

Jean-Paul Comet – Curriculum Vitae

Full Professor in Computer Science at Université Côte d’Azur

Lab : Informatique, Signaux et Systèmes de Sophia-Antipolis (I3S) – UMR CNRS 7271

Civil status: French, 55 year old, married, 3 children.

Academic appointments:

- From Sept. 2007: Full Professor (Exceptional class from Sept 2023, 1st class 2014-2023, recipient of the research and doctoral supervision grants (PEDR) 2006-2018 and since 2019 (RIPEC-3)) in computer science at Université Côte d’Azur.
- November 2006: Habilitation, University of Evry-Val d’Essonne (France). Title: *From textual bioinformatics to a formal approach of systems biology*.
- 2000–07: Assistant professor (PEDR 2006), on a sabbatical leave (délégation) 2004–2006.
- 1999: Post-doc in bioinformatics at Whitehead Institute/MIT Center for Genome Research, USA.
- 1995–1998: PhD in Computer Science at the Technological University of Compiègne (France). Laboratory: INRIA Rocquencourt. Title: Dynamic Programming and biological sequence alignments.

Research topics: Extensions and applications of formal methods for modeling of biological regulatory networks, model-checking, Hoare logic, testing methods, constraints approaches, graph transformations, hybrid models, Machine Learning for toxicity prediction.

Supervision of PhD students:

students	dates	supervisors
A. Richard	2003–2006	G. Bernot (10%) and my-self (90%)
M. Poudret	2005–2009	P. Le Gall (20%), A. Arnould (50%) and my-self (30%)
S. Troncale	2005–2008	G. Bernot (50%) and my-self (50%)
J. Fromentin	2006–2009	O. Roux (60%), P. Le Gall (20%) and my-self (20%)
Z. Khalis	2006–2010	G. Bernot (50%) and my-self (50%)
A. Das	2009–2012	F. Diener (50%), G. Bernot (25%) and my-self (25%)
E. Cornillon	2013–2016	G. Bernot (50%) and my-self (50%)
B. Miraglio	2014–2017	G. Bernot (40%), C. Risso (20%) and my-self (40%)
J. Behaegel	2015–2018	F. Delaunay (45%), M. Pelleau (10%) and my-self (45%)
I. Grenet	2016–2019	100%, convention CIFRE, Bayer Crop Science
D. Boyenval	2018–2022	G. Bernot (40%), F. Delaunay (30%), and my-self (30%)
L. Gibart	2019–2022	G. Bernot (50%) and my-self (50%)
R. Michelucci	2021–2024	D. Pallez (50%) and my-self (50%)
F. Camilleri	2021–2024	convention CIFRE, Bayer Crop Science
G. Grataloup	2023–2026	G. Bernot (33%), D. Pallez (33%) and my-self (33%)
V. Vigeant	2024–2027	G. Bernot (50%) and my-self (50%)

Evaluation Committees:

- member of the evaluation committee « SIMI 2 » of ANR, national agency for research, 2011–2013.
- member of the committee for the “research and doctoral supervision grants (PEDR)” of the section 27 CNU (National council of universities), in 2009, 2012 and 2013.
- elected member of CNU (National council of universities) section 27, Oct 2015–Oct 2023.
- member of two lab evaluation committees of HCERES, 2013 and 2018.

Departmental and University Responsibilities:

- Responsible for the bioinformatics graduate education of the department of biology of the engineer school EPU at University of Nice-Sophia (two semesters). I teach programming languages, bioinformatics, algorithmics, databases, maths for biology, modeling of biological systems...
- Member of the scientific committee of academia *complexity et diversity of living cells*, Université Côte-d’Azur (until Sept. 2023).
- In charge of the research group « Formal Bioinformatics » (8 permanents), 2012-2018.
- Deputy director of the research team SPARKS (45 permanent members), since jan 2020.
- Director of the doctoral school in Information Technologies (~250 PhD students) since january 2023.

