Curriculum vitae of Patrick De Leenheer

September 30th, 2017

- **Personal details**
  Born in Gent, Belgium on March 16, 1973.
  Citizenship: Belgium and USA.
  Married to Marijke Brutsaert, four children Ninke (age 17), Merel (15), Jenna (12), and Kate (10).

- **Current affiliation and coordinates**
  Department of Mathematics, Kidder Hall 296, Oregon State University, Corvallis, OR 97331.
  Email: deleenhp@math.oregonstate.edu, Phone: 541-737-4686, Fax: 541-737-0517.

- **Education**

  – Ghent University (Belgium), Electro-mechanical engineering, M.Sc., July 1995.
  – Ghent University (Belgium), Applied Sciences, Ph.D., December 2000.

- **Academic experience**

  – Oregon State University, Department of Mathematics, Professor, 2013-present.
  – Oregon State University, Department of Integrative Biology, Professor, 2013-present.
  – Research Fellow at VLAC (Vlaams Academisch Centrum), Belgium, September 2011-June 2012.
  – Université Catholique de Louvain, Louvain-la-Neuve, Belgium, Visiting Professor, fall 2011.
  – University of Florida, Department of Mathematics, Associate Professor, 2008-2013.
  – University of Florida, Department of Mathematics, Assistant Professor, 2004-2008.
  – DIMACS/Rutgers University, Post-Doctoral Research Fellow, 2003-2004.
  – Université Catholique de Louvain, Louvain-la-Neuve, Belgium, Visiting Professor, June 2003.
  – Arizona State University, Visiting Assistant Professor, 2001-2003.
  – Eindhoven University of Technology, The Netherlands, Postdoctoral Researcher, 2001.
  – Ghent University, Belgium, Research and Teaching Assistant and PhD Student in IAP (federally funded Inter-University Attraction Poles programme), 1995-2000.

- **Publications**

  1. Journal papers & book chapters
     Submitted:
     – D. Farber, P. De Leenheer, and C.C. Mundt, Modeling the Spread of a Plant Disease at Varying Spatial Scales.
     – H.A. Ohms, A. Mohapatra, D.A. Lytle, and P. De Leenheer, Different forms of competition alter frequency-dependent selection and the evolutionary stability of partial migration.
     – S. Peckham, E. Waymire, and P. De Leenheer, Critical Thresholds for Eventual Extinction in Randomly Disturbed Population Growth Models.

     Published, accepted:
     – M. Schuster, E. Foxall, D. Finch, H.L. Smith, and P. De Leenheer, Tragedy of the Commons in the Chemostat, accepted for publication in PLOS ONE (also available on arXiv:1705.07214 and biorXiv doi: http://dx.doi.org/10.1101/140400).

- L. McMullen, P. De Leenheer, J. Tonkin, and D.A. Lytle, High mortality and enhanced recovery: modeling the countervailing effects of disturbance on population dynamics, Ecology Letters 20, p. 1566-1575, 2017.

- A.V. Ratushny, P. De Leenheer, S.I. Bazhan, G.A. Bocharov, T.M. Khlebodarova, and V.A. Likhoshvai, On the potential for multiscale oscillatory behavior in HIV, Chapter 34 In P. Shapshak et al. (eds.), Global Virology II - HIV and NeuroAIDS, p. 898-924, Springer, 2017.

- P. De Leenheer, A. Mohapatra, H.A. Ohms, D.A. Lytle, and J.M. Cushing, The Puzzle of Partial Migration: Adaptive Dynamics and Evolutionary Game Theory perspectives, Journal of Theoretical Biology 412, p.172-185, 2017.

- N.W. Ruktanonchai, D.L. Smith, and P. De Leenheer, Parasite sources and sinks in a patched Ross-Macdonald malaria model with human and mosquito movement: implications for control, Mathematical Biosciences 279, p.90-101, 2016.

- S.S. Pilyugin, J. Medlock, and P. De Leenheer, P., The effectiveness of marine protected areas for predator and prey with varying mobility, Theoretical population Biology 110, p.63-77, 2016.

- J. Sun, J.D. Todd, J.C. Thrash, Y. Qian, M.C. Qian, B. Temperton, J. Guo, E.K. Fowler, J. Aldrich, C.D. Nicora, M.S. Lipton, R.D. Smith, P. De Leenheer, S.H. Payne, A.W.B. Johnston, C.L. Davie-Martin, K.H. Halsey, and S.J. Giovannoni, The abundant marine bacterium Pelagibacter simultaneously catabolizes dimethylsulfoniopropionate to the gases dimethyl sulfide and methanethiol, Nature Microbiology Article number: 16065 (2016), doi:10.1038/nmicrobiol.2016.65

- N.W., Ruktanonchai, P. De Leenheer, A.J.Tatem, V.A. Alegana, T.T. Caughlin, E. zu Erbach-Schoenberg, C. Lourenco, C.W. Ruktanonchai, and D.L. Smith, Identifying Malaria Transmission Foci for Elimination Using Human Mobility Data, PLOS Computational Biology (2016), http://dx.doi.org/10.1371/journal.pcbi.1004846

- H. Youn, P. De Leenheer, and V. Tremblay, Output diffusion of the monopolist over time and space, Journal of Optimization Theory and Applications 169, p. 290-298, 2016.

- A. Mohapatra, H.A. Ohms, D.A. Lytle, and P. De Leenheer, Population models with partial migration, Journal of Difference Equations and Applications, 2, p. 316-329, 2016.

- R. A. Ray, J.D. Alexander, P. De Leenheer, and J.L. Bartholomew, Modeling the Effects of Climate Change on Disease Severity: A Case Study of *Ceratonova* (*syn Ceratomyxa*) *shasta* in the Klamath River, In B. Okamura et al. (eds.), Myxozoan Evolution, Ecology and Development, 363-378, 2015.

- H. Pourbashash, S. S. Pilyugin, C. McCluskey, and P. De Leenheer, Discrete and Continuous Dynamical Systems-B 19, 3341-3378, 2014.

- J. Langebrake, G.E. Dilanji, S.J. Hagen, P. De Leenheer, Traveling waves in response to a diffusing quorum sensing signal in spatially-extended bacterial colonies, Journal of Theoretical Biology 363, 5361, 2014.

