| EASIAM 2012: DAY 1 (June 25, 2012) | | | | | | |
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| 8:00-9:00 | | *Conference Registration @Astro-Math. 1F* | | | | |
| 9:00-9:30 | | *Opening @Auditorium, Astro-Math.* | | | | |
| | | *Host: I-Liang Chern* | | | | |
| | | *Keynote Talk @Auditorium, Astro-Math.* | | | | |
| | | *Session Chair: Hisashi Okamoto* | | | | |
| 9:30-10:30 | | ***Linda Petzold*** (Department of Mechanical Engineering, University of California Santa Barbara, USA), Spatial Stochastic Amplification in Cell Polarization | | | | |
| 10:30-10:40 | | *Coffee* | | | | |
| | | *Invited Talks @Auditorium, Astro-Math.* | | | | |
| | | *Session Chair: Zhong-Ci Shi* | | | | |
| 10:40-11:20 | | ***Weiqing Ren*** (Department of Mathematics, National University of Singapore and IHPC, Singapore), The string method for the study of rare events | | | | |
| 11:20-12:00 | *Conference Registration @Astro-Math. 1F* | ***Hitoshi Arai*** (Graduate School of Mathematical Sciences, The University of Tokyo, Japan), Mathematical models of visual information processing and applications to visual illusions | | | | |
| 12:00-12:05 | | *Group Photo @Astro-Math. 1F* | | | | |
| 12:05-13:30 | | *Lunch* | | | | |
| | | *Student Paper Prize Presentations @Auditorium, Astro-Math.* | | | | |
| | | *Session Chair: Hisashi Okamoto* | | | | |
| 13:30-14:00 | | ***Xuanchun Dong*** (Department of Mathematics, National University of Singapore, Singapore), Analysis and comparison of numerical methods for the Klein-Gordon equation in the nonrelativistic limit regime | | | | |
| 14:00-14:30 | | ***Zhenning Cai*** (School of Mathematical Sciences, Peking University, China), Numerical Regularized Moment Method of Arbitrary Order for Boltzmann-BGK Equation | | | | |
| 14:30-15:00 | | ***Seonjeong Lee*** (Department of Mathematical Sciences, Seoul National University, Republic of Korea), An Optimal Estimation of Piecewise Constant Paramter Functions in ODEs | | | | |
| 15:00-15:30 | | *Coffee* | | | | |
| | | *Parallel Session 1: Applied Partial Differential Equations* | *Parallel Session 2: Numerical Analysis* | *Parallel Session 3: Applied Numerical Linear Algebra* | *Parallel Session 4: Mathematical Analysis of Engineering Problems* | *Parallel Session 5: Fluid Mechanics* |
| | | *@Room 101, Astro-Math.* | *@Room 102, Astro-Math.* | *@Room 202 Astro-Math.* | *@Room 204, Astro-Math.* | *@Room 201, Astro-Math.* |
| | | *Session Chair: Leevan Ling* | *Session Chair: Chi-Tien Lin* | *Session Chair: Yusaku Yamamoto* | *Session Chair: Hitoshi Arai* | *Session Chair: Yin-Tzer Shih* |
| 15:30-15:50 A | | ***Zhonghua Qiao*** (Department of Applied Mathematics, The Hong Kong Polytechnic University, Hong Kong), Energy stability analysis and adaptive time-stepping strategy for nonlinear diffusion equations | ***Suh-Yuh Yang*** (Department of Mathematics, National Central University, Taiwan), A new stabilized finite element method for the reaction-convection-diffusion equations | ***Akira Imakura*** (Center for Computational Sciences, University of Tsukuba, Japan), On convergence behavior of the GMRES(m) method with a hybrid restart technique | ***Ling-Huang Yu*** (Department of Mathematics, National Chung Cheng University, Taiwan), Vibration of a Standing Plate with Internal Crack | ***Xiaolin Li*** (Department of Applied Mathematics and Statistics, SUNY at Stony Brook, USA), Front Tracking on Fabric Modeling and Application to Parachute Simulation |
