A1. Dynamical Representations of Heterochrony and the Developmental Process
Brady John Alicea, Open Worm Foundation, Orthogonal Research and Education Lab

A2. Quantum Correlations For a Simple Kicked System with Mixed Phase Space
Or Alus, Rockefeller University; Shmuel Fishman, Technion - Israel Institute of Technology; Mark Srednicki, University of California Santa Barbara

A3. Characterizing Atrial Fibrillation Dynamics Using Multiplex Visibility Graphs
Konstantinos N. Aronis, Anastasiya Salova, Ariadna Venegas-Li, Andrea Santoro, Johns Hopkins University

Siegfried Bleher, Fairmont State University

A5. Model-Free Control of Chaos with Deep Reservoir Computing
Daniel M. Canaday, Aaron Griffith, Daniel Gauthier, Ohio State University

A6. Computation of Sensitivities of Statistics in Chaotic Systems
Nisha Chandramoorthy, Qiqi Wang, Massachusetts Institute of Technology

A7. Long-range Interactions of Kinks
Ivan C. Christov, Purdue University; Robert J. Decker, A. Demirkaya; University of Hartford; Vakhid A. Gani; National Research Nuclear University MEPhI (Moscow Engineering Physics Institute); P. G. Kevrekidis, University of Massachusetts, Amherst; R. V. Radomskiy, P. N. Lebedev Physical Institute of the Russian Academy of Sciences

A8. Mathematical Model of Gender Bias and Homophily in Professional Hierarchies
Sara M. Clifton, University of Illinois at Urbana-Champaign; Kaitlin Hill, University of Minnesota; Avinash Karamchandani, Northwestern University; Eric Autry, Duke University; Patrick McMahon, Grace Sun, University of Illinois at Urbana-Champaign

Ned J. Corron, US Army AMRDEC

A10. Nonequilibrium Statistical Mechanics of Sudden Stratospheric Warming
Justin M. Finkel, Dorian Abbot, Mary Silber, Jonathan Weare, University of Chicago

A11. Data-Driven Order Parameters For Coupled Oscillator Models
Oscar L. Goodloe, Joel Nishimura, Arizona State University

A12. Using Exact Coherent Structures to Tile the Infinite Spacetime Kuramoto-Sivashinsky Equation
Matthew N. Gudorf, Predrag Cvitanovic, Georgia Institute of Technology

A13. Enhancing the Dynamic Modeling of the Curing of Ethyl Linoleate: Reaction Pathways For Epoxidation
Rebecca E. Harmon, Lindsay H. Oakley, Linda J. Broadbelt, Northwestern University

A14. Scalable Learning of Time-varying Vector Autoregression By Low Rank Tensors
Kameron Decker Harris, Aleksandr Aravkin, Rajesh Rao, Bingni Wen Brunton, University of Washington

A15. The Effects of Collisions on Observational Signatures of Nonlinear Charged Particle Dynamics in the Magnetotail
Daniel Holland, Phillip Kovarik, Jonathan Sullivan-Wood, Illinois State University

A16. Interphase DNA As a Self-returning Random Walk
Kai Huang, Igal Szleifer Northwestern University

A17. The Unruly Effective Diffusion Coefficient of Phase-Locked Bursters
Avinash Jagdish Karamchandani, Hermann Riecke, Northwestern University

Tali Khain, University of Michigan; Konstantin Batygin, Michael E. Brown, California Institute of Technology
A19. Levitating Granular Cluster: Typical Behavior and Noise-induced Rare Events
Evgeniy Khain, *Oakland University*

A20. Dynamics of Multi-Agent Reinforcement Learning
Jimmy Kim, Daniel Shams, *Northwestern University; David Schwab, ITS CUNY*

Colin Klaus, *Mathematical Biosciences Institute; Giovanni Caruso, Italian National Research Council; Vsevolod Gurevich, Vanderbilt; Clint Makino, Boston University; Heidi Hamm, Emmanuel DiBenedetto, Vanderbilt*

A22. Optimizing Simulations of Shaken Granular Media
Aniruddh Krishnan, Nicholas Corkill, Jonathan Bougie, *Loyola University Chicago*