- P. De Leenheer, Optimal Placement of Marine Proteced Areas: A Trade-Off Between Fisheries' Goals and Conservation Efforts, IEEE Transactions on Automatic Control 59 (6), 1583-1587, 2014. (a longer version with detailed proofs entitled Optimal Placement of Marine Proteced Areas was published as arXiv:1307.1581)

- P. De Leenheer, J. Gopalakrishnan, and E. Zuhr, Nonnegativity of exact and numerical solutions of some chemotactic models, Computers and Mathematics with Applications, Vol. 66, pp. 356-375, 2013.

- V. Traag, and P. Van Dooren, and P. De Leenheer, Dynamical models explaining social balance and the evolution of cooperation, PLOS ONE 8 (4), April 2013.

- P. De Leenheer, J. Gopalakrishnan, and E. Zuhr, Instability in a generalized Keller-Segel model, Journal of Biological Dynamics 6 (2), 974-991, 2012.

- G. E. Dilanji, J.B. Langebrake, P. De Leenheer, and S.J. Hagen, Quorum activation at a distance: spatiotemporal patterns of gene regulation from diffusion of an autoinducer signal, Journal of the American Chemical Society 134(12), 5618-5626, 2012.

- J. Langebrake, L. Riotte-Lambert, C.W. Osenberg, and P. De Leenheer, Differential movement and movement bias models for Marine Protected Areas, Journal of Mathematical Biology 64, 667-696, 2012.

- S.M. Ciupe, P. De Leenheer, and T.B. Kepler, Paradoxical suppression of broadly neutralizing antibodies in the presence of strain specific antibodies during HIV infection, Journal of Theoretical Biology 77 (1), 55-66, 2011.
- D. Angeli, P. De Leenheer and E.D. Sontag, Persistence results for chemical reaction networks with time-dependent kinetics and no global conservation laws, SIAM Journal of Applied Mathematics 71 (1), 128-146, 2011.
- P. De Leenheer, J. Dockery, T. Gedeon, and S.S. Pilyugin, The chemostat with lateral gene transfer, Journal of Biological Dynamics 4 (6), 607-620, 2010.
- D. Angeli, P. De Leenheer and E.D. Sontag, Graph-theoretic characterizations of monotonicity of biochemical networks in reaction coordinates, Journal of Mathematical Biology 61 (4), 581-616, 2010.
- P. De Leenheer, J. Dockery, T. Gedeon, and S.S. Pilyugin, Senescence and antibiotic resistance in an age-structured population model, Journal of Mathematical Biology 61 (4), 475-499, 2010.
- L. Wang, P. De Leenheer, and E.D. Sontag, Conditions for Global Stability of Monotone Tridiagonal Systems with Negative Feedback, Systems and Control Letters 59 (2), 130-138, 2010.
- P. De Leenheer and N.C. Cogan, Failure of antibiotic treatment in microbial populations, Journal of Mathematical Biology 59 (4), 563-579, 2009 (also arXiv:0807.1943).
- P. De Leenheer, Within-host virus models with periodic antiretroviral therapy, Bulletin of Mathematical Biology 71 (1), 189-210, 2009 (also arXiv:0801.4384v1).
- D. Angeli, P. De Leenheer and E.D. Sontag, Chemical networks with inflows and outflows: A positive linear differential inclusions approach, Biotechnology Progress 25 (3), 632-642, 2009.
- A. Ackleh and P. De Leenheer, Discrete three-stage population model: persistence and global stability results, Journal of Biological Dynamics, 2 (4), 415-427. 2008.
- P. De Leenheer and S.S. Pilyugin, Multi-strain virus dynamics with mutations: a global analysis, Mathematical Medicine and Biology 25 (4), pp 285-322, 2008 (also arXiv:0707.4501).
- P. De Leenheer and S.S. Pilyugin, Immune response to a malaria infection: Properties of a mathematical model (also arXiv:0707.4497), Journal of Biological Dynamics, 2 (2), pp 102-120, 2008.
- W.S. Keeran, P. De Leenheer and S.S. Pilyugin, Feedback-mediated coexistence and oscillations in the chemostat, Discrete and Continuous Dynamical Systems-B, 9 (2), pp 321-351, 2008.
- D. Angeli, P. De Leenheer and E.D. Sontag, A Petri net approach to the study of persistence in chemical reaction networks, Mathematical Biosciences, 210 (2), pp 598-618, 2007 (also arXiv:q-bio.MN/0608019 v2).
- D. Angeli, P. De Leenheer and E.D. Sontag, A Petri net approach to persistence analysis in chemical reaction networks, Lecture Notes in Control and Information Sciences, 357, pp 181-316, 2007.
- P. De Leenheer, D. Angeli and E.D. Sontag, Monotone chemical reaction networks, Journal of Mathematical Chemistry, 41 (3), 295-314, 2007
- W.S. Keeran, P. De Leenheer and S.S. Pilyugin, Circular and elliptic orbits in a feedback-mediated chemostat, Discrete and Continuous Dynamical Systems-B, 7, pp 779-792, 2007.
- F. Mazenc, M. Malisoff and P. De Leenheer, On the stability of periodic solutions in the perturbed chemostat, Mathematical Biosciences and Engineering, 4, pp 319-338, 2007.
- P. De Leenheer, and S.S. Pilyugin, Feedback-mediated oscillatory coexistence in the chemostat, Lecture Notes in Control and Information Sciences, 341, pp 97-104, 2006.
- P. De Leenheer, D. Angeli and E.D. Sontag, Crowding effects promote coexistence in the chemostat, Journal of Mathematical Analysis and Applications 319 (1), pp 48-60, 2006.
- P. De Leenheer, S.A. Levin, E.D. Sontag and C.A. Klausmeier, Global stability in a chemostat with multiple nutrients, Journal of Mathematical Biology 52 (4), pp 419-438, 2006.
- M. Malisoff and P. De Leenheer, A Small-Gain Theorem for Monotone Systems with Multi-Valued Input-State Characteristics, IEEE Transactions on Automatic Control 51 (2), pp 287-292, 2006.
- P. De Leenheer, D. Angeli and E.D. Sontag, On predator-prey systems and small-gain theorems, Mathematical Biosciences and Engineering, 2, pp 25-42, 2005.
- D. Angeli, P. De Leenheer and E.D. Sontag, A small-gain theorem for almost global convergence of monotone systems, Systems and Control Letters, 52 (5), pp 407-414, 2004.

- P. De Leenheer, B. Li, H.L. Smith, Competition in the chemostat: some remarks, Canadian Applied Mathematics Quarterly, 11 (3), pp 229-248, 2003.
- P. De Leenheer, D. Angeli D and E.D. Sontag, Small-gain theorems for predator-prey systems, Lecture Notes in Control and Information Sciences, 294, pp 191-198, 2003.
- P. De Leenheer, D. Angeli D and E.D. Sontag, A feedback perspective for chemostat models with crowding effects, Lecture Notes in Control and Information Sciences, 294, pp 167-174, 2003.
- P. De Leenheer and H.L. Smith, Virus dynamics: a global analysis, SIAM Journal on Applied Mathematics, 63 (4), pp 1313-1327, 2003.
- P. De Leenheer and H.L. Smith, Feedback control for chemostat models, Journal of Mathematical Biology, 46 (1), pp 48-70, 2003.
- P. De Leenheer and D. Aeyels, Stabilization of positive systems with first integrals, Automatica, 38 (9), pp 1583-1589, 2002.
- D. Aeyels and P. De Leenheer, Extension of the Perron-Frobenius Theorem to homogeneous systems, SIAM Journal on Control and Optimization, 41 (2), pp 563-582, 2002.
- P. De Leenheer and D. Aeyels, Stabilization of positive linear systems, Systems and Control Letters, 44 (4), pp 259-271, 2001.
- P. De Leenheer and D. Aeyels, Stability properties of equilibria of classes of cooperative systems, IEEE Transactions on Automatic Control, 46 (12), pp 1996-2001, 2001.

2. Technical Report (not reviewed)

(a) P. De Leenheer, E. D. Sontag, A note on the monotonicity of matrix Riccati equations, DIMACS Technical Report 2004-36.

3. PhD thesis, Stability, control and stabilization of positive systems, Ghent University, December 2000.

4. Conference proceedings papers (with review process)

(a) D. Dochain, P. De Leenheer, and A. Rapaport, About transgressive over-yielding in the chemostat, proceedings of Mathmod 2012, Vienna University of Technology, February 15-17, 2012.

(b) D. Angeli, P. De Leenheer, and E.D. Sontag, On Persistence of Chemical Reaction Networks with Time-Dependent Kinetics and No Global Conservation Laws, cdrom proceedings of the 48th IEEE Conference on Decision and Control, Shanghai, China, December 2009. (Invited Paper)

(c) L. Wang, P. De Leenheer and E.D. Sontag, Global stability for monotone tridiagonal systems with negative feedback, cdrom proceedings of the 47th IEEE Conference on Decision and Control, Cancun, Mexico, December 2008.

(d) D. Angeli, P. De Leenheer, and E. Sontag, Petri net tools for the analysis of persistence in chemical networks, cdrm proceedings of NOLCOS 2007 (7th IFAC Symposium on NonLinear Control Systems, 22-24 August 2007, Pretoria, South Africa).

(e) F. Mazenc, P. De Leenheer, and M. Malisoff, Stabilizing a Periodic Solution in the Chemostat: A Case Study in Tracking, cdrom proceedings of the 45th IEEE Conference on Decision and Control, San Diego, December 2006.

(f) D. Angeli, P. De Leenheer, and E. D. Sontag, On the structural monotonicity of chemical reaction networks, cdrom proceedings of the 45th IEEE Conference on Decision and Control, San Diego, December 2006. (Invited paper)

(g) M. Malisoff, and P. De Leenheer, Remarks on Monotone Control Systems with Multi-Valued Input-State Characteristics, cdrom Proceedings of the Joint 44th IEEE Conference on Decision and Control and European Control Conference (CDC-ECC'05), Seville, Spain, December 2005.

(h) P. De Leenheer, and D. Angeli, Monotonicity and convergence in chemical reaction networks, cdrom Proceedings of the Joint 44th IEEE Conference on Decision and Control and European Control Conference (CDC-ECC'05), Seville, Spain, December 2005.

(i) D. Angeli, P. De Leenheer and E.D. Sontag, Monotonicity and convergence in chemical reaction networks, cdrom proceedings of 43rd IEEE Conference on Decision and Control, Bahamas, 2004.

(j) P. De Leenheer, D. Angeli and E.D. Sontag, A tutorial on monotone systems -with an application to chemical reaction networks, paper 435, cdrom proceedings of MTNS2004 (16th international symposium on mathematical theory of networks and systems), July $5-9$, 2004, Leuven, Belgium. (Invited paper)

(k) P. De Leenheer and H.L. Smith, Global analysis of HIV models, Proceedings of the European Control Conference (ECC), Cambridge, UK, 2003. (Invited paper)

(l) P. De Leenheer and D. Aeyels, Extension of the Perron-Frobenius Theorem: From linear to homogeneous, cdrom proceedings of the 41st IEEE Conference on Decision and Control, Las Vegas, Nevada, 2002. (Invited paper)

(m) P. De Leenheer and H. Smith, Feedback control for a chemostat with two organisms, cdrom proceedings of the Symposium on Mathematical Theory of Networks and Systems (MTNS), University of Notre Dame 2002. (Invited paper)

(n) P. De Leenheer, H. Nijmeijer and B. de Jager, Stabilization with hybrid control laws, cdrom proceedings of the IFAC World Congress, Barcelona 2002.

(o) P. De Leenheer and D. Aeyels, Stabilization results for positive systems with first integrals, cdrom proceedings of the IFAC Nonlinear Control Systems Design Symposium (NOLCOS), Saint Petersburg, Russia, July 4-7, 2001.

(p) P. De Leenheer and D. Aeyels, Accessibility properties of controlled Lotka-Volterra systems, Proceedings of the 39th IEEE Conference on Decision and Control, Sydney, Australia, 2000, pp. 3977-3981.

(q) P. De Leenheer and D. Aeyels, Stability results for some classes of cooperative systems, Proceedings of the 39th IEEE Conference on Decision and Control, Sydney, Australia, 2000, pp. 2965-2970.

(r) J. Peuteman, D. Aeyels and P. De Leenheer, Averaging results for homogeneous differential equations that are not fast time-varying, Proceedings of the 38th IEEE Conference on Decision and Control, Phoenix, Arizona, 1999, pp. 3358-3363.

(s) P. De Leenheer and D. Aeyels, A note on uniform boundedness of a class of positive systems, Proceedings of the 38th IEEE Conference on Decision and Control, Phoenix, Arizona, 1999, pp. 2575-2579.

(t) D. Aeyels and P. De Leenheer, Stability for homogeneous cooperative systems, Proceedings of the 38th IEEE Conference on Decision and Control, Phoenix, Arizona, 1999, pp. 5241-5242.

(u) P. De Leenheer and D. Nesic, A note on stabilizing and time-optimal controllers for discrete-time linear systems with positive controls, Preprints, IFAC Nonlinear Control Systems Design Symposium (NOLCOS), Enschede, The Netherlands, July 1-3, 1998, pp. 685-690.

- **Grants**

  - **Research grants**

    1. NSF grant in Mathematical Biology, 'Modeling the Interplay of Ecology and Effectiveness of Marine Protected Areas', DMS-1411853, 2014-2017, $ 285k. (PI, co-PI: S.S. Pilyugin ,University of Florida)

    2. Research grant 'Mathematical Models for Quorum Sensing' and residence at the Belgian Academy of Sciences provided by the VLAC (the Flemish Academic Centre for Science and the Arts), September 2011- June 2012, €45k. (PI, co-PI: Wim Michiels, KUL)

    3. Faculty Enhancement Opportunity (FEO), University of Florida, 2011, $ 18k. (PI)

    4. Preliminary Studies Grant from the College of Liberal Arts and Sciences at UF, 2010-2011, $ 15k. (PI)

    5. NSF grant in Mathematical Biology, 'Models in mathematical biology: a feedback perspective II', DMS-0614651, 2006-2010, $ 100k. (PI)

    6. NSF grant in Applied Mathematics 'Models in mathematical biology: a feedback perspective', DMS-0500861, 2005-2006 (transfer from DMS-0342153, 2003-2006), $ 64k. (PI)

  - **Conference grants**

    1. NSF grant for the University of Florida Conference on Computational and Systems Biology, 2011, $20k. (co-PI, PI: Sergei S. Pilyugin, University of Florida, co-PI: Jed Keesling, University of Florida)

    2. NSF grant for International Conference: Mathematical tools for multi-scale biological processes, DMS-0803127, 2008, $ 16k. (co-PI, PI: Tomas Gedeon, Montana State University)

- **Awards**

  1. Research Fellowship at VLAC (the Flemish Academic Centre for Science and the Arts), 2011-2012.
  2. Postdoctoral Research Fellowship at DIMACS and at Rutgers University, 2003-2004.

- **Editorial Boards**

  Associate Editor of Mathematical Biosciences and Engineering, since 2011.
  Associate Editor of the Journal of Applied Mathematics, 2006-2013.

- **Invited talks, colloquia, seminars (since fall 2001)**

  - July 25, 2017, The puzzle of partial migration, International Linear Algebra Society 2017, Iowa State University., Ames, IA. (Invited)
  - May 8, 2017, Tragedy of the Commons in the Chemostat, Applied & Computational Mathematics Seminar, Portland State University. (Invited)
  - May 5, 2017, The Tragedy of the Commons in the Chemostat, part II, Mathematical Biology Seminar, OSU.
  - May 1, 2017, The Tragedy of the Commons in the Chemostat, Analysis Seminar, OSU.
  - April 26, 2017, Further results on partial migration, part II, Mathematical Biology Seminar, OSU.
  - April 12, 2017, Further results on partial migration, Mathematical Biology Seminar, OSU.
  - March 31, 2017, The evolutionary puzzle of partial migration , Mathematical Biology Seminar, Arizona State University. (Invited)
  - July 5, 2016, The puzzle of partial migration: an adaptive dynamics approach, 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL. (Invited)
  - July 4, 2016, A patched malaria model: implications for control, 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL. (Invited)
  - April 20, 2016, Partial Migration, Mathematical Biology Seminar, OSU.
  - April 6, 2016, Dynamics and control of a patched model for the spread of malaria, Research Seminar, Department of Physics, OSU.
  - March 10, 2016, The basic reproduction number: motivation, definition and properties, Mathematical Biology Seminar, OSU.
  - January 26, 2016, A patched Ross-Macdonald malaria model with human and mosquito movement: implications for control, MBI Workshop on Dynamics in Networks with Special Properties, 1/25/16-1/29/16, MBI, Ohio State University.
  - January 11, 2016, A patched Ross-Macdonald malaria model with movement by hosts and vectors: implications for control, Mini-course lecturer at the Conference on Mathematical Modelling and Control of Communicable Diseases, 1/11/16-1/14/16, FGV, Rio de Janeiro, Brazil.
  - October 15, 2015, Further results on a patched Ross-Macdonald malaria model, Mathematical Biology Seminar, OSU
  - October 5, 2015, Review and extension of the Ramsey-Cass-Koopmans model, Applied and Computational Mathematics Seminar, Portland State University.
  - April 23, 2015, Marine Protected Areas: A mathematical modeling perspective, HMSC Seminar, Newport, OR.
  - February 2, 2015, Marine Protected Areas: A Modeling Perspective, Integrative Biology Seminar, Oregon State University.
  - January 26, 2015, Multi-patch malaria transmission models: analysis and control, Applied and Computational Mathematics Seminar, Portland State University. (Invited)
  - October 2, 2014, Finding sources and sinks in a multi-patch malaria model, Mathematical Biology Seminar, Oregon State University.
  - September 12, 2014, On finding hotspots and sinks in a multi-patch malaria model, CGRB Fall Conference, Oregon State University.

- August 7, 2014, How Fish Ecology Affects the Effectiveness of Marine Protected Areas, 2014 SIAM Conference on the Life Sciences, Charlotte, NC. (Invited)

- June 24, 2014, Dynamical models explaining social balance, Chemical Reaction Networks Theory Workshop, Portsmouth, UK. (Invited)

- May 30, 2014, Impact of ecology on MPA effectiveness, NCTS International Conference on Nonlinear Dynamics with Applications to Biology, National TsingHua University, Taiwan. (Invited)

- April 12, 2014, From fisheries to modeling the dead, NUMS 2014 (keynote speaker).

- April 5, 2014, Dynamics of the Dead, Cascade 2014, Oregon State University.

- February 27, 2014, Properties of a discrete-time larval dispersal model, Mathematical Biology Seminar, Oregon State University.

- February 25, 2014, Mathematical modeling for within-host virus dynamics, Biomedical Sciences Seminar, Oregon State University.

- February 3, 2014, The limit set trichotomy for monotone, sublinear maps on positive cones, Analysis Seminar, Oregon State University.

- December 5, 2013, Introduction to Marine Protected Areas, Heppell Lab meeting, Oregon State University.

- November 22, 2013, Further results on Marine Protected Areas, Applied Mathematics and Computation Seminar, Oregon State University.

- October 31, 2013, Modeling to explain the effects of Marine Protected Areas, Part II, Mathematical Biology Seminar, Oregon State University.

- October 24, 2013, Modeling to explain the effects of Marine Protected Areas, Part I, Mathematical Biology Seminar, Oregon State University.

- December 14, 2012, Optimal placement of Marine Protected Areas, Conference Everything disperses to Miami (The role of movement and dispersal in spatial ecology, epidemiology and environmental science), The University of Miami, Coral Gables, FL. (Invited)

- December 3, 2012, Dynamical Models Explaining Social Balance, Colloque en l'Honneur de Gauthier Sallet, Université Gaston Berger, Saint Louis, Senegal. (Invited)

- November 27, 2012, On the vulnerability of foodwebs, The University Math Society of the University of Florida. (Invited)

- October 16, 2012, Optimal placement of Marine Protected Areas, Biomathematics Seminar, University of Florida.

- October 5, 2012, Mathematical models and experiments of Quorum Sensing, Center for Genome Research and Biocomputing, Oregon State University. (Invited)

- October 4, 2012, Dynamical Models Explaining Social Balance, Department of Mathematics, Oregon State University. (Invited)

- September 10, 2012, Dynamical Models Explaining Social Balance, Colloquium at the Department of Mathematics, University of Florida.

- June 26, 2012, Optimal placement of Marine Protected Areas, Seminar in INRIA, Metz, France. (Invited)

- June 26, 2012, Balancing in social networks, Seminar in INRIA, Metz, France. (Invited)

- June 13, 2012, Research experience as a VLAC fellow, The Royal Academy of Belgium, Brussels, Belgium. (Invited)

- May 22, 2012, On models of social balance, Seminar Series Dynamics at the Academy, The Royal Academy of Belgium, Brussels, Belgium.

- May 22, 2012, On models of social balance, research retreat UCL, Knokke, Belgium. (Invited)

- May 21, 2012, Shortest extinction sequence in food webs, research retreat UCL, Knokke, Belgium. (Invited)

- March 19, 2012, Mathematical models and experiments of Quorum Sensing, Colloquium at the Department of Mathematics, University of Groningen, The Netherlands. (Invited)

– February 15, 2012, About transgressive over-yielding in the chemostat, Mathmod 2012, Vienna University of Technology, Vienna, Austria. (Invited)

– January 27, 2012, Optimal placement of Marine Protected Areas, Seminar at the University of Liège, Belgium. (Invited)

– December 1, 2011, Mathematical Models for Quorum Sensing, VLAC Seminar, The Royal Flemish Academy of Belgium for Science and the Arts, Brussels, Belgium.

– November 24, 2011, Optimal placement of Marine Protected Areas, Colloquium at the Department of Mathematics, Utrecht University, The Netherlands. (Invited)

– November 10, 2011, Optimal placement of Marine Protected Areas, Seminar at INRA, Montpellier, France. (Invited)

– October 10, 2011, Optimal placement of Marine Protected Areas, Seminar in Systems and Control, Université Catholique de Louvain, Louvain-la-Neuve, Belgium. (Invited)

– March 3, 2011, Mathematical models of Marine Protected Areas, Colloquium at the Department of Mathematics and Statistics, Oakland University, MI. (Invited)

– May 3, 2010, Mathematical Biology at UF, Symposium of the Quantitative Spatial Ecology, Evolution, and Environment IGERT Program of the University of Florida Biology Department, Austin Carey Memorial Forest.

– April 16, 2010, Some mathematical tools for the analysis of complex biochemical networks, Cluster Seminar, University of Houston. (Invited)

– April 2, 2010, Convergence in biochemical reaction networks, Math Biology Seminar at the School of Mathematical and Statistical Sciences, Arizona State University. (Invited)

– March 18, 2010, Some properties of within-host virus models, Colloquium at the Department of Mathematics, University of Central Florida. (Invited)

– October 28, 2009, An introduction to synthetic biology, SIAM Gators Seminar, University of Florida. (Invited)

– September 14, 2009, Positive feedback in a stochastic model for gene regulation, Biomathematics Seminar, University of Florida.

– August 31, September 21 and 28, 2009, The zero deficiency theorem (part I,II and III), Biomathematics Seminar, University of Florida.

– July 7, 2009, Periodic Antiviral Therapies for Within-Host Virus Models, SIAM Conference on Control and Its Applications, Denver, CO. (Invited)

– April 4, 2009, Multi-strain within-host virus dynamics, AMS Meeting, NC State University, Raleigh, NC. (Invited)

– April 4, 2009, Graph-theoretic characterizations of monotonicity of chemical networks in reaction coordinates, AMS Meeting, NC State University, Raleigh, NC. (Invited)

– October 20, 2008, Persistence in biochemical reaction networks, Focus Group Meeting on Mathematical and Computational Models in Biological Networks, Mathematical Biosciences Institute (MBI), Columbus, OH. (Invited)

– August 4, 2008, Treatment for within-host virus dynamics, SIAM Conference on Life Sciences, Montreal, Canada. (Invited)

– June 4, 2008, Global analysis of a multi-strain virus model with mutations, Talk at the Mathematical Tools for Multi-Scale Biological Processes conference, Bozeman, MT.

– June 4, 2008, Treatment for within-host virus dynamics, Talk at the Mathematical Tools for Multi-Scale Biological Processes conference, Bozeman, MT.

– May 1, 2008, Within-host virus dynamics: modeling, analysis and treatment, Colloquium at the Department of Mathematics, University of Louisiana at Lafayette. (Invited)

– November 14, 2007, Global behavior of within-host virus models, Colloquium at the Department of Mathematical Sciences, Middle Tennessee State University. (Invited)

– November 5, 2007, The global dynamics of within-host virus models, Colloquium at the Department of Mathematics, University of Florida.