| 15:50-16:10 B | | ***Wen-Ching Lien*** (Department of Mathematics, National Cheng Kung University, Taiwan), Nonlinear Stability of Spherical Self-Similar Flows to the Compressible Euler Equations | ***Zanariah Abdul Majid*** (Department of Mathematics, Universiti Putra Malaysia, Malaysia), Five step block method for solving general second order ODEs directly | ***Lei Du*** (Faculty of Engineering, Information and Systems, University of Tsukuba, CREST/JST, Japan), IDR(s) for linear systems with multiple shifts and multiple right-hand sides | ***Teng-Yao Kuo*** (Ph. D. Program in Mechanical and Aeronautical Engineering, Feng Chia University, Taiwan), The ground-state computation of hetero-structure quantum dots in arbitrary shape | ***Alex Chang*** (Department of Applied Mathematics, National Pingtung University, Taiwan), A Coupled Transport and Phase Equilibrium Flow On Heterogeneous Pore-Scale Network Media |
| 16:10-16:30 C | *EASIAM Business Meeting @R440* | ***Jilu Wang*** (Department of Mathematics, City University of Hong Kong, Hong Kong), Modelling and analysis for heat and moisture transport in fibrous porous media with nonlocal radiation sources | ***Hoang Linh Vu*** (Faculty of Mathematics, Mechanics, and Informatics, VNU Hanoi University of Science, Vietnam), Efficient integration of matrix-valued non-stiff differential-algebraic equations by half-explicit methods | ***Yusuke Morikura*** (Graduate School of Fundamental Science and Engineering, Waseda University, Japan), Verification methods for linear systems using ufp estimation with rounding-to-nearest | ***Sita Charkrit*** (Department of Mathematics, Faculty of Sciences, Maejo University, Chiangmai, Thailand), An alternative method for solving nonlinear differential equations via integral equations. | ***Rhodri Nelson*** (Department of Mathematics, Hokkaido University, Japan), Applications Of Vortex Dynamics In Multiply Connected Domains |
| 16:30-16:50 D | | ***Ekeoma Rowland Ijioma*** (Meiji Institute of Advanced Mathematical Science, Japan), Pattern Formation in Reverse Smoldering Combustion: A Homogenization Approach | ***Nary Kim*** (Mathematics, Ajou University, Republic of Korea), Numerical Solutions of Stochastic Optimal Control problems using Stochastic Collocation method | ***Katsuhisa Ozaki*** (Department of Mathematical Sciences, Shibaura Institute of Technology, Japan), Fast Interval Matrix Multiplication without Directed Rounding | ***David Gao*** (School of Science, Information Technology and Engineering, University of Ballarat, Australia), Unified Understanding for Complex Systems and Solutions to Certain NP-Hard Problems | ***Guanghua Ji*** (School of Mathematical Sciences, Beijing Normal University, China), Kinetic Theory for Active Nematic Particle |

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| 16:50-17:10<br>E | | ***WeiFan Hu*** (Department of Applied Mathematics, National Chiao-Tung University, Taiwan), A new unconditionally stable discretization of immersed boundary method and applications | ***Naoya Yamanaka*** (Research Institute for Science and Engineering, Waseda University, Japan), Accurate and Rigorous Logarithm Algorithm in Round to Nearest | ***Hanz Martin Cheng*** (Mathematics Department, Ateneo de Manila University, Philippines), Generation of Complex Matrices Belonging to Matrix Groups with Controlled Condition Number | ***Timothy Gao*** (Department of Applied and Engineering Physics, Cornell University, USA), Solutions to an 8th Order Polynomial Minimization Problem by Canonical Duality Theory | |
| 17:10-17:30 | *Transportation to Banquet (Tour Bus): Assembly @17:20 at Astro-Math. 1F* | | | | | |
| 18:00-20:00 | *Banquet @Su Hang Restaurant/ Student Paper Prize Ceremony* | | | | | |
| **EASIAM 2012: DAY 2 (June 26, 2012)** | | | | | | |
| | | *Invited Talks @Auditorium, Astro-Math.* | | | | |
| | | *Session Chair: Dongwoo Sheen* | | | | |
| 9:30-10:10 | | ***Victor Didenko*** (Faculty of Science, University of Brunei Darussalam), Algebraic approach to approximation methods for operator equations | | | | |
| 10:10-10:30 | | *Coffee* | | | | |
| | | *Session Chair: Hyung-Chun Lee* | | | | |
