

**Biomathematics and Statistics Working Group**  
**Centro de Matemática, Aplicações Fundamentais**  
**e Investigação Operacional (CMAF-CIO)**  
**Science Faculty, Lisbon University**

**Conference Proceedings**

Aguiar, M., Stollenwerk, N., and Kooi, W. B. (2008). Torus bifurcations, isolas and chaotic attractors in a simple dengue model with ADE and temporary cross immunity. Proceedings of 8th Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE , ISBN 978-84-612-1982-7, edited by Jesus V.A. et al., Murcia, pp. 23-35.

Stollenwerk, N., Aguiar, M., and Kooi, W. B. (2009). Computational aspects in the investigation of chaotic multi-strain dengue models. Proceedings of 9th Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE, ISBN 978-84-612-9727-6, edited by Jesus Vigo Aguiar et al., Gijón, pp. 995-1002.

Maíra Aguiar and Ezio Venturino. (2009). Symposium on Biomathematics. AIP Conference Proceedings, 1168, 1525-1526.

Aguiar, M., Kooi, W. B., and Stollenwerk, N. (2009). Multi-strain deterministic chaos in dengue epidemiology, a challenge for computational mathematics. AIP Conference Proceedings, 1168, 1555-1558.

Aguiar, M., Ballesteros, S., and Stollenwerk, N. (2010). The influence of seasonality on dengue epidemiology, modelling and data analysis. Proceedings of 10th Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE, ISBN 978-84-613-5510-5, edited by Jesus V.A. et al., Almeria, pp. 25-35.

Stollenwerk, N., Aguiar, M., Ballesteros, S., and Kooi, W. B. (2010). Certain uncertainties in population biology revisited. Proceedings of 10th Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE, ISBN 978-84-613-5510-5, edited by Jesus V.A. et al., Almeria, pp.840-48.

Aguiar, M., Ballesteros, S., and Stollenwerk, N. (2010). Two strain dengue model with temporary cross immunity and seasonality. AIP Conference Proceedings, 1168, 732-735.

Aguiar, M., Ballesteros, S., and Stollenwerk, N. (2010). Dynamic noise and its role in understanding epidemiological processes. AIP Conference Proceedings, 1168, 736-40.

Maíra Aguiar and Ezio Venturino. (2010). Symposium on Biomathematics. AIP Conference Proceedings, 1168, 709-11.

Aguiar, M., Ballesteros, S., Boto, J.P., Kooi, B.W., Mateus, L., Stollenwerk, N. (2011). Parameter estimation in epidemiology: from simple to complex dynamics. AIP Conference Proceedings, 1389, 1248-1251.

Aguiar, M., Stollenwerk, N. and Kooi, W. B. (2011). The stochastic multi-strain dengue model: analysis of the dynamics. AIP Conference Proceedings, 1389, 1224-1227.

Maíra Aguiar and Ezio Venturino. (2011). Symposium on Biomathematics. AIP Conference Proceedings, 1389, 1204-1207.

Kooi, B.W., Aguiar, M., Stollenwerk, N. (2012). Bifurcation analysis of a family of multi-strain epidemiology models. Proceedings of the 12th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 733-749 . ISBN: 978-84-615-5392-1, edited by Jesus V.A. et al., Múrcia, Spain.

Filipe Rocha, Aguiar, M., Max Souza, Stollenwerk, N. (2012). Mosquitoes donot matter dynamically in some vector borne disease epidemiologies. Proceedings of the 12th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 1047-1062 . ISBN: 978-84-615-5392-1, edited by Jesus V.A. et al., Múrcia, Spain.

Urszula Skwara, Peyman Ghaffari, Jos'e Martins, Aguiar, M., João Boto, Stollenwerk, N. (2012). Fractional calculus and super-diffusion in epidemiology. Proceedings of the 12th International Conference on Mathematical Methods in Science and Engineering, CMMSE}, pp 1118-1129 . ISBN: 978-84-615-5392-1, edited by Jesus V.A. et al., Múrcia, Spain.

