PROGRAMME

Tuesday 19 March

12:00 - 12:15 Welcome and workshop format description


13:30 - 14:20 Light Lunch

Topic: Non-Linear Analysis and its Applications (revisited)

14:30 - 15:20 Silvia Gazzola, University of Bath, “Fast Iterative Regularization Methods”

15:30 - 16.20 Jaime Ortega, CMM/UCHile, TBA

16:30 - 17:00 Coffee Break

Topic: Non-Linear Analysis and its Applications (revisited)

17:00 - 17:50 Axel Osses, CMM/UCHile, “A mathematical direct & inverse model for light-sheet microscopy”

18:00 - 18:30 Alejandro Maass – A prospective vision of the CMM

18:45 - 19:30 Cocktail
Wednesday 20 March

09:15 - 09:20 Welcome

   Topic: **Interdisciplinary Mathematics and Modelling**: PDEs, Multiscale modeling, Mathematical biology, Dynamical and stochastic systems, Wave propagation, Mathematical problems from natural sciences & engineering, Optimal design problems, Numerical experiences.


10:10 - 11:00 Daniel Hurtado, PUC, “Multiscale modeling of lung tissue biomechanics”

11:10 - 11:40 Coffee Break

   Topic: **Interdisciplinary Mathematics and Modelling** (revisited)

11:40 - 12:30 Joaquín Fontbona, CMM/UChile, “Synchronization of stochastic mean field networks of Hodgkin–Huxley neurons with noisy channels”

12:40 - 14:20 Lunch

   Topic: **Interdisciplinary Mathematics and Modelling** (revisited)


15:30 - 16:20 Johannes Zimmer, University of Bath, “From fluctuations in particle systems to their scaling limits and applications”

16:30 – 17:00 Coffee Break


17:00 - 17:50 Apala Majumdar, Bath, “Pattern Formation in Confined Nematic Liquid Crystals”

18:00 - 18:50 Duván Henao, PUC, “Debonding of a gel from a rigid substrate”

19:00 - 19:50 Patricio Cumsille, UBB, “Parameter estimation and mathematical modeling for the quantitative description of drug resistance in gastrointestinal stromal tumor metastasis to the liver”
Thursday 21 March

09:15 - 09:20 Welcome

   Topic: **Applied Mathematics and its Interactions:** Multiscale modelling with PDEs, Mathematical biology, Graph theory and its interaction with informatics, Inverse problems, Control theory.

09:20 - 10:00 Rodrigo Lecaros, UTFSM, “An inverse problem for Moore--Gibson--Thompson equation arising in high intensity ultrasound”

10:10 - 11:00 Iván Rapaport, CMM/UChile, “The Congested Clique Model”

11:10 - 11:40 Coffee Break

11:40 - 12:30 - Paul Milewski and Bath’s guest team - Presentation of the Department of Mathematical Sciences
- Workshop Conclusions

(Both activities will hold in the CMM’s Meeting room)