| 10:30-11:10 | | ***Wei-Cheng Wang*** (Department of Mathematics, National Tsing Hua University, Taiwan), A kernel-free boundary integral method for the Stokes system | | | | |
| 11:10-11:50 | | ***Leevan Ling*** (Department of Mathematics, Hong Kong Baptist University, Hong Kong), Meshless strong form collocation: Theories & Applications | | | | |
| 12:00-13:20 | | *Lunch* | | | | |
| | | *Parallel Session 6:*<br>*Applied Partial Differential Equations* | *Parallel Session 7:*<br>*Numerical Analysis* | *Parallel Session 8:*<br>*Applied Numerical Linear Algebra* | *Parallel Session 9:*<br>*Mathematical Biology and/or Medicine* | *Parallel Session 10:*<br>*Fluid Mechanics* |
| | | *@Room 101, Astro-Math.* | *@Room 102, Astro-Math.* | *@Room 202 Astro-Math.* | *@Room 204, Astro-Math.* | *@Room 201, Astro-Math.* |
| | | *Session Chair: Shao Liang Zhang* | *Session Chair: Wai-Ki Ching* | *Session Chair: Hendra Gunawan* | *Session Chair: Mohd Omar* | *Session Chair: Xiaolin Li* |
| 13:20-13:40<br>A | | ***Hisashi Okamoto*** (Research Institute for Mathematical Sciences, Kyoto University, Japan), A pattern formation in 2D Navier-Stokes equations at very high Reynolds numbers | ***Xiao-Qing Jin*** (Department of Mathematics, University of Macau, Macau), A sinc collocation method for Love's integral equation with a very small parameter | ***Mao-Ting Chien*** (Department of Mathematics, Soochow University, Taiwan), Determinantal representation of polynomials | ***Rafael Saldana*** (Mathematics Department, Ateneo de Manila University, Philippines), Mathematical Aspects of Foraging Behavior Among Long-Tailed Shrikes (Lanius schach) and Brown Shrikes (Lanius cristatus) | ***Leo Hari Wiryanto*** (Faculty of Mathematics and Natural Sciences, Bandung Institute of Technology, Indonesia), Local flow near a separation of solid boundary |
| 13:40-14:00<br>B | | ***Luyu Sun*** (Department of Mathematics, Hong Kong Baptist University, Hong Kong), Unconditionally Energy Stable Scheme for Binary Fluid-Surfactant Dynamics Model | ***ChiehSen Huang*** (Department of Applied Mathematics, National Sun Yat-sen University, Taiwan), A locally conservative Eulerian-Lagrangian finite volume WENO scheme for advection problems | ***Hai-Wei Sun*** (Department of Mathematics, University of Macau, Macau), Fast Algorithms for Toeplitz Matrix Exponential and Applications | ***Hui Zhang*** (School of Mathematical Sciences, Beijing Normal University, China), Self-consistent Mean Field Model of Hydrogel and Its Numerical Simulation | ***Takahito Kashiwabara*** (Graduate School of Mathematical Sciences, The University of Tokyo, Japan), On a strong solution of the Navier-Stokes equations under slip or leak boundary conditions of friction type |
| 14:00-14:20<br>C | | ***Zhengru Zhang*** (School of Mathematical Sciences, Beijing Normal University, China), Energy stable method for molecular beam epitaxial growth model without slope | ***Hiroshi Fujiwara*** (Graduate School of Informatics, Kyoto University, Japan), Numerical Analysis and Computations for the Radiative Transport Equation | ***Yusaku Yamamoto*** (Department of Computational Science, Kobe University, Japan), A generalization of the dqds algorithm for totally nonnegative matrices | ***Sugiyarto Surono*** (Ahmad Dahlan University Yogyakarta, Indonesia), Mathematical Model Six Classes Of Disease's Spreading (Epidemics) with Variable Human Population and Disease-Carrier and its Variations | ***Ching-Hao Yu*** (Department of Engineering Science and Ocean Engineering, National Taiwan University, Taiwan), Development of a scheme that preserves the dispersion relation equation for solving the pure advection equation and Navier-Stokes equations with free surface |