Participation in the animation of the research:

- Organization of a thematic school on the « modeling of biological networks », '13, '16, '19, and 2023.
- Member of the scientific committee of this school in June 2010.
- Organization of a workshop on the « Theory of Boolean networks », November 2014.
- Organization with S. Vial and F. Quessette of 3 thematic days on Interaction networks: analysis, modeling and simulation, satellite meetings of conferences IPG'05, IPG'06 et IPG'07.
- In charge, with G. Bernot of the spring school « Modelling and simulation of biological processes in the context of post-genomics », La Colle sur Loup, France, March 29th – April 3rd 2009.
- Local committee of spring school Modeling and simulation of complex biological processes in the context of genomics, 2004, 2007, (Evry, France) and 2009 (Nice, France); local committee of the international symposium on macromolecular networks, and of workshop on regulatory proteins interplay and traffic on DNA, Paris and Evry, 2002.
- Referee for numerous journals and conferences, Program Committee of numerous conferences.
- Book edition, « modelling and simulation of biological processes in the context of genomics », 2004,
- Editor with M. Kaufman of a special issue of TSI on modeling and simulation for post-genomics, 2007

Publications :

- 18 book chapters, 31 papers in international journals,
- 1 article in a national journal in 2004 and 1 article in a journal popularizing science in 2007,
- 30 papers in international conferences.

The majority of my publications (journals, conferences, chapters ...) are available on my webpage: <http://www.i3s.unice.fr/~comet/>.

Editions

- [e1] P. Amar, J.-P. Comet, F. Képès, and V. Norris, editors. *Modelling and simulation of biological processes in the context of genomics*. Publisher Frontier group (ISBN : 2-84704-0374), June 2004.
- [e2] J.-P. Comet and M. Kaufman, editors. *Modélisation et simulation pour la post-génomique*. TSI, numéro spécial, Mars 2007.

Book chapters

- [c1] J.-J. Codani, J.-P. Comet, J.-C. Aude, E. Glémet, A. Wozniak, J.-L. Risler, A. Hénaut, and P.P. Slonimski. *Automation, Genomic and Functional Analyses*, volume 28, chapter Automatic analysis of large scale pairwise alignments of protein sequences, pages 229–244. Academic Press, ISBN : 0-12-521527-4, 1999.
- [c2] J. Mary, G. Mercier, J.-P. Comet, A. Cornuéjols, C. Froidevaux, and M. Dutreix. *Proc. of the Dieppe Spring school on Modelling and simulation of biological processes in the context of genomics*, chapter Using an attribute estimation technique for the analysis of microarray data, pages 69–77. Publisher Frontier group, ISBN : 2-84704-036, 2003.
- [c3] G. Bernot, J. Guespin-Michel, J.-P. Comet, P. Amar, A. Zemirline, F. Delaplace, P. Ballet, and A. Richard. *Proc. of the Dieppe Spring school on Modelling and simulation of biological processes in the context of genomics*, chapter Modelling, observability and experiment: a case study, pages 49–55. Publisher Frontier group, ISBN : 2-84704-036, 2003.
- [c4] J. Mary, G. Mercier, J.-P. Comet, A. Cornuéjols, C. Froidevaux, and M. Dutreix. *Informatique pour l'analyse du transcriptome*, chapter Utilisation d'une méthode de sélection d'attributs pour l'analyse du transcriptome de cellules de levure exposées à de faibles doses de radiation, pages 189–205. Hermes, ISBN : 2-7462-0850-4, 2004.
- [c5] A. Richard, J.-P. Comet, and G. Bernot. *Modern Formal Methods and Applications*, chapter Formal Methods for Modeling Biological Regulatory Networks, pages 83–122. Springer, ISBN: 1-4020-4222-1, 2006.
- [c6] D. Mateus, J.-P. Comet, J.-P. Gallois, and P. Le Gall. *Proc. of the Evry Spring school on Modelling complex biological systems in the context of genomics*, chapter Inferring parameters of genetic regulatory networks with symbolic formal methods, pages 51–70. EDP Science, ISBN : 978-2-7598-0019-3, 2007.