- October 29, 2007, The Perron-Frobenius Theorem and a few of its applications, Pi Mu Epsilon Talk, University of Florida.
- October 24, 2007, Discrete three-stage population model: persistence and global stability results, Seminar in Probability and Applied Mathematics, University of Florida.
- October 1, 2007, Persistence in biochemical reaction networks, International Conference on Systems Biology, Long Beach, CA. (Invited talk at tutorial on Mathematical Tools for the Analysis of Biochemical Network Dynamics).
- August 1, 2007, Multi-strain virus dynamics with mutations: A global analysis, Joint SMB-JSMB annual meetings, San Jose, CA.
- July 26, 2007, Multi-strain virus dynamics with mutations: A global analysis, Workshop on Control Theory and Mathematical Biology, Louisiana State University. (Invited)
- February 27, 2007, Mathematical tools for the analysis of biochemical reaction networks, Colloquium at Department of Mathematics, Purdue University, Mathematical tools for the analysis of biochemical reaction networks. (Invited)
- February 23, 2007, Mathematical tools for the analysis of biochemical reaction networks, Department of Applied Mathematics and Statistics, University of California at Santa Cruz. (Invited)
- February 20, 2007, Convergence in biochemical reaction networks, Seminar in Probability and Applied Mathematics, Department of Mathematics, University of Florida.
- February 9, 2007, Mathematical tools for the analysis of biochemical reaction networks, Mathematics Department, College of William and Mary. (Invited)
- November 10, 2006, Mathematical tools for the analysis of biochemical reaction networks, Colloquium at Department of Mathematics, University of Groningen, The Netherlands. (Invited)
- August 30, 2006, Feedback-mediated oscillatory coexistence in the chemostat, Second Multidisciplinary International Symposium on Positive Systems: Theory and Applications (POSTA 06), Grenoble, France. (Invited)
- August 2, 2006, Structural monotonicity of chemical reaction networks, Joint SIAM-SMB Conference on the Life Sciences, Raleigh, NC. (Invited)
- May 26, 2006, Coexistence, bistability and oscillations in the feedback-controlled chemostat, Maseeh Colloquium Series, Portland State University. (Invited)
- May 4, 2006, Coexistence, bistability and oscillations in the feedback-controlled chemostat, Mathematical Biosciences Institute, Ohio State University. (Invited)
- February 21, 2006, Bistability and Oscillations in the Feedback-Controlled Chemostat, Department of Mathematics and Department of Electrical Engineering, Louisiana State University. (Invited)
- December 8, 2005, Feedback control in the chemostat, Seminar in Probability and Applied Mathematics, Department of Mathematics, University of Florida.
- November 18, 2005, Feedback-mediated coexistence and oscillations in the chemostat, Department of Mathematics, University of North Florida. (Invited)
- August 1, 2005, Remarks on monotonicity in certain classes of chemical networks, Conference on Differential and Difference Equations and Applications, Melbourne, FL. (Invited)
- July 12, 2005, Remarks on monotonicity in certain classes of chemical networks, Sixth SIAM Conference on Control and its Applications, New Orleans, LA.
- May 26, 2005, Remarks on monotonicity in certain classes of chemical networks, Colloquium at Department of Mathematical Analysis, Ghent University, Belgium. (Invited)
- May 18, 2005, Remarks on monotonicity in certain classes of chemical networks, Seminar at FUNDP, Namur, Belgium. (Invited)
- May 17, 2005, Remarks on monotonicity in certain classes of chemical networks, Colloquium at Department of Mechanical Engineering, Eindhoven University of Technology, The Netherlands. (Invited)
- April 19, 2005, Remarks on monotonicity in certain classes of chemical networks, Seminar in Probability and Applied Mathematics, Department of Mathematics, University of Florida.

- October 26, 2004, An introduction to monotone systems, Applied Mathematics Seminar, Department of Mathematics, University of Florida.

- April 2, 2004, Growth on 2 nutrients in the chemostat: an application of monotone systems theory, PACM Dynamical Systems/Nonlinear Science Seminar, Princeton University. (Invited)

- February 23, 2004, Crowding effects promote coexistence in the chemostat, Department of Mathematics Colloquium, Queen's University, Canada. (Invited)

- February 18, 2004, Crowding effects promote coexistence in the chemostat, Department of Mathematics Colloquium, University of Iowa. (Invited)

- January 30, 2004, Crowding effects promote coexistence in the chemostat, Department of Mathematics Colloquium, University of Florida. (Invited)

- October 28, 2003, 7th Workshop on Dynamics and Computation (Iterated games and cooperation), An application of competitive systems theory: global analysis of HIV models, University of Leuven, Belgium. (Invited)

- June 5, 2003, A feedback perspective for chemostat models with crowding effects, Department of Computer Science Seminar, University of Leuven, Belgium. (Invited)

- February 24, 2003, A feedback perspective for chemostat models with crowding effects, Department of Mathematics Colloquium, University of Louisville. (Invited)

- February 13, 2003, A feedback perspective for chemostat models with crowding effects, Department of Mathematics Colloquium, New Mexico State University. (Invited)

- November 1, 2002, Small gain theorems for predator-prey systems, Mathematical Biology Seminar, Arizona State University.

- June 17, 2002, HIV dynamics: a global analysis, Department of Mechanical Engineering Colloquium, Eindhoven University of Technology. (Invited)

- June 2002, HIV dynamics: a global analysis, Department of Electrical Energy Seminar, Ghent University. (Invited)

- May 2002, Extending the Perron-Frobenius theorem: from linear to homogeneous, Department of Mathematical and Statistical Sciences Colloquium, University of Alberta, Canada. (Invited)

- May 2002, Virus dynamics: a global analysis, Department of Mathematical and Statistical Sciences Seminar Series in Mathematical Biology, University of Alberta, Canada. (Invited)

- November 16, 2001, Coupled biological systems, Mathematical Biology Seminar, Arizona State University.

- October 5, 2001, Feedback control for a chemostat with two organisms, Mathematical Biology Seminar, Arizona State University.

- **Teaching**

  - At the Oregon State University:
    1. Undergraduate courses: MTH 254 Vector Calculus I (F14), MTH 342 Linear Algebra 2 (F13), MTH 311 Advanced Calculus (W14), MTH 361 Introduction to Probability (F16), MTH 228 Calculus and Probability for the Life Sciences II (F17).
    2. Graduate courses: MTH 524 Dynamical Systems (W15, W16), MTH 658 Topics in Mathematical Modeling (S15), Z 507 Zoology Seminar (13-14, 14-15, F15).
    3. Undergraduate/Graduate courses: MTH 428/528 Introduction to Mathematical Biology (F14, F15), MTH 482/582 Applied Partial Differential Equations (W17), MTH 483/583 Complex Variables (W17).