| 14:20-14:40<br>D | | ***Xia Ji*** (Institute of Computational Mathematics, Chinese Academy of Sciences, China), High-order Accurate Runge-Kutta Discontinuous Galerkin Methods for a Two-dimensional Nonlinear Dirac Model | ***Xuefeng Liu*** (Research Institute for Science and Engineering, Waseda University, Japan), On verified eigenvalue evaluation of self-ajoint elliptic differential operator | ***Siu-Long Lei*** (Department of Math, University of Macau, Macau), Circulant and skew-circulant splitting iteration method for solving constant coefficient fractional diffusion equations | ***Hidenori Yasuda*** (Department of mathematics, Josai University, Japan), Simulation of fulminant ARDS and lymphopenia of H5N1 | |
| 14:40-15:00<br>E | *Conference Registration @Astro-Math. 1F* | | ***Kuan-Yu Chen*** (Department of Applied Mathematics, National Chiao-Tung University, Taiwan), A conservative scheme for solving coupled surface-bulk convection-diffusion equations with an application to interfacial flows with soluble surfactant | ***Mei-Feng Liu*** (Department of Applied Mathematics, I-Shou university, Taiwan), Mathematical modeling for the single-walled carbon nanotubes (SWCNTs) based on thermo-magneto-electro-elastic theory with nonlocal effect | ***Maxim Solovchuk*** (Taida Institute of Mathematical Science, National Taiwan University, Taiwan), A computational study of nonlinear Westervelt equation and its application to focused ultrasound therapy | |

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| 15:00-15:30 | | *Coffee* | | | | |
| | | *Parallel Session 11: Applied Partial Differential Equations* | *Parallel Session 12: Numerical Analysis* | *Parallel Session 13: Applied Numerical Linear Algebra* | *Parallel Session 14: Specific Topics* | *Parallel Session 15: Operation Research and Optimization* |
| | | *@Room 101, Astro-Math.* | *@Room 102, Astro-Math.* | *@Room 202 Astro-Math.* | *@Room 204, Astro-Math.* | *@Room 201, Astro-Math.* |
| | | *Session Chair: Chieh-Sen Huang* | *Session Chair: Hai-Wei Sun* | *Session Chair: Xiao-Qing Jin* | *Session Chair: Leo Hari Wiryanto* | *Session Chair: Rafael Saldana* |
| 15:30-15:50 A | | ***Li-Ming Yeh*** (Department of Applied Mathematics, National Chiao-Tung University), Uniform Estimate for Non-Uniform Elliptic Equations with Discontinuous Coefficients | ***Seak-Weng Vong*** (Department of Mathematics, University of Macau, Macau), Discrete-time collocation methods for solving Schrödinger equations with wave operator | ***Yin-Tzer Shih*** (Department of Applied Mathematics, National Chung Hsing University, Taiwan), Adaptive Parameterized Block-Based Singular Value Decomposition and for Image De-noising and Compression | ***Hendra Gunawan*** (Department of Mathematics, Bandung Institute of Technology, Indonesia), On the boundedness of fractional integral operators | ***Wai-Ki Ching*** (Department of Mathematics, The University of Hong Kong, Hong Kong), Interactive High-Order Hidden Markov Model and Its Applications |
| 15:50-16:10 B | | ***Naoki Wada*** (Graduate School of Informatics, Kyoto University, Japan), An approach to inverse problem on graphs through representation theory | ***Tomoyuki Miyaji*** (JSPS Research Fellow, Research Institute for Mathematical Sciences, Kyoto University, Japan), Taylor model for Poincare map and applications | ***Roden David*** (Mathematics, Ateneo de Manila University, Philippines), Transform Methods for Approximating Eigenvalues of Matrices | ***Ferry Jaya Permana*** (Department of Mathematics, Universitas Katolik Parahyangan, Indonesia), An Approximate Distribution for the Weighted Sum of the Variance Gamma Processes | ***Mohd Omar*** (Mathematics, University of Malaya, Malaysia), An integrated manufacturing system for linearly time-varying demand process |