Alexander T. Kucher, L.V. Pletnev, G.M. Suslov, C. Zhang

Michael Lee, Earl Dowell, *Duke University*

A25. Comparing the Growth of Internet Access Worldwide
Jiachen Liu, Haley Yaple, *Carthage College*

A26. Puzzles and Piecewise Isometries - 1D, 2D, and 3D Possibilities
Lachlan D. Smith, Paul B. Umbanhowar, Julio M. Ottino, Richard M. Lueptow, *Northwestern University*

A27. A Pharmacokinetic Model of Lead-Calcium Interactions
Tucker Lundgren, Anca Radulescu, *State University of New York at New Paltz*

A28. Connected Tiling Structures Within a Fractal Sea
Thomas F. Lynn, *Northwestern University; Lachlan D. Smith, University of Sydney; Julio M. Ottino, Paul B. Umbanhowar, Richard M. Lueptow, Northwestern University*

A29. Modes of Information Flow
Blanca Daniella Masante Ayala, Ryan G. James, James P. Crutchfield, *University of California Davis; Bahti Zakirov, College of Staten Island*

A30. Hebbian Model of the Structural Plasticity in the Olfactory System
John Hongyu Meng, Hermann Riecke, *Northwestern University*

A31. Detecting Dynamically Generated Communities in Complex Networks
Alex Mercanti, Adilson E. Motter, *Northwestern University*

A32. Dimer Chain with Single Impurity
Abhik Mukherjee, Igor Barashenkov, *University of Cape Town, South Africa*

A33. Multifaceted Dynamics of Janus Oscillator Networks
Zachary G. Nicolaou, Deniz Eroglu, Adilson E. Motter, *Northwestern University*

A34. Motif Dynamics on Signed Directed Complex Networks
Youngjai Park(1,2), Young Jin Kim(1,3), Seung-Woo Son(1,2),
1Hanyang University, Korea; 2University of Calgary, Canada; 3Korea Institute of Science and Technology, Korea

A35. The High Forecasting Complexity of Noisy Periodic Orbits Limits the Ability to Distinguish Them From Chaos
Navendu S. Patil, Joseph P. Cusumano, *Pennsylvania State University*

A36. Asymptotic Sets in Networks of Coupled Quadratic Nodes
Anca Radulescu, Simone Evans, *SUNY New Paltz*

A37. Improved Newton Linearization for $L^1$-Norm-Type Minimization with Application to Viscoplastic Fluid Solvers
Johann Rudi, *Argonne National Laboratory; Georg Stadler, New York University; Omar Ghattas, University of Texas at Austin*

A38. Wavenumber Selection in Pattern Forming Systems
Saloni Saxena, J. Michael Kosterlitz, *Brown University*

A39. Examining Human Unipedal Quiet Stance By Characterizing Smoothness
Matthew R. Semak, Jeremiah Schwartz, Gary Heise, *University of Northern Colorado*
A40. Data-driven Model Selection For a Coarse-Grained Description of Coupled Oscillators
Jordan Snyder, UC Davis; Andrey Lokhov, Anatoly Zlotnik, Los Alamos National Laboratory

A41. Effects of Shear-rate Dependent Viscosity on the Flow of a Cement Slurry
Chengcheng Tao, Barbara Kutchko, Elis Rosenbaum, Mehrdad Massoudi, U.S. DOE National Energy Technology Laboratory

A42. Forecasting U.S. Elections with Compartmental Models of Infection
Alexandria Volkening, OSU Mathematical Biosciences Institute; Daniel F. Linder, Augusta University; Mason A. Porter, University of California Los Angeles; Grzegorz A. Rempala, Ohio State University

A43. Variational and Phase Response Analysis For Limit Cycles with Hard Boundaries, with Applications to Neuromechanical Control Problem
Yangyang Wang, Mathematical Biosciences Institute, Ohio State University; Peter Thomas, Hillel Chiel, Jeff Gill, Case Western Reserve University

A44. Frequency Entrainment of Coupled Oscillators with Dynamic Interaction
Seong-Gyu Yang (양성규), Sungkyunkwan University (성균관대학교); Hyunsuk Hong (홍현숙), Chonbuk National University (전북대학교); Beom Jun Kim (김범준), Sungkyunkwan University (성균관대학교)

A45. Decoys and Dilution: the Impact of Incompetent Hosts on Prevalence of Chagas Disease
Mondal Hasan Zahid, Christopher M. Kribs, University of Texas at Arlington

A46. Random Beats Design in Network Synchronization
Yuanzhao Zhang, Adilson E. Motter, Northwestern University

Also note: poster B28 has been moved to Friday’s poster session.

Blake Gigout, Jeffrey S. Olafsen, Baylor University
B9. Relation Between Sensitive Systems, Topological Entropy and Baire Set in MDS
Mauricio Díaz, Universidad Nacional Andrés Bello

B10. Geometrical Methods For Stochastic Dynamics
Jinqiao Duan, Illinois Institute of Technology

B11. Encoding of Multimodal Sensory Information in a Sensorimotor System
Rosangela Follmann, Christopher J. Goldsmith, Wolfgang Stein, Illinois State University

B12. Electrochemical Signaling and Oscillatory Growth in Bacillus Subtilis
Noah Ford, David Chopp, Arthur Prindle, Northwestern University

B13. Connecting Gene Expression to Cellular Movement: a New Transport Model For Cell Migration
Alexis Grau Ribes, Yannick De Decker, Laurence Rongy, Université libre de Bruxelles (ULB); Belgium

B14. Understanding and Designing Emergent Behavior Via Stability Analysis of Mean Field Games
Piyush Grover, Mitsubishi Electric Research Labs; Kaivalya Bakshi, Evangelos A. Theodorou, Georgia Tech

B15. Data-driven Spatiotemporal Modal Decomposition For Time Frequency Analysis
Seth Michael Hirsh, Bing Brunton, Nathan Kutz, University of Washington

B16. A Minimal Mathematical Model For Free Market Competition Through Advertising
Joseph D. Johnson, Daniel M. Abrams, Northwestern University

B17. Growing Network Model For Knowledge Space: Micro to Macro Views
Hyunuk Kim, Pohang University of Science and Technology, Korea; Daniel Kim, Natural Science Research Institute, Korea; Young-Ho Eom, University of Strathclyde, UK; Hawoong Jeong, Korea Advanced Institute of Science and Technology, Korea; Woo-Sung Jung Pohang University of Science and Technology, Korea; Hyejin Youn, Northwestern University

B18. Delay Differential Analysis of Sensory Processing Dysfunction in Schizophrenia
Robert Kim (1,2), Aaron L. Sampson (1, 2), Claudia Lainscsek (1, 2), Michael L. Thomas (2, 3), Karen Man (1), Xiaxin Lainscsek (4), The COGS Investigators, Neal R. Stormr (2), David L. Braff (2, 5), Terrence J. Sejnowski (1, 2), Gregory A. Light (2, 5); Affiliations: (1) Salk Institute for Biological Studies; (2) University of California San Diego; (3) Colorado State University; (4) Technische Universität Graz, Austria; (5) VISN-22 Mental Illness, Research, Education and Clinical Center (MIRECC), VA San Diego Healthcare System

B19. Sliding on Moving Strings: From Regular Motions to Nonlinear Resonances and Chaos
Steven R. Knudsen, Leonardo Golubovic, West Virginia University

B20. Noise-induced Frequency Increase in Synchronization of Human Rhythmic Activities
Wataru Kurebayashi, Masahiro Okano, Masahiro Shinya, Kazutoshi Kudo, Shiga University

Benjamin G. Letson, Jonathan Rubin, University of Pittsburgh

B22. Variable Cutting-and-Shuffling to Enhance Mixing
Lachlan Smith, Paul B. Umbanhowar, Julio M. Ottino, Richard M. Lueptow, Northwestern University

Sanjana Menon, Richard Sowers, Manuel Hernandez, University of Illinois at Urbana-Champaign

Kengo Nakai, Yoshitaka Saiki, University of Tokyo

B25. Quasi-Periodicity to Period-Doubling of Parallel-Input/Parallel-Output Buck-Boost DC-DC Converter
Ammar Nimer Natshih, Higher Colleges of Technology; Dubai Women's College

B26. Strain Rate Effects on Quasi-two-dimensional Advection-reaction-diffusion Experiments
Thomas D. Nevins, Douglas Kelley, University of Rochester
B27. Multistability in Chemical Networks: Interplay of Coupling Strength and Delay
Simbarashe Nkomo, Emory University

Blake Gigout, Jeffrey S. Olafsen, Baylor University
Note: poster B28 has been moved to Friday.

