

DETAILED PROGRAM

Sunday 8 July 2012

5:30–7:30 Welcome Reception

Monday 9 July 2012

7:30 Registration opens

8:30 Plenary Session

Official Welcome/Opening Ceremony

Chair: Iven Mareels

Room: GM15

Opening Session

Sub-nyquist sampling: From theory to hardware and applications

Yonina Eldar

10:00 Morning Tea – Level 1

10:30	SE-01	SE-02	SE-03	SE-04	SE-05
	Systems in Biology	Systems in Finance I	Invited Session: Physical Systems Theory	Large Scale Systems	Invited Session: Optimization Based Controller Design I
	Chair: Eric Rogers	Chair: Ion Matei	Convenor: Arjan van der Schaft	Chair: Michael Tippett	Convenor: Lars Gruene
	Co Chair: Adeline Decuyper	Co Chair: Enyu Zhuang	Co Convenor: Dimitri Jeltsema	Co Chair: Mohsen Zamani	Co Convenor: Hasnaa Zidani
	Room: 104	Room: G27	Room: 108	Room: GM17	Room: 106
10:30	Numerical model of epidemic spreading in a temporal network	A geometric subgradient descent algorithm for the economic load dispatch problem	Bounded stabilization of a class of stochastic port-Hamiltonian systems	On the stability of interconnections of linear uncertain systems	Economic MPC without terminal constraints
	Adeline Decuyper	Pierre Borckmans	Satoshi Satoh	Ze Zhang	Lars Gruene
10:55	Tuning of mathematical models describing synthetic cyclic feedback biocircuits: Combining exact algebraic parameter reconstruction and nonlinear parameter estimation	Identification of Lévy systems in financial mathematics	Tensor products of Dirac structures and interconnection of Dirac dynamical systems	Pinning synchronization in complex network with sampled information	Distributed cooperative nonlinear economic MPC
	Juan Carlos Martínez-García	Máté Mánfay	Hiroaki Yoshimura	Chi Huang	Jaehwa Lee
11:20	Rotated gimbal like approximation of the human head movement dynamics	Profit distribution of sequential trades and simultaneous trades in arbitrage networks	Casimir-based control beyond the dissipation obstacle	On the robustness of interconnected or networked uncertain multi-agent systems	Estimates on the prediction horizon length in MPC
	Bijoy Ghosh	Enyu Zhuang	Dimitri Jeltsema	Kwang-Ki Kim	Karl Worthmann
11:45	Minimum-energy pose filtering on the special euclidean group	An improved Lagrangian relaxation method for maximising the net present value of large resource-constrained projects	Force feedback of a manipulator system in the Port-Hamiltonian framework	Event-triggering of large-scale systems without zero behavior	Predictive path following without terminal constraints
	Mohammad Zamani	Hanyu Gu	Jacqueline Scherpen	Fabian Wirth	Timm Faulwasser
12:10	Adaptive iterative learning control for robotic-assisted upper limb stroke rehabilitation	Flow control in time-varying, random supply chain networks	Memory elements: A paradigm shift in Lagrangian modeling of electrical circuits	Distributed control of large-scale systems based on dissipativity with quadratic differential forms	Scalable control of low frequency dominant systems
	Eric Rogers	Ion Matei	Dimitri Jeltsema	Michael Tippett	Anders Rantzer
12:35			Port Hamiltonian modeling of Power Networks (<i>Regular Submission</i>)	On zeros of tall, fat and square blocked time-invariant systems	
			Fiaz Shaik	Mohsen Zamani	

13:00 Lunch – Level 1

14:00 Semi – Plenary Session

Semi – Plenary Session

Chair: Ying Tan

Chair: Emanuele Viterbo

Room: GM15

Room: G08

Control and numerics: Continuous versus discrete approaches

Coding techniques for networked distributed storage systems

Enrique Zuazua

Frederique Oggier

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15:00	Afternoon Tea – Level 1			
15:30	SE-06	SE-07	SE-08	SE-09
	Invited Session: Chemical Systems	Invited Session: Coding I	Invited Session: Semigroup Dynamic Systems & Control	Invited Session: Optimization Based Controller Design II
	Convenor: Shodhan Rao	Convenor: Joachim Rosenthal	Convenor: Victor Ayala	Convenor: Lars Gruene
	Co Convenor: William Lepine Room: 104	Co Convenor: Emmanuele Viterbo Room: 106	Co Convenor: Wolfgang Kliemann Room: 108	Co Convenor: Hasnaa Zidani Room: GM17
15:30	Lyapunov functions for the stability of a class of chemical reaction networks	On the error performance of the A_n lattices	Morse decompositions of semiflows associated with graphs	Set-valued Euler's method realized with interpolated distance functions and optimal control solvers
	Muhammad Ali Al-Radhawi	Robby McKilliam	Jose Ayala-Hoffmann	Robert Baier
15:55	Balanced chemical reaction networks governed by general kinetics	Plücker embedding of completely reducible cyclic orbit codes	Controllability on $SL(2, \mathbb{C})$	Reachability for state constrained stochastic control problems
	Shodhan Rao	Anna-Lena Trautmann	Victor Ayala	Athena Picarelli
16:20	Multistationarity in double phosphorylation networks with protein synthesis and degradation	Lattice theory in phase unwrapping and time recovery	Limit behaviour of control systems from shadowing semigroups and flows	Avoidance trajectories for driver assistance systems via solvers for optimal control problems
	Katharina Holstein	Vaughan Clarkson	Victor Ayala	Ilaria Xausa
16:45	Equilibrium and stability of Wilson and Cowan's time coarse graining model	A graph theoretical approach to network encoding complexity	Global bifurcations of control sets and random dynamics	Safety analysis under probabilistic target constraints
	William Pasillas-Lépine	Guangyue Han	Fritz Colonius	Olivier Bokanowski
17:10		On burst error correction and storage security of noisy data		Alternatives for optimization in systems and control: convex and non-convex approaches (<i>Regular Submission</i>)
		Joachim Rosenthal		Emile Simon
17:35	Sessions Finish			

Tuesday 10 July 2012

8:30	Registration opens			
9:00	Plenary Session			
	Chair: Margreta Kuijper			
	Room: GM15			
	Efficient and robust multicasting via network coding			
	Frank Kschischang			
10:00	Morning Tea – Level 1			
10:30	SE-10	SE-11	SE-12	SE-13
	Uwe Helmke Techfest I (starting at 10:40am)	Minicourse: Multidimensional system theory	Wireless Networked Systems I	Infinite Dimensional Systems I
	Convenor: Jochen Trumpf	Convenor: Joseph Ball	Chair: David Gao	Chair: Tatiana Filippova
	Co Convenor: Knut Huper Room: 104	Room: G27	Co Chair: John Baras Room: 108	Co Chair: Ewoud Vos Room: GM17
10:30	Welcome	Noncommutative multidimensional linear systems, analytic function theory and real algebraic geometry in the noncommutative setting, and overdetermined multidimensional linear systems: a minicourse	Optimal simplex distribution in homological sensor networks	Port-Hamiltonian approach to deployment
	Jochen Trumpf		Abubakr Muhammad	Ewoud Vos
10:55	Subspace entropy and controlled invariant subspaces		Global optimal solutions to nonconvex euclidean distance geometry problems	Cascaded flows operators with rough path inputs
	Fritz Colonius		Ning Ruan	Luis A. Duffaut Espinosa
11:20	On the zero properties of tall linear systems with single-rate and multirate outputs		Robust distributed routing in dynamical networks with cascading failures	Composition of canonical port-Hamiltonian systems on smooth and discrete manifolds
	Brian Anderson	Joseph A. Ball	Ketan Savla	Marko Seslija
				Invited Session: Coding II
				Convenor: Joachim Rosenthal
				Co Convenor: Emmanuele Viterbo
				Room: 106
				On state feedback in linear modular systems
				Srinivasan Krishnaswamy
				Minimum homogeneous weights of a class of cyclic codes over primary integer residue rings
				Marcus Greferath
				Iterated fast decodable space-time codes from crossed products
				Nadya Markin

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11:45	The separation principle, revisited		Stability of distributed power control algorithms for time-dependent wireless networks	Causal invertibility on hilbert resolution Spaces	MDS 2D convolutional codes
	Anders Lindquist		Eoin Devane	Michael Cantoni	Raquel Pinto
12:10	Parsimonious triggering: Lyapunov based triggering with fewer events		Throughput-delay trade-off in wireless multi-hop Networks via greedy hyperbolic embedding	Well-posedness and regularity of the problem of transmission of the wave equation	A unified framework for constructing fast-decodable codes for N relays
	Fabian Wirth		John Baras	Salah-Eddine Rebiai	Camilla Hollanti
12:35	Active noise control with sampled-data filtered-x adaptive algorithm		The bottleneck biconnected steiner network problem	The mathematics of impulse control	Practical decoders for barnes-wall lattice constellations
	Yutaka Yamamoto		Charl Ras	Tatiana Filippova	Harshan Jagadeesh
13:00	Lunch – Level 1				
14:30	Uwe Helmke Techfest II		Semi – Plenary Session		
	Convenor: Jochen Trumpf		Chair: Iven Mareels		
	Co Convenor: Knut Huper				
	Room: 104		Room: G08		
14:30	Lyapunov function based step size control for numerical ODE solvers		Synchronization in oscillator networks and smart grids		
	Lars Gruene				
15:00	Decoding of subspace codes, a problem of schubert calculus		Francesco Bullo		
	Joachim Rosenthal				
15:30	Afternoon Tea – Level 1				
16:00	SE-15	SE-16	SE-17	SE-18	SE-19
	Uwe Helmke Techfest III	Wireless Networked Systems II	Game Theory	Invited Session: Optimization Based Controller Design III	Linear Deterministic Control Theory
	Convenor: Jochen Trumpf	Chair: John Baras	Chair: Peter Caines	Convenor: Lars Gruene	Chair: Timo Reis
	Co Convenor: Knut Huper	Co Chair: Isabel Jurado	Co Chair: Minyi Huang	Co Convenor: Hasnaa Zidani	Co Chair: Fabian Wirth
	Room: 104	Room: 106	Room: 108	Room: GM17	Room: G27
16:00	Double quotient structures for invariant computations	Stochastic packetized model predictive control for networked control systems subjects to time-delays and dropouts	ϵ -Nash mean field theory for nonlinear stochastic dynamic games with major-minor agents	A global steering method for nonholonomic systems	The Descriptor Discrete-Time Riccati Equation: Numerical solution and applications
	Robert Mahony	Isabel Jurado Flores	Peter Caines	Ruixing Long	Cristian Oara
16:25	Optimisation geometry	The consensus problem under vanishing communications	Coalition formation in mean field stochastic systems	Stability, performance and robustness of sensitivity-based multi-step feedback NMPC	Linear-quadratic infinite time horizon optimal control for differential-algebraic equations – a new algebraic criterion
	Jonathan Manton	John Baras	Peter Caines	Vryan Gil Palma	Timo Reis
16:50	Optimization problems with matrix unknowns	State estimation over Packet-dropping Channels	LQG optimal control Arising in mean Field decision problems	Higher order variational time discretization of optimal control problems	On a discrete-time (H^∞) control problem with additional input non-minimum phase property
	J William Helton	Baoyue Rong	Minyi Huang	Cédric M. Campos	Kotaro Hashikura
17:15	Linear switching systems and random products of matrices	Sparsely-packetized predictive control by orthogonal matching pursuit	Sufficient conditions on the existence of saddle points on Markov games	Optimal control of tuberculosis in Angola	Extremal norms for positive linear inclusions
	Clyde Martin	Masaaki Nagahara	Jie Shen	Delfim Torres	Fabian Wirth
17:40	Canonical forms for pseudo-continuous multi-mode multi-dimensional systems with conservation Laws				On the reachability of discrete time linear systems with convex output constraints
	Erik Verriest				M. Devrim Kaba

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18:05	Detection of motion direction of targets using a turtle retinal patch model				Necessary optimality conditions for optimal control problems with infinite horizon
	Bijoy Ghosh				Fernando Pereira
18:30	Sessions Finish				
19:00	Uwe Helmke Techfest Dinner: Woodward Centre, University House at the Woodward				

Wednesday 11 July 2012

8:30	Registration opens					
9:00	Semi – Plenary Session		Semi – Plenary Session		Semi – Plenary Session	
	Chair: Dragan Netic		Chair: Yutaka Yamamoto		Chair: Lars Gruene	
	Room: GM15		Room: G08		Room: GM17	
	Information structures, stability, and optimality		Measurement and modelling in the internet		Energy and power-based control perspectives for nonlinear systems	
	Michael Rotkowitz		Darryl Veitch		Jacquelin Scherpen	
10:00	Morning Tea – Level 1					
10:30	SE-20	SE-21	SE-22	SE-23	SE-24	SE-25
	Invited Session: Optimization Based Controller Design IV	Invited Session: Inverse Problems and Metrics in Power Spectral Analysis	Systems Theory: The Behavioural Approach	Invited Session: Systems Described by PDEs	Invited Session: Networked Systems	Minicourse: Quantum Feedback Control
	Convenor: Lars Gruene	Convenor: Tryphon T Georgiou	Chair: Ingrid Blumthaler	Convenor: Marius Tucsnak	Convenor: Li Qiu	Convenor: Matthew James
	Co Convenor: Hasnaa Zidani	Co Convenor: Anders Lindquist	Co Chair: Paula Rocha	Co Convenor: Enrique Zuazua	Co Convenor: Ling Shi	
	Room: 104	Room: G27	Room: 108	Room: GM17	Room: 106	Room: G29
10:30	Zubov's method for interconnected systems – a dissipative formulation	Structured covariance estimation in high resolution spectral analysis	A new parametrization of observers	Optimal control for low reynolds swimmers	Communication topology design under limited bandwidth	Quantum technologies are new technologies that involve manipulating nature in the domain of quantum theory. This mini course will provide an introduction to feedback control of quantum systems.
	Fabian Wirth	Mattia Zorzi	Ingrid Blumthaler	Marius Tucsnak	Chao Yang	
10:55	A new version of necessary conditions for optimal control problems with differential algebraic equations	Geometric tools for the estimation of structured covariances	Behavioural distance and rational representations	Local exact controllability of the one-dimensional compressible Navier-Stokes equation	Networked multi-agent systems: From real laplacian to complex laplacian	
	Igor Kornienko	Tryphon Georgiou	Harry Trentelman	Olivier Glass	Zhiyun Lin	Matthew R. James
11:20	A numerical approach for solving optimal control of hybrid systems	Metric uncertainty for spectral estimation based on nevanlinna-pick interpolation	Rational representations and minimal state representations of behaviours	Control results for a simplified 1d fluid-particle system	Minimum capacity in stabilizing an LTI system with quantized control inputs via output feedback	
	Roberto Ferretti	Johan Karlsson	Sasanka Gottimukkala	Takéo Takahashi	Weizhou Su	
11:45	Hamilton-Jacobi-Bellman approach for the climbing problem for multi-stage launchers	Input-to-state covariances for spectral analysis: The biased estimate	A note on invariance in the behavioural approach	Nonsmooth optimal control problems and Applications	Collective torus control of multi-robot systems	
	Olivier Bokanowski	Per Enqvist	Paula Rocha	Kazufumi Ito	Zhiyong Chen	
12:10	A random coordinate descent algorithm for singly linear constrained smooth optimization (<i>Regular Submission</i>)		Positive realness and Lyapunov functions for switched behaviours	Proving existence of solutions of PDEs using feedback theory	Sensitivity optimal design of networks of identical linear systems (<i>Regular Submission</i>)	
	Ion Necoara		Paula Rocha	Mikael Kurula	Uwe Helmke	

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12:35	Effects of long range connections on Markov chain mixing times (<i>Regular Submission</i>)		Stabilization and control design by partial output feedback	Hamiltonian formulation of two dimensional shallow water flows with boundary energy flow (<i>Regular Submission</i>)		
	Balázs Gerencsér		Ingrid Blumthaler	Ramkrishna Pasumarthy		
13:00			Construction of algebraic-differential equations with given smooth-impulsive behaviour			
			Nicholas Karampetakis			
13:25	Sessions Finish – Free afternoon					

Thursday 12 July 2012

8:30	Registration opens					
9:00	Plenary Session					
	Chair: Arjan van der Schaft					
	Room: GM15					
	Infinite-dimensional linear port-Hamiltonian systems					
	Birgit Jacob					
10:00	Morning Tea – Level 1					
10:30	SE-26	SE-27	SE-28	SE-29	SE-30	SE-31
	Panel Session: Mathematical Network Problems in Mine Planning (10 minutes per presentation followed by discussion)	Nonlinear Control	Consensus in Networked Systems I	Invited Session: Information Flow in Open Dynamical systems	Invited Session: Optimisation-based controller design V	Geometry on Systems Theory
	Convenor: Doreen Thomas	Chair: Zhing-Ping Jiang	Chair: Rene Boel	Convenor: Jean-Charles Delvenne	Convenor: Lars Gruene	Chair: Erik Verriest
	Co Convenor: Brian Hall	Co Chair: Jan Willem Polderman	Co Chair: Elena Panteley	Co Convenor: Fritz Colonius	Co Convenor: Hasnaa Zidani	Co Chair: Martin Scheicher
	Room: G27	Room: 106	Room: 108	Room: GM17	Room: 104	Room: G29
10:30	Network theory has played an important role in some of these projects.	Dissipative feedback design for nonlinear systems with structured uncertainties	A leader/follower approach for distributed coordination of interacting components	Entropy for external stability of linear control systems	A generalized fractional calculus of variations with applications	Multidimensional observers via gabriel localisations
	Brian Hall	Nicolas Hudon	Rene Boel	Fritz Colonius	Tatiana Odziejewicz	Martin Scheicher
10:55	Optimization problems in open pit mine planning	Robust adaptive dynamic programming: An overview of recent results	Practical synchronization in complex networks of non-identical dynamical nodes	Introducing open ergodic theory	Hamilton-Jacobi-Bellman system on multi-domains	Computing the riemannian log map on the Stiefel manifold
	Mark Zuckerberg	Zhong-Ping Jiang	Elena Panteley	Jean-Charles Delvenne	Zhiping Rao	Quentin Rentmeesters
11:20	Network planning problems in mining export supply chains	Stability of reset systems	Model reference adaptive formation control based on H-infinity control criterion	Nonstochastic information flows in n-pairs networks	Nonlinear spectral radii of order-preserving maps and infinite horizon zero-sum two-player stochastic games	On a class of filtering problems with observation in a Riemannian manifold
	Natashia Boland	Jan Willem Polderman	Yoshihiko Miyasato	Girish Nair	Marianne Akian	Salem Said
11:45	Future problems in mine planning: The business context	Stabilization of GTF systems with unknown parameters	Consensus in switching networks with sectorial nonlinear couplings	Irreversibility in port-Hamiltonian systems	Reach set formulation of a model predictive control scheme	Persistence of behaviour
	Bryan Maybee	Sergey Dashkovskiy	Anton Proskurnikov	Arjan van der Schaft	Fernando Pereira	Erik Verriest

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12:10	Optimisation challenges in underground hard rock mining Hyam Rubinstein	Input-to-state stability for discrete-time Lur'e systems Elvijs Sarkans	Consensus algorithms with delayed nonlinear couplings Anton Proskurnikov	A risk-based approach to optimisation under limited information (<i>Regular Submission</i>) Tansu Alpcan		
12:35		Global exponential observers for two classes of nonlinear systems Costas Kravaris	Distributed labeling in autonomous agent populations Iman Shames	Minimum data complexity for stabilizability of uncertain control systems (<i>Regular Submission</i>) Koji Tsumura		
13:00	Lunch – Level 1					
14:00	Semi – Plenary Session			Semi – Plenary Session		
	Chair: Girish Nair Room: GM15			Chair: Doreen Thomas Room: G08		
	An approach to minimal bit rates and entropy for deterministic control Fritz Colonius			The local structure of Steiner minimum trees and Gilbert arborescences in normed spaces Konrad Swanepoel		
15:00	Afternoon Tea – Level 1					
15:30	SE-32 Mathematics in Mine Design Chair: Natasha Boland Co Chair: Doreen Thomas Room: G27	SE-33 Invited Session: Consensus in Networked Systems II Convenor: Kanat Camlibel Co Convenor: Harry Trentelman Room: 106	SE-34 Invited Session: Overdetermined Multidimensional Linear Systems Convenor: Victor Vinnikov Co Convenor: Joseph Ball Room: 108	SE-35 Stochastic Systems Chair: Eric Rogers Co Chair: Tomohisa Hayakawa Room: GM17	SE-36 System Representation Theory Chair: Gyorgy Michaletzky Co Chair: Clyde Martin Room: 104	
15:30	A geometric approach to shortest bounded curvature paths in surfaces of constant non-positive curvature Jose Ayala-Hoffmann	On the controllability of diffusively coupled multi-agent networks with switching topologies Kanat Camlibel	Pseudo-continuous multi-mode multi-dimensional systems ($M^{\wedge} 3D$) (<i>Regular Submission</i>) Erik Verriest	LQR problem of continuous-time LTI systems with random gains Wei Chen	Oscillatory splines and ODES Clyde Martin	
15:55	Network optimisation in underground mine access design Doreen Thomas	Synchronization analysis of multi-agent systems with switching topologies Nima Monshizadeh	Livsic overdetermined conservative systems on lie groups Eli Shamovich	Stabilization of switched linear stochastic systems under delayed discrete mode observations Tomohisa Hayakawa	Convex control theoretic smoothing splines Clyde Martin	
16:20	Optimal design of an underground mine decline with an associated vent raise Peter Grossman	Robust synchronization of linear multi-agent systems with additive uncertainty Harry Trentelman	State feedback for overdetermined 2D systems: pole placement and stability for bundle maps over an algebraic curve Liran Shaul	Exponential stability of repetitive processes with markovian switching Eric Rogers	On the "weak" proper solutions of tangential interpolation problems Gyorgy Michaletzky	
16:45	Scheduling unit processing time arc shutdown jobs to maximize network flow over time: complexity results Natasha Boland	Chemical reaction networks and consensus dynamics Arjan van der Schaft	Homogeneous interpolation problem for rational functions of two variables Victor Vinnikov			
17:10		Performance of a synchronized community detection algorithm (<i>Regular Submission</i>) Arnaud Browet	Geometric and algebraic conditions for j-controllable behaviours Grant Boquet			
17:35		Effects of social diversity in continuous opinion formation in complex networks (<i>Regular Submission</i>) Mahdi Jalili	Algebraic characterization of free directions of scalar n-D Autonomous Systems (<i>Regular Submission</i>) Debasattam Pal			
18:00	Sessions Finish					
19:00	MTNS Dinner: Cafe Italia					