Aguiar, M., Paul, R. Sakuntabhai, A., Stollenwerk, N., Uttayamakul, S. (2012). Descriptive and predictive models of dengue epidemiology: an overview. Proceedings of the 12th International Conference on Mathematical Methods in Science and Engineering - CMMSE 2012, pp 37-48 ISBN: 978-84-615-5392-1, edited by Jesus V.A. et al., Múrcia, Spain.

Maíra Aguiar, Nico Stollenwerk and Ezio Venturino. (2012). Preface of the "Symposium on biomathematics VI". AIP Conference Proceedings: Numerical Analysis and Applied Mathematics - ICNAAM 2012, 1479, 1303-1306.

Rocha, F., Aguiar, M., Souza, M. and Stollenwerk, N. (2012). Understanding the effect of vector dynamics in epidemic models using center manifold analysis. AIP Conference Proceedings: Numerical Analysis and Applied Mathematics - ICNAAM 2012, 1479, 1319-1322.

Urszula Skwara, José Martins, Peyman Ghaffari, Maíra Aguiar, João Boto and Nico Stollenwerk. (2012). Applications of Fractional Calculus to Epidemiological Models. AIP Conference Proceedings: Numerical Analysis and Applied Mathematics - ICNAAM 2012, 1479, 1339-1342.

Maíra Aguiar, Nico Stollenwerk and Bob W. Kooi. (2012). D escribing dengue Epidemics: Insights from Simple Mechanistic Models. AIP Conference Proceedings: Numerical Analysis and Applied Mathematics - ICNAAM 2012, 1479, 1307-1310.

Maíra Aguiar & Nico Stollenwerk. (2013). "Kâi Lêuat òk" is everything: 26, 27, 66. Proceedings of the 13th International Conference on Mathematical Methods in Science and Engineering - CMMSE 2013, pp 40-49 . ISBN: 978-84-616-2723-3, edited by Jesus V.A. et al., Almería, Spain.

Rocha, F., Skwara, U., Aguiar, M., Stollenwerk, N. (2013). Understanding dengue fever dynamics: study of seasonality in the models. Proceedings of the 13th International Conference on Mathematical Methods in Science and Engineering - CMMSE 2013, pp 1197-1209 . ISBN: 978-84-616-2723-3, edited by Jesus V.A. et al., Almería, Spain.

Urszula Skwara, Filipe Rocha, Maira Aguiar, Nico Stollenwerk. (2013). Superdiffusion in epidemiological models. Proceedings of the 13th International Conference on Mathematical Methods in Science and Engineering - CMMSE 2013, pp 1250-1261 . ISBN: 978-84-616-2723-3, edited by Jesus V.A. et al., Almería, Spain.

Nico Stollenwerk, Maira Aguiar, Filipe Rocha, Urszula Skwara. (2013). Testing particle filters for dengue fever studies via simple reinfection model. Proceedings of the 13th International Conference on Mathematical Methods in Science and Engineering - CMMSE 2013, pp 1262-1277 . ISBN: 978-84-616-2723-3, edited by Jesus V.A. et al., Almería, Spain.

Nico Stollenwerk, Davide Masoero, Urszula Skwara, Filipe Rocha, Peyman Ghaffari, Maira Aguiar. (2013). Semiclassical approximations of stochastic epidemiological processes towards parameter estimation. Proceedings of the 13th International Conference on Mathematical Methods in Science and Engineering - CMMSE 2013, pp 1278-1289 . ISBN: 978-84-616-2723-3, edited by Jesus V.A. et al., Almería, Spain.

Maira Aguiar, Filipe Rocha and Nico Stollenwerk. (2014). If "football fever could be a dose of dengue", the "Simon Hay fever" should have given a dose of samba. Proceedings of the 14th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 20-27 ISBN: 978-84-616-9216-3, edited by Jesus V.A. et al., Almería, Spain.

Juliana Bezerra, Filipe Rocha, Luis Mateus, Nico Stollenwerk, Paulo Pimenta, Eduardo Pessanha, Nagila Secundino, Jorge Arias, Doug Norris and Maira Aguiar. (2014). On how far mosquitos matter in describing dengue fever epidemiology. Proceedings of the 14th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 182-196 . ISBN: 978-84-616-9216-3, edited by Jesus V.A. et al., Almería, Spain.