B29. Complex Contagion Leads to Complex Dynamics in Models Coupling Behavior and Disease
Matthew T. Osborne, Ohio State University; Xueying Wang, Washington State University; Joseph H. Tien, Ohio State University

B30. Stability of Multi-pulse Solutions to Nonlinear Wave Equations
Ross Hamilton Parker, Björn Sandstede, Brown University

B31. Empirical Determination of the Optimum Attack For Fragmentation of Modular Networks
Carolina A. Pereira, Sebastián Gonçalves, Federal University of Rio Grande do Sul (UFRGS); Bruno Requiao da Cunha, Federal Police

B32. Drainage Through Holes Drives Arctic Sea Ice Melt Ponds to the Critical Percolation Threshold
Predrag Popovic, Mary C. Silber, Dorian S. Abbot, University of Chicago

B33. Standard Map-like Models For Single and Multiple Walkers in an Annular Cavity
Aminur Rahman, Texas Tech University

B34. Active Suspension of Self Rotating Particles
Cody Reeves, Northwestern University; Igor Aronson, Penn State; Petia Vlahovska, Northwestern University

B35. Chaos Mediated Synchronous Neuronal Transitions
Epaminondas Rosa, Annabelle Shaffer, Zach Mobille, George Rutherford, Rosangela Follmann, Illinois State University

B36. Parametrically Excited Birhythmic Generalised Van Der Pol Model
Sandip Saha, Gautam Gangopadhyay, S N Bose National Centre for Basic Sciences, India.

B37. Koopman Operator and Its Approximations For Dynamical Systems with Symmetries
Anastasiya Salova, Jeffrey Emenheiser, Adam Rupe, James Crutchfield, Raissa D’Souza, University of California, Davis

B38. A Mechanistic Framework For Transcriptional Regulation Through Intranuclear Crowding Kinetics
Anne R. Shim, Rikkert J. Nap, Luay Almassalha, Hiroaki Matusda, Vadim Backman, Igal Szleifer, Northwestern University

B39. Bayesian Parameter Estimation in the Spatial Organization of Metabolism
Sasha Shirman, Svetlana P. Ikonomova, Taylor Nichols, Keith E.J. Tyo, Danielle Tullman-Eereck, Niall Mangan, Northwestern University

B40. The Lotka Model: One Century Later
Gessner Antonio Soto, University of Colorado

B41. Controlling a Belousov-Zhabotinsky Droplet Using a Light Intensity Gradient
Syed Jazli Syed Jamaluddin, West Virginia University; Kritsana Khaothong, Kasetsart University, Thailand; Mark Tinsley, Kenneth Showalter, West Virginia University

B42. New Amplitude Equations For Ocean Waves
Jim Thomas, Dalhousie University and Woods Hole Oceanographic Institution

B43. Measurement Induced Complexity in Quantum Dynamics
Ariadna E. Venegas-Li, Fabio Anza, James P. Crutchfield, University of California Davis

B44. The Effect of Diffusion on Mixing By Cutting and Shuffling
Mengying Wang, Northwestern University; Ivan C. Christov, Purdue University

B45. Enhancing the Synchronization of Coupled Rhythms Through Intrinsic Network Heterogeneity
Xize Xu, Hermann Riecke, Northwestern University

B46. Emotions Predict Presidential Voting Choices
Vicky Chuqiao Yang, Santa Fe Institute

B47. Pattern Formation in a Fully-3D Segregating Flow
Mengqì Yu, Paul B. Umbanhowar, Julio M. Ottino, Richard M. Lueptow, Northwestern University