  - At the University of Florida:
    1. Undergraduate courses: MAP 4403 Mathematical Methods for Engineers (fall 04), MAS 4105 Linear Algebra I (spring 05, fall 12, spring 13), MAP 2302 Elementary Differential Equations (fall 05, fall 06, fall 08, fall 09, fall 10, fall 12), MTG 3214 Euclidean Geometry (fall 08).
    2. Graduate courses: MAP 6327 Applied Differential Equations I (fall 05), MAP 6487 Biomathematics Seminar I (fall 09), MAP 6488 Biomathematics Seminar II (spring 10, spring 12), PCB 6049 IGERT Colloquium (spring 11).

3. Undergraduate/Graduate courses: MAA 4102/5104 Advanced Calculus I (spring 05), MAP 4484/5489 Modeling in Mathematical Biology (spring 06, spring 09), MAP 4305/5304 Intermediate Differential Equations (fall 06, spring 07, fall 07, summer 10, fall 10, summer 11), MAP 4341/5345 Introduction to Partial Differential Equations (spring 08).

– Lecturer for the Mini-Course "A patched Ross-Macdonald malaria model with movement by hosts and vectors: implications for control" organized at the Conference on Mathematical Modelling and Control of Communicable Diseases, FGV, January 11-14, 2016, Rio de Janeiro, Brazil.

– Lecturer in Graduate School in Systems, Optimization, Control and Networks (SOCN) for the course "Topics in Mathematical and Systems Biology", October 2011, Université Catholique de Louvain, Louvian-la-Neuve, Belgium.

– Lecturer in Graduate School in Systems and Control for the course "Positive systems", October 2004, Université Catholique de Louvain, Louvain-la-Neuve, Belgium.

– At Rutgers University: MAT 336 Differential Equations in Biology (fall 03).

– At Arizona State University, 01-03: MAT 210, 270, 271, 272 (calculus), and MAT 242 (linear algebra).

– At Ghent University, Belgium, 1995-2000: TA for Power systems I and II and Dynamics of electrical systems.

- **Students (Undergraduates, Masters, PhD and Postdocs)**

   – PhD Students: *In Mathematics*: Jessica Langebrake (PhD, June 2013), Erica Zuhr (PhD, April 2012), Ricardo Reyes Grimaldo (since 2016, ongoing). *In Biology*: Nick Rucktanonchai (PhD, August 2014).

   – Masters Students: *In Mathematics*: James Rekow (co-advised with E. Thomann), 2016.

   – Postdocs: *In Mathematics*: Anushaya Mohapatra (2014-2016), Ajiun Zhang (2016-current).

   – Mentor to visiting PhD student Hossein Pourbashash (2012-2013).

   – Mentor to John Thompson Research Assistant Professor Necibe Tuncer (2010-2011).

   – Member of PhD Committees at UF: *In Mathematics*: Scott Keeran, Beyza Aslan, Minah Oh, Jillian Stupianski, Karly Jacobsen, Cuong Ngo, Mathew Gluck, Delphine Mico and Cameron Browne. *In Physics*: Minjun Son, Gabriel Dilanji, Bobby Bond.

   – Member of Master Committee at OSU: *In Mathematics*: Hooman Zabeti, *in Engineering*: Jia Guo (EECS, 2014), *in Statistics*: Dane Skinner.

   – Member of PhD Committee at OSU: *Mathematics*: Jason McClelland, *in Integrative Biology*: Haley Ohms, Kyle Coblentz, Barbara Spiecker. *In Fisheries and Wildlife*: Linsey Arnold, *in Botany and Plant Pathology*: Daniel Farber, *in Biomedical Sciences*: Tim Muller.

   – National member of PhD Committee: *in Mathematics*: Bruce Pell (Arizona State University, 2016).

   – International member of PhD Committee: *In Mathematics*: Bichara Derdei (Université de Lorraine, France, 2013), Radhouane Fekih Salem (Université de Montpellier 2, France, and Université de Tunis El Manar, Tunis, 2013) *In Engineering*: Valery Moreno Vega (Technical Sciences, Instituto Superior Politécnico "José Antonio Echeverría" in Cuba), Vincent Traag (Université Catholique de Louvain, Belgium, 2013), Victor Hugo Riquelme Flores (Departamento de Ingenieria Matematica, Universidad de Chile), September 2016.

   – Mentoring of undergraduates at OSU: *In Mathematics*: Brian Livingston $(14-15)$ and James Rekow $(14-15$, Honor's Thesis co-advised with E. Thomann).

- **Other activities**

   – Service to the Oregon State University: Task force to develop a new program Biological Data Sciences $13-17$. Member of the Research Working Group of the Marine Studies Initiative (since 2014). Serving as Senator in the Faculty Senate (2015), COS Promotion and Tenure Committee (16-18).

   – Service to the Department of Mathematics of the Oregon State University: Advisory Committee (2017-2020), Undergraduate Committee $16-18$, Graduate Committee $13-15$, Qualifying Exam Committee $13-17$, Mathematical Biology Seminar $13-14$, Task Force Undergraduate Degree Reform, $13-14$, Math-IB curriculum working group (15-16, chair), Promotion and Tenure Committee (15-18).

- Service to the Department of Integrative Biology of the Oregon State University: Seminar Committee $13 - 15$. Member of the Search Committee for Assistant Professor in Quantitative Systems Biology $14 - 15$, Math-IB curriculum working group (15-16, chair).

- Developed and taught the new course MAP 4484/5489 Modeling in Mathematical Biology (spring 06, University of Florida).

- Developed and taught the new course MTH 428/528 Introduction to Mathematical Biology (fall 14, OSU).

- Helping to develop a new option in Mathematical Biology for Mathematics majors (15-16).

- Helping to develop a new calculus/probability/linear algebra sequence for the Life Sciences (15-17): MTH 227/228 Calculus and Probability for the Life Sciences I/II (with Ben Dalziel).

- Academic Manager of cooperative agreement between the College of Liberal Arts and Sciences of the University of Florida and Ghent University in Belgium, to promote exchange of faculty and students $05 - 11$.

- Service to the College of Liberal Arts and Sciences of the University of Florida: Faculty Finance Committee $09 - 11$ and $12 - 13$, Member of the QSE^3 IGERT Council $09 - 10$, Mathematical Sciences Steering Committee.