Nico Stollenwerk, Filipe Rocha, Luis Mateus, Urszula Skwara, Peyman Ghaffari and Maira Aguiar. (2014). Chaos and noise in population biology: modelling dengue fever and data analysis, multi-strain dynamics, mosquitos and climate. Proceedings of the 14th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 1194-1207. ISBN: 978-84-616-9216-3, edited by Jesus V.A. et al., Almería, Spain.

Urszula Skwara, Filipe Rocha, Maira Aguiar and Nico Stollenwerk. (2014). On stochastic models of vector borne diseases. Proceedings of the 14th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 1187-1193. ISBN: 978-84-616-9216-3, edited by Jesus V.A. et al., Almería, Spain.

Filipe Rocha, Hyun Mo Yang, Luis Mateus, Maira Aguiar, Carlos Braumann and Nico Stollenwerk. (2014). Modelling a temperature dependent mosquito population. Proceedings of the 14th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 1076-1083. ISBN: 978-84-616-9216-3, edited by Jesus V.A. et al., Almería, Spain.

Luis Mateus, Davide Masoero, Filipe Rocha, Maira Aguiar, Urszula Skwara, Peyman Ghaffari, Jean-

Claude Zambrini and Nico Stollenwerk. (2014). Epidemiological models in semiclassical approximation: an analytically solvable model as test case. Proceedings of the 14th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 904-917. ISBN: 978-84-616-9216-3, edited by Jesus V.A. et al., Almería, Spain.

Luis Mateus, Maira Aguiar and Nico Stollenwerk. (2015). Bayesian estimation of vaccine efficacy. (2015). Proceedings of the 15th International Conference on Mathematical Methods in Science and Engineering, CMMSE}, pp 794-802. ISBN 978-84-617-2230-3 edited by Jesus V.A. et al., Almería, Spain.

Pablo Fuentes Sommer, Luis Mateus, Bob W. Kooi, Maíra Aguiar and Nico Stollenwerk. (2015). Hopf and torus bifurcations in stochastic systems in mathematical population biology. Proceedings of the 15th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 543-555. ISBN978-84-617-2230-3 edited by Jesus V.A. et al., Almería, Spain.

Nico Stollenwerk, Urszula Skwara, Lúdia Aceto, Éric Daudé, Ramona Marguta, Luis Mateus, Peyman Ghaffari, Andrea Parisi and Maíra Aguiar. (2015). Power law jumps and power law waiting times, fractional calculus and human mobility in epidemiological systems. Proceedings of the 15th International Conference on Mathematical Methods in Science and Engineering, CMMSE, pp 1060-1072. ISBN978-84-617-2230-3 edited by Jesus V.A. et al., Almería, Spain.

Maíra Aguiar, Roberto Cavoretto, Ezio Venturino and Nico Stollenwerk. (2015). Mathematical Models and Numerical Methods in Life Sciences. Accepted to be published at AIP Conference Proceedings: Numerical Analysis and Applied Mathematics - ICNAAM 2015.

Maíra Aguiar, Luis Mateus and Nico Stollenwerk. (2015). The currently best estimate for worldwide dengue vaccine efficacy. Accepted to be published at AIP Conference Proceedings: Numerical Analysis and Applied Mathematics - ICNAAM 2015.

Nico Stollenwerk, Thomas Gotz, Luis Mateus, Putra Wijaya, David Willems, Urszula Skwara, Ramona Marguta, Peyman Ghaffari, and Maíra Aguiar. (2015). Modelling Spatial Connectivity in Epidemiological Systems, Dengue Fever in Thailand on Networks from Radiation Models. Accepted to be published at AIP Conference Proceedings: Numerical Analysis and Applied Mathematics - ICNAAM 2015.

Nico Stollenwerk, Pablo Fuentes Sommer, Luis Mateus, Bob Kooi† and Maíra Aguiar (2015). Stochastic Hopf and torus bifurcations in population biology. Accepted to be published at AIP Conference Proceedings: Numerical Analysis and Applied Mathematics - ICNAAM 2015.