University | Computer Networks |
| 2016/6/21 | Quan Chen | Shanghai Jiao Tong University | Scheduling of Multi-Core Processors |
| 2016/6/21 | Chentao Wu | Shanghai Jiao Tong University | Mass Data Storage System |
| 2016/6/21 | Jicun Ren | Shanghai Jiao Tong University | Single-Molecule Methods on Molecular Interactions in Living Cells. |
| 2016/6/21 | Bob Eisenberg | Rush University Medical Center | Mathematics in Molecular Biology: Open Channels |
| 2016/6/21 | Man-Duen Choi | University of Toronto | The Principle of Locality Made Simple but Hard (2) |
| 2016/6/21 | Yongge Tian | Central University of Finance and Economics | Matrix Inertia Theory and Its Applications |
| 2016/6/22 | Julie Kornfield | California Institute of Technology | Helping the Corneal Stroma Stay in Shape |
| 2016/6/22 | Dan Zhou | California Institute of Technology | Finding the Binding Site Of Luminate®, A Therapeutic Peptide for Retinal Disease |
| 2016/6/22 | Yan Jie | National University of Singapore | Quantifying Force Dependent Interactions of Mechanosensing Proteins |
| 2016/6/22 | Man-Duen Choi | University of Toronto | The Taming of the Shrew |
| 2016/6/22 | Nedeljkov Marko | University of Novi Sad | Non Classical Solutions to Conservation Law Systems (2) |
| 2016/6/23 | Yanni Zeng | University of Alabama at Birmingham | Structural Conditions for Balance Laws from Continuum Mechanics |
| 2016/6/24 | Man-Duen Choi | University of Toronto | The Eden Garden of Sums of Squares |
| 2016/6/24 | Jie Sun | Department of Mathematics, Clarkson University | Information Theoretic Reverse Engineering of Complex Networks |
| 2016/6/28 | Li Yang | Washington University in St. Louis | Black Phosphorus and Beyond |
| 2016/6/29 | Haizhao Yang | Duke University | Preconditioning Orbital Minimization Method for Planewave Discretization |
| 2016/6/30 | Tao Luo | City University of Hong Kong | On the Physical Vacuum Free Boundary of Viscous Gaseous Stars |
| 2016/6/30 | Haizhao Yang | Duke University | Butterfly Algorithm and Butterfly Factorization |
| 2016/6/30 | Mikhail Korobkov | Sobolev Institute of Mathematics | On the Morse Sard Theorem for the Sharp Chinese Academy of Science of Sobolev Mappings and Applications in Fluid Mechanics |
| 2016/6/30 | Tao Hu | FB Oculus | The History and Future of Virtual Reality Technology |



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| 2016/6/30 | Xiaochao Yao | HTC Vive | The History and Future of Virtual Reality Technology |
| 2016/7/1 | Andriy Baumketner | NAS Ukraine | Phase Transitions and Cluster Formation in Aqueous Solutions of Protein Lysozyme |
| 2016/7/4 | Guowu Meng | The Hong Kong University of Science and Technology | Kepler Problem and Lorentz Transformation |
| 2016/7/5 | Jingsong He | Ningbo University | Modelling Optical Rogue Wave Through the Dnls Equation |
| 2016/7/5 | Li Tang | École Polytechnique Fédérale de Lausanne | Enhancing T Cell Therapy through Tcr Signaling Responsive Nanoparticle Drug Delivery |
| 2016/7/5 | Xuwen Zhu | Stanford University | Degenerate Hyperbolic Surfaces and Asymptotics of Weil Petersson Metric |
| 2016/7/5 | Semyon Dyatlov | Massachusetts Institute of Technology | Resonances in Dynamical Systems and Scattering Theory |
| 2016/7/6 | Tony Cai | The Wharton School, University of Pennsylvania | Recovery of High Dimensional Low Rank Matrices and Its Applications |
| 2016/7/8 | Baofeng Feng | The University of Texas Rio Grande Valley | A Complex Short Pulse Equation of Defocusing Type |
| 2016/7/8 | O.G.Smolyanov | Lomonosov Moscow State University | Feynman Path Integrals and Feynman Formulas |
| 2016/7/12 | Alexander Mednykh | Sobolev Institute of Mathematics | Coverings of Graphs and Uniformisation Theory |
| 2016/7/12 | Bobo Hua | Fudan University | Some Problems on Steklov Eigenvalues on Graphs |
| 2016/7/12 | Alexander Mednykh | Sobolev Institute of Mathematics | Spanning Trees |
| 2016/7/12 | Jihoon Ok | Korea Institute for Advanced Study | Regularity Results for Elliptic and Parabolic Equations with Variable Growth |
| 2016/7/12 | Hongming Yin | Washington State University | On the American Option Pricing Model with a Nonlinear Volatility |
| 2016/7/13 | Greg Huber | Kavli Institute for Theoretical Physics, and Department of Physics, University of California, Santa Barbara | Terasaki Ramps: A Glimpse into the Geometrical Architecture of the Cell |
| 2016/7/15 | Alexander Mednykh | Sobolev Institute of Mathematics | Branched Coverings of Graphs |
| 2016/7/20 | Qi Cheng | University of Oklahoma | The Discrete Logarithms and the Algorithms |



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| 2016/7/21 | Weiran Sun | Simon Fraser University | Fractional Diffusion Limits of Non Classical Transport Equations |
| 2016/7/25 | Bin Cheng | University of Surrey | Existence of Global Weak Solutions to a Hybrid Vlasov-MHD Model for Magnetized Plasmas |
| 2016/7/26 | Hyonju Yu | Pohang University of Science and Technology | On Hoffman Graph |
| 2016/8/4 | Yao Li | Department of Mathematics and Statistics, University of Massachusetts Amherst | Systematic Measures of ODE-Modeled Complex Networks |
| 2016/8/5 | Weimin Han | University of Iowa | Hemivariational Inequalities: Theory and Numerical Analysis |
| 2016/8/5 | Ming Han | Northwestern University | Active Janus Colloids |
| 2016/8/8 | Yifei Lou | University of Texas Dallas | The Difference of L1 and L2 for Compressive Sensing and Image Processing |
| 2016/8/10 | Long Chen | University of California at Irvine | Numerical Methods for Elliptic Equations on Polyhedral Meshes |
| 2016/8/11 | Long Chen | University of California at Irvine | An Interface Fitted Mesh Generator and Virtual Element Methods for Elliptic Interface Problems |
| 2016/8/24 | Tao Wu | Weierstrass Institute | Bilevel Optimization and Applications in Imaging Sciences I |
| 2016/8/25 | Tao Wu | Weierstrass Institute | Bilevel Optimization and Applications in Imaging Sciences II |
| 2016/9/7 | Mikio Nakahara | Kindai University | Decoherence Free Subspace, Noiseless Subsystem and Group Representation |



Zhiyuan College Student Seminars, 2013~2016 (21)

| Date | Speakers | Affiliation | Title |
|------------|---------------------------|---|--|
| 2013/11/21 | Qingtao Xu | Zhiyuan College, Class of 2015, Life Science | Film Appreciation |
| 2013/12/12 | Keyi Wu | Zhiyuan College, Class of 2015, Mathematics | The World of Cipher |
| 2014/3/14 | Yuxi Zhao | Zhiyuan College, Class of 2015, Physics | Distance Measurement in Astronomy |
| 2014/10/10 | Shiyue Yang | Zhiyuan College, Class of 2016, Chemistry | HIP-HOP |
| 2014/10/31 | Gefei Xu | Zhiyuan College, Class of 2016, Chemistry | Succulent Plants |
| 2014/12/5 | Yiyi Zhang | Zhiyuan College, Class of 2016, Computer Science | Architectures in Shanghai |
| 2014/12/9 | Banruo Huang | Zhiyuan College, Class of 2016, Chemistry | Future Synthesizer: Chemistry, Biology and Algorithm |
| 2015/3/26 | Lequn Chen | Zhiyuan College, Class of 2017, Computer Science | To See the World and Humanity from Black Mirror |
| 2015/4/10 | Nuo Chen | Zhiyuan College, Class of 2017, Physics | The New Era of Astronomy, to Find the Next Earth |
| 2015/05/13 | Yifan Xu | Zhiyuan College, Class of 2017, Mathematics | The Mathematics That You Don't Know |
| 2015/5/16 | Dongping Qi | Zhiyuan College, Class of 2016, Mathematics | The Study of Etymology |
| 2015/5/29 | Gefei Xu | Zhiyuan College, Class of 2016, Chemistry | Food and Culture |
| 2015/5/29 | Alex , Ted , Hsin-Jung Yu | University of Pennsylvania | Food and Culture |
| 2015/6/4 | Tianyao Chen | Zhiyuan College, Class of 2017, Computer Science | The View of the Galaxy |
| 2015/10/22 | Songyu Ke | Zhiyuan College, Class of 2017, Computer Science | Ancient China with Policy of Physiocracy and Restriction of Business |
| 2015/11/19 | Yuxing Ren | Zhiyuan College, Class of 2017, Physics | The Origin and Current Situation of Ancient Music |
| 2015/12/5 | Jie Zhao | Zhiyuan College, Class of 2018, Physics | The Psychological Explanation for Irrational Shopping |
| 2016/3/10 | Yuelin Shi | Zhiyuan College, Class of 2016, Life Science | Lead a Life of a Queen |
| 2016/3/24 | Chang Liu | School of Naval Architecture, Ocean and Civil Engineering | The Study of Naval Architecture and Ocean Engineering |



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| 2016/4/12 | Yiyi Zhang Yu Zhang | Zhiyuan College, Class of 2016, Computer Science; High School Affiliated to Shanghai Jiao Tong University | The Communication between Two Mayor's Award Owners |
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