- Service to the Department of Mathematics of the University of Florida: Steering Committee $12 - 15$, Hiring Committee $08 - 09$, Tenure and Promotion Committee $08 - 11$, Chair Search Committee $07 - 08$, Colloquium Committee $05 - 06$ and $08 - 11$ (Chair in $09 - 11$) and $12 - 13$ (Co-Chair), PhD Examination Committees (Numerical Analysis $05 - 07$, PDE's $04 - 11$) Organizer of the Seminar in Probability and Applied Mathematics, $04 - 05$ and January/February 2006, Group Proposals Committee $04 - 05$, Liaison Committee $06 - 08$, Visitors and Conferences Committee (Chair) $06 - 07$, Post-doc Search Committee $07 - 08$, Hiring Plan Committee $07 - 09$, Differential Equations Textbook Selection Committee $07 - 08$, Organizer of the Biomathematics Seminar $09 - 10$.

- Co-organizer (with Jim Cushing, Katia Koelle, and Stephan Munch) of MBI Workshop Rapid Evolution and Sustainability, Mathematical Biosciences institute, Ohio State University, October 7-11, 2013.

- Co-organizer (with Hal Smith) of the special session "Recent Progress in Nonlinear Analysis and PDE's arising from Dispersal Models" at the conference "Everything Disperses to Miami: The Role of Movement and Dispersal in Ecology, Epidemiology and Environmental Science", Miami, FL, December 14-16, 2012.

- Co-organizer (with Freddy Dumortier) of a seminar series Dynamics at the Academy, at the Royal Flemish Academy of Belgium for Science and the Arts, March 28 and May 24, 2012.

- Co-organizer (with Murat Arcak and Yuan Wang) of the DIMACS Workshop on "Perspectives and Future Directions in Systems and Control Theory", DIMACS Center, Rutgers University, Piscataway, NJ, May $23 - 27$, 2011.

- Co-organizer (with Sergei S. Pilyugin and Jed Keesling) of the "Computational Biology Conference", Gainesville, FL, March $17 - 19$, 2011.

- Co-organizer (with Yuan Wang) of the session "Mathematical Models in Biology" at the Fall Southeastern Sectional Meeting of the AMS, Boca Raton, FL, October 30-November 1, 2009.

- Co-organizer (with Eduardo Sontag) of the workshop "Control Theory and Dynamics in Systems Biology", DIMACS Center, Rutgers University, NJ, May 18-22, 2009.

- Co-organizer (with Tomas Gedeon and Xiaoqiang Zhao) of the conference "Mathematical tools for multi-scale biological processes at the Montana State University", Bozeman, MT, June 4-6, 2008.

- Co-organizer (with Michael Malisoff) of Minisymposium "Monotone systems and their applications" at the Sixth SIAM Conference on Control and its Applications, New Orleans, LA, July 11-14, 2005.

- Co-organizer (with Graham Cormode) of the DIMACS Seminar Series on Quantitative Biology and Epidemiology in the 2003-2004 academic year.

- Co-organizer (with Vincent Blondel and Rodolphe Sepulchre) of the 7th workshop on "Dynamics and Computation (Theme: Iterated games and cooperation)", October 27-28, 2003, Leuven, Belgium.

– Reviewer for several journals (about 20 papers per year), including: Proceedings of the National Academy of Sciences, Natural Resource Modeling, Journal of Mathematical Biology, Journal of Mathematical Medicine and Biology, Journal of Biological Dynamics, Mathematical Biosciences, Mathematical Biosciences and Engineering, Journal of Theoretical Biology, Journal of Biological Systems, Ecological Applications, Theoretical Ecology, Journal of Mathematical Analysis and Applications, SIAM Journal on Control and Optimization, SIAM Journal on Applied Mathematics, SIAM Journal on Matrix Analysis and Applications, Nonlinear Analysis: Real World Applications, Acta Applicandae Mathematicae, Mathematical Reviews, Journal of Difference Equations and Applications, IEEE Transactions on Automatic Control, Automatica, Systems and Control Letters, International Journal of Adaptive Control and Signal Processing, Journal of Applied Mathematics, European Journal of Control, Proceedings of the IEEE, Discrete and Continuous Dynamical Systems -B, International Journal of Robust and Nonlinear Control, Transactions on Network Science and Engineering, Communications in Nonlinear Science and Numerical Simulation.
Reviewer for several international conferences (IFAC, IEEE, MTNS).

– Member of the International Program Committee of the 5th International Symposium on Positive Systems (Posta 2016), Rome, Italy, September 20-22, 2016.

– Member of the International Program Committee for MTNS, Groningen, The Netherlands, July 7-11, 2014.

– Book reviews: An Introduction to Mathematical Biology by Linda Allen, Prentice Hall, 2006; Mathematical Methods for Biology and Medicine by Glenn Ledder, Springer, 2009.

– Judge at the Alachua Region Science & Engineering Fair on January 28, 2011.

– Judge at the FIRST Robotics competition, Oregon State University, April 4 & 5, 2014.

– Reviewer for the Louisiana Board of Regents R&D RCS (LA, USA).

– External reviewer for INRIA, France, evaluating proposal to form the new research group Masaie (2008).

– External reviewer and panelist for INRIA, France (2017).

– Reviewer for NSERC (Canada).

– Reviewer for EPSRC (UK).

– Reviewer for NWO (The Netherlands).

– Reviewer and panelist for NSF (USA).

- **Recent Collaborators (past 5 years)**
  J. Bartholomew, Oregon State University, OR.
  J.M. Cushing, University of Arizona, AZ.
  D. Finch, Oregon State University, OR.
  S. Giovannoni, Oregon State Univeristy, OR.
  J. Gopalakrishnan, Portland State University, OR.
  S. Hagen, University of Florida, FL.
  K. Halsey, Oregon State University, OR.
  D.A. Lytle, Oregon State University, OR.
  C. McCluskey, Wilfried Laurier University, Canada.
  J. Medlock, Oregon State University, OR.
  S.D. Peckham, University of Colorado-Boulder, CO.
  S.S. Pilyugin, University of Florida, FL.
  V. Tremblay, Oregon State University, OR.
  E. Thomann, Oregon State University, OR.
  V. Traag, Université Catholique de Louvain, Louvain-la-Neuve, Belgium.
  P. Van Dooren, Université Catholique de Louvain, Louvain-la-Neuve, Belgium.
  M. Schuster, Oregon State University, OR.
  H.L. Smith, Arizona State University, AZ.
  D.L. Smith, University of Washington, WA.
  E. Waymire, Oregon State University, OR.
  H. Youn, Seoul Institute, Seoul, South Korea.