| 16:10-16:30 C | | ***Prisayarat Sangapate*** (Maejo University, Thailand), Adaptive control and synchronization of the shallow water model | ***Jia-Wei Lee*** (Department of Harbor and River Engineering, National Taiwan Ocean University, Taiwan), A semi-analytical approach for a nonconfocal suspended strip in an elliptical waveguide | ***Yu-Fen Cheng*** (Department of Mathematics, National Central University, Taiwan), Parallel Two-level Polynomial Jacobi-Davidson Eigensolver for Large, Sparse Dissipative Acoustic Problems | ***Dharma Lesmono*** (Department of Mathematics, Universitas Katolik Parahyangan, Indonesia), Modelling Option on Indonesian Stock Indices Using Variance Gamma | ***Roberd Saragih*** (Industrial and Financial Mathematics Research Group, Institut Teknologi Bandung, Indonesia), Controller with minimum order for infinite dimensional system based on singular perturbation |
| 16:30-16:50 D | | | ***David Ni*** (Research, Direxion Technology, Taiwan), Topological Transitions of Meromorphic Maps of Extended Lorentz Transformation | ***Ching-Sung Liu*** (Department of Mathematics, National Tsing Hua University, Taiwan), An inexact inverse iteration for computing the smallest eigenvalue of an irreducible M-matrix | ***Ali Serdar Nazlipinar*** (Dumlupinar University, Turkey), An Algorithm for Calculation of Attainable Sets of Nonlinear Control Systems with Limited Resources | ***Michelle Vallejos*** (Institute of Mathematics, University of the Philippines, Philippines), Multigrid optimization methods for boundary optimal control problems |
| 16:50-17:10 E | | | ***Norikazu Saito*** (Graduate School of Mathematical Sciences, The University of Tokyo, Japan), Finite volume approximation for fast diffusion equations | ***Dongjin Lee*** (Graduate School of Engineering, Nagoya University, Japan), Eigenvalue Computation for a Specific Need Arising from Electronic Structure Calculation | | |
| 17:30-19:30 | | *Reception @Astro-Math. 1F* | | | | |
| **EASIAM 2012: DAY 3 (June 27, 2012)** | | | | | | |
| | | *Keynote Talk @Auditorium, Astro-Math.* | | | | |
| | | *Session Chair: Ming-Chih Lai* | | | | |
| 9:30-10:30 | | ***Yalchin Efendiev*** (Department of Mathematics, Texas A&M University, USA), Generalized Multiscale Finite Element Methods | | | | |
| 10:30-10:50 | | *Coffee* | | | | |
| | | *Parallel Session 16: Applied Partial Differential Equations* | *Parallel Session 17: Numerical Analysis* | *Parallel Session 18: Auto-Tuning* | *Parallel Session 19: Specific Topics* | *Parallel Session 20: Operation Research and Optimization* |
| | | *@Room 101, Astro-Math.* | *@Room 102, Astro-Math.* | *@Room 202 Astro-Math.* | *@Room 204, Astro-Math.* | *@Room 201, Astro-Math.* |
| | | *Session Chair: Jyh-Hao Lee* | *Session Chair: Suh-Yuh Yang* | *Session Chair: Takahiro Katagiri* | *Session Chair: Yongwimon Lenbury* | *Session Chair: Roberd Saragih* |
| 10:50-11:10 A | | ***Ruo Li*** (School of Mathematical Sciences, Peking University, China), Globally Hyperbolic Regularization of Grad's Moment System | ***Takehiko Kinoshita*** (Research Institute for Mathematical Sciences, Kyoto University, Japan), Some remarks on the optimal $L^2$ error estimates for the finite element method with nonconvex polygonal domain | ***Takahiro Katagiri*** (Information Technoloy Center, The University of Tokyo, Japan), ppOpen-AT: An Auto-tuning Language for ppOpen-HPC --- Its New function and Impact to Application Software --- | ***Wikaria Gazali*** (BINUS University, Indonesia), Program Design Classification Simulation Sandals Dhiif's Product with Back Propagation and Fourier Descriptors Method | ***Xiaoming Yuan*** (Department of Mathematics, Hong Kong Baptist University, Hong Kong), Customized Proximal Point Algorithms and Applications to Image Processing |

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| 11:10-11:30<br>B | | ***Ming-Chien Chiang*** (Department of Applied Mathematics, National Chiao-Tung University, Taiwan), On the reconstruction of the reflection and refraction free-form surfaces arising from geometric optics design | ***Akitoshi Takayasu*** (Faculty of Science and Engineering, Waseda University, Japan), Computer-assisted existence proof of solutions to elliptic equations in divergence form | ***Takao Sakurai*** (Hitachi, Ltd.), OpenATLib: Automatic solver and preconditioner selection for sparse matrix libraries | ***Oranit Panprasitwech*** (Department of Mathematics, King Mongkut's University of Technology Thonburi, Thailand), A Combinatorial Interpretation for Generalized Continued Fractions | ***Emrah Akyar*** (Department of Mathematics, Anadolu University, Turkey), Brown-Robinson Method for Matrix Games with Fuzzy Payoffs |
| 11:30-11:50<br>C | *Conference Registration @Astro-Math. 1F* | ***Yu-Chen Shu*** (Department of Mathematics, National Cheng Kung University, Taiwan), Coupling Interface Method for Solving Poisson-Boltzmann Equation | ***Zhou Guanyu*** (Graduate School of Mathematical Science, The University of Tokyo, Japan), Analysis of the fictitious domain method with penalty for parabolic problem | ***Yaohung M. Tsai*** (Department of Mathematics, National Taiwan University, Taiwan), Optimizing the Block Size for QR Factorization on CPU-GPU Hybrid Systems | ***Yaowaluck Khongtham*** (Department of Mathematics, Faculty of Science, Mae jo University, Thailand), Common Solutions of Variational Inclusions Problems, Equilibrium Problems and Fixed Point Problems in Hilbert Spaces | ***Handan Akyar*** (Department of Mathematics, Anadolu University, Turkey), A new geometric approach for ranking generalized trapezoidal fuzzy numbers |
| 12:00-13:20 | | *Lunch* | | | | |
| | | | *Parallel Session 21*<br>*Numerical Analysis* | *Parallel Session 22*<br>*Auto-Tuning* | *Parallel Session 23:*<br>*Specific Topics* | |
| | | | *@Room 102, Astro-Math.* | *@Room 202 Astro-Math.* | *@Room 204, Astro-Math.* | |
| | | | *Session Chair: Chin-Tien Wu* | *Session Chair: Weichung Wang* | *Session Chair: Juan-Ming Yuan* | |
| 13:20-13:40<br>A | | | ***Chi-Tien Lin*** (Deaprtment of Financial and Computational Mathematics, Providence University, Taiwan), Numerical study for long-time solutions for some hyperbolic conservation laws with nonlinear term | ***Reiji Suda*** (Department of Computer Science, the University of Tokyo, Japan), 4DAC and One-Step Approximation: Mathematical Formulation and Algorithm for Automatic Tuning | ***Watcharapon Pimsert*** (Department of Mathematics, Faculty of Science, Kasetsart University, Thailand), Pexiderized forms of a logarithmic functional equation | |
| 13:40-14:00<br>B | | | ***Yun-Shih Wang*** (Department of Applied Mathematics, National Chung Hsing University, Taiwan), A two-parameter continuation algorithm for vortex pinning in rotating Bose-Einstein condensates | ***Teruo Tanaka*** (Department of Computer Science, Faculty of Infomatics, Kogakuin University, Japan), An Incremental Parameter Estimation Method Appling d-Spline for Software Automatic Tuning | ***Anurak Thanyacharoen*** (Department of Mathematics and Statistics, Faculty of Science and Technology, Thammasat University, Thailand), A general solution of a generalized additive-quartic functional equation | |
| 14:00-14:20<br>C | | | ***Cheng Liang Li*** (School of Mathematical Sciences, Guilin University of Electronic Technology, China), The New Cascadic Multigrid Method for Elliptic Interface Problems | ***Chenhan Yu*** (Department of Mathematics, National Taiwan University, Taiwan), Modeling and Optimizing Performance of Symmetric Positive Definite Multifrontal on Hybrid CPU-GPU Systems | ***Warisa Yomsatieankul*** (Department of Mathematics, Faculty of Science, King Mongkut's University of Technology Thonburi, Thailand), Third-order Reconstruction Using Meshfree Interpolating Moving Least Squares Method | |
| 14:20-14:30 | *Break + Transition to Closing* | | | | | |
| 14:30-15:00 | *Closing + Lottery (iPad x 2) @Auditorium, Astro-Math.* | | | | | |
| | *Host: I-Liang Chern* | | | | | |