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Friday 13 July 2012					
8:30	Registration opens				
9:00	Plenary Session				
	Chair: Rob Evans				
	Room: GM15				
	Control Theoretic Methods in Image Processing				
Allen Tannenbaum					
10:00	Morning Tea – Level 1				
10:30	SE-37	SE-38	SE-39	SE-40	SE-41
	Algorithms in Systems Theory	Nonlinear Control (Representations)	Sampling	Infinite Dimensional Systems II	Quantum Systems
	Chair: Jacquélien Scherpen	Chair: Thuan Quang Le	Chair: Ramon Delgado	Chair: Steven Gray	Chair: Matthew James
	Co Chair: Jean-Carles Delvenne	Co Chair: Nicolas Hudon	Co Chair: Gjerrit Meinsma	Co Chair: Arjan van der Schaft	Co Chair: Ian Petersen
	Room: 104	Room: 106	Room: 108	Room: GM17	Room: G27
10:30	Balancing as a moment matching problem	On the controllability and stabilizability of piecewise affine dynamical systems	Optimal relaxed causal sampler using sampled-data system theory	Coprime factorizations of MISO fractional time-delay systems	A numerical condition for the physical realizability of a quantum linear system
	Jacquélien Scherpen	Thuan Quang Le	Hanumant Singh Shekhawat	Le Ha Vy Nguyen	Shanon Vulgar
10:55	A model reduction strategy preserving disturbance decoupling properties	Identification and inversion of smooth hysteretic maps	An on-Line MUSIC algorithm with applications to sparse signal reconstruction	Linear-exponential-quadratic gaussian control for stochastic partial differential equations	Gaussian stochastic linearization for open quantum systems using quadratic approximation of Hamiltonians
	Mark Mutsaers	Andelko Katalenic	Ramon A. Delgado	Tyrone Duncan	Ian Petersen
11:20	An algorithm for the minimum rank of a loop directed tree	An improved max-plus eigenvector method for the approximation of nonlinear L_2 -gain bounds	L^2 and L^∞ optimal downsampling from system theoretic viewpoint	Trajectory concatenability for systems described by partial differential equations	Physical realizability of an open spin system
	Maguy Trefois	Huan Zhang	Hanumant Singh Shekhawat	Arjan J. van der Schaft	Luis A. Duffaut Espinosa
11:45	Cartesian products of Z-Matrix networks: Factorization and interval analysis	On an algorithm for checking whether or not a nonlinear discrete time system is difference flat	Sampled-data L-infinity smoothing: fixed-size ARE solution with free hold function	Robust stabilization for distributed parameter systems by stable controllers	
	Airlie Chapman	Kazuhiro Sato	Gjerrit Meinsma	Masashi Wakaiki	
12:10	On the complexity of optimizing PageRank	Geometric decomposition and potential-based representation of nonlinear systems	Yet another discrete-time H-infinity fixed-lag smoothing solution	Dirichlet boundary control of an unstable ODE plant with a diffusion process in the actuation path	
	Jean-Charles Delvenne	Nicolas Hudon	Gjerrit Meinsma	Hideki Sano	
12:35	Detection of human-initiated vehicle maneuvers via group-sparsity	Gramian based model reduction of nonlinear MIMO systems	Causal rate distortion function and relations to filtering theory	Smooth universal inputs for smooth systems: A formal power series approach	
	Peter Karasev	Samuel Melchior	Photios Stavrou	W. Steven Gray	
13:00	Lunch – Level 1				
14:00	Semi – Plenary Session			Semi – Plenary Session	
	Chair: Michael Cantoni			Chair: Brian Anderson	
	Room: GM15			Room: G08	
	Clustered model reduction of large-scale complex networks			Algebraic methods and symbolic computation in systems theory	
Jun-ichi Imura			Eva Zerz		
15:00	Afternoon Tea – Level 1				

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15:30	SE-42	SE-43	SE-44
	MTNS History	Mechanical Systems	Miscellaneous Results in Stability
	Convenor: William Helton	Chair: Rini Akmeliawati	Chair: Anders Rantzer
	Co Convenor: Margreta Kuijper	Co Chair: Jing Wang	Co Chair: Mohamed Mabrok
	Room: G08	Room: 106	Room: 104
15:30	<p>The MTNS started in 1973 at the University of Maryland.</p> <p>Then the Operator Theory of Networks and Systems assembled about 40 people to bring together several threads which were spun in disparate branches of science.</p> <p>At the history session we will recount the origins and some of the threads which have run over the years thru the MTNS. There will be talks or testimonials and reminisces by Joe Ball, John Baras, Bill Helton, Joachim Rosenthal, Arjan van der Schaft, Yutaka Yamamoto.</p>	System identification and characterization of parameterized state-space model of a small scale unmanned helicopter	Dwell-time conditions for robust stability of impulsive systems
15:55		Rini Akmeliawati	Andrii Mironchenko
16:20		Analysis and control of quadrotor via a Normal Form approach	Two-stage compensator designs without coprime factorizability
16:45		Jing Wang	Kazuyoshi Mori
17:10		Passivity based control of underactuated 2-D SpiderCrane Manipulator	Stabilization of conditional uncertain negative-imaginary systems using riccati equation approach
17:35		Ramkrishna Pasumarthy	Mohamed Mabrok
18:00		Semistability analysis of the chaplygin sleigh	Stabilization of linear systems with synchronization errors using a polytopic uncertainty problem formulation
		Sai Pushpak	Eric Rogers
17:35	Plenary Session: Closing		
	Room: GM15		
18:00	Sessions Finish		