- [c7] M. Poudret, J.-P. Comet, P. Le Gall, F. Képès, A. Arnould, P. Meseure, J.-M. Verbavatz, and A. Rambourg. *Proc. of the Lille Spring school on Modelling complex biological systems in the context of genomics*, chapter Toward a computer-aided methodology for topology-based simulation of the Golgi apparatus, pages 89–104. EDP Science, ISBN : 978-2-7598-0075-9, 2008.
- [c8] Z. Khalis, G. Bernot, and J.-P. Comet. *Proc. of the Nice Spring school on Modelling complex biological systems in the context of genomics*, chapter Gene Regulatory Networks: Introduction of multiplexes into R. Thomas’ modelling, pages 139–151. EDP Science, ISBN : 978-2-7598-0437-5, 2009.
- [c9] J.-P. Comet and G. Bernot. *Proc. of the Evry Spring school on Modelling complex biological systems in the context of genomics*, chapter Introducing continuous time in discrete models of gene regulatory networks, pages 61–94. EDP Sciences, ISBN : 978-2-7598-0545-7, 2010.
- [c10] J.-P. Comet, G. Bernot, A. Das, F. Diener, Massot C., and A. Cessieux. *Proc. of the Evry Spring school on Modelling complex biological systems in the context of genomics*, chapter Simplified models for the mammalian circadian clock, pages 85–106. EDP Sciences, 2012.
- [c11] G. Bernot, J.-P. Comet, A. Richard, M. Chaves, J.-L. Gouzé, and F. Dayan. *Modeling in Computational Biology and Biomedicine, A Multidisciplinary Endeavor*, chapter Modeling and analysis of gene regulatory networks, pages 47–80. Springer, ISBN : 978-3-642-31208-3, 2013.
- [c12] G. Bernot, J.-P. Comet, and C. RISSO-de FAVERNEY. *Computational Toxicology*, volume II, chapter Regulatory networks, pages 215–234. Humana Press, ISBN 978-1-62703-058-8, USA, 2013.
- [c13] El Houssine Snoussi Gilles Bernot, Jean-Paul Comet. *Logical Modeling of Biological Systems*, chapter Formal methods applied to gene network modelling, pages 77–90. 2014.
- [c14] K.J.E. Carpio, G. Bernot, J.-P. Comet, and F. Diener. *Proc. of the Thematic Research School on Advances in Systems and Synthetic Biology, Modelling Complex Biological Systems in the Context of Genomics*, chapter Probabilistic Gene Network, pages 77–90. EDP Sciences, ISBN 978-2-7598-1764-1, 2015.
- [c15] B. Miraglio, B. Bernot, J.-P. Comet, and C. RISSO-de FAVERNEY. *Proc. of the Thematic Research School on Advances in Systems and Synthetic Biology, Modelling Complex Biological Systems in the Context of Genomics*, chapter Towards a Computer Aided Toxicology, pages 85–101. EDP Sciences, ISBN : ISBN : 978-2-7598-1971-3, 2016.
- [c16] E. Cornillon, J.-P. Comet, G. Bernot, and G. Enée. *Proc. of the Thematic Research School on Advances in Systems and Synthetic Biology, Modelling Complex Biological Systems in the Context of Genomics*, chapter Hybrid Gene Networks: a new Framework and a Software Environment, pages 57–84. EDP Sciences, ISBN : 978-2-7598-1971-3, 2016.
- [c17] H. Collavizza, G. Bernot, and J.-P. Comet. *Approches symboliques de la modélisation et de l’analyse des systèmes biologiques*, chapter Méthodes de vérification formelle pour la modélisation en biologie : le cas des réseaux de régulation biologique, pages 275–335. ISTE, ISBN: 9781789480290, DOI: 10.51926/ISTE.9029.ch8, 2022.
- [c18] H. Collavizza, G. Bernot, and J.-P. Comet. *Symbolic Approaches to Modeling and Analysis of Biological Systems*, chapter Formal Verification Methods for Modeling in Biology: Biological Regulation Networks, pages 255–312. ISTE, ISBN: 978-1-78945-029-3, DOI: 10.1002/9781394229086.ch8, 2023.

The volumes in which the references [c2, c3, c6, c7, c8, c9, c10, c14, c15, c16] appear, combine both proceedings of the thematic schools and book chapters. The references above correspond to chapters.

International journals

- [ij1] J.-P. Comet, J.-C. Aude, E. Glémet, A. Hénaut, J.-L. Risler, P.P. Slonimski, and J.-J. Codani. Significance of Z-value statistic of Smith-Waterman scores for protein alignments. *Computers and Chemistry*, 23(3-4):317–331, 1999.
- [ij2] J.-N. Bacro and J.-P. Comet. Sequence alignment : an approximation law for the Z-value with applications to databank scanning. *Computers and Chemistry*, 25:401–410, 2001.
- [ij3] J.-P. Comet and J. Henry. Pairwise sequence alignment using a PROSITE pattern-derived similarity score. *Computers and Chemistry*, 26(5):421–436, 2002.
- [ij4] J.-P. Comet. Application of max-plus algebra to biological sequence comparisons. *Theoretical Computer Science*, 293:189–217, 2003.
- [ij5] G. Mercier, N. Berthault, J. Mary, J. Peyre, A. Antoniadis, J.-P. Comet, A. Cornuéjols, C. Froidevaux, and M. Dutreix. Biological detection of low radiation by combining results of two microarray analysis methods. *Nucleic Acids Research*, 32(1):e12, 2004.
- [ij6] G. Bernot, J.-P. Comet, A. Richard, and J. