

# Past President Report Season 2021-2022 (AGM)

(Thomas Hillen)

## MSI Volume 2

Biochemical Problems, Mathematical Solutions

Editors: Mark Roussel and Moises Santillan Zeron

1. J. Pantoja-Hernandez, M. Santillan: Segmentation-clock synchronization in circular-lattice networks of embryonic presomitic-mesoderm cells.
2. D. Lee, A. Koul, N. Lubna, S.A. McKenna, S. Portet, Mathematical modelling of OAS2 activation by dsRNA and effects of dsRNA lengths
3. Justin Eilertsen, Marc R. Roussel, Santiago Schnell, Sebastian Walcher, On the quasi-steady-state approximation in an open Michaelis–Menten reaction mechanism.
4. Justin Le Sauteur-Robitaille, Zhe Si Yu, Morgan Craig, Impact of estrogen population pharmacokinetics on a QSP model of mammary stem cell differentiation into myoepithelial cells
5. Edwards and Wood, Branch Prioritization Motifs in Biochemical Networks with Sharp Activation

## MSI Volume 3

1. F. Lutscher, T. Hillen, Correlated random walks in heterogeneous landscapes: Derivation, homogenization, and invasion fronts
2. P.H. Muir, M.Adams, J. Finden, P. Phoncharon, Superconvergent Interpolants for Gaussian Collocation Solutions of Mixed First and SecondOrder BVODE Systems,  
  
SPECIAL ISSUE of Rio Sun: Mathematics of signal processing in complex networks and systems
3. Vu Dinh, Lam Si Tung Ho, Convergence of maximum likelihood supertree reconstruction
4. André M. McDonald, Michaël A. van Wyk, Guanrong Chen. The inverse Frobenius-Perron problem: A survey of solutions to the original problem formulation.
5. Jesús Gómez-Gardeñes, Ernesto Estrada, Network bipartitioning in the anti-communicability Euclidean space.

## MSI Volume 4

Special issue: The Modelling of SARS-CoV-2

Editors: Craig, Hillen, Tyson, Zhu

1. Sara J Hamis, Fiona R Macfarlane. A single-cell mathematical model of SARS-CoV-2 induced pyroptosis and the effects of anti-inflammatory intervention.
2. Rebecca C. Tyson 1\*Noah D. Marshall 2Bert O. Baumgaertner. Transient prophylaxis and multiple epidemic waves.
3. Maria M. Martignoni, P. Rahman, A. Hurford, Rotational worker vaccination provides indirect protection to vulnerable groups in regions with low COVID-19 prevalence
4. G. McGregor, Regional Physical Distancing
5. A. Spivak, et al. Optimization of Employee Working Schedule Amid COVID-19: A Simple Combinatorial Approach

## CMS:

- We installed the CAIMS/CMS joint institutional membership option. CAIMS/CMS book series is doing well.

## CAIMS blog:

- New CAIMS blog: [The war in Ukraine: a perspective of a Russian-Canadian mathematician](#)

## CAIMS 2024 annual meeting:

- I talked to Bahman Gharesifard <[bahman.gharesifard@queensu.ca](mailto:bahman.gharesifard@queensu.ca)> and Felicia Magpantay <[felicia.magpantay@queensu.ca](mailto:felicia.magpantay@queensu.ca)> and they agreed to host the CAIMS annual meeting 2024 at Queens University.

## CAIMS GAP connector:

- I recommend to discontinue it. Maintenance is too complicated, and its use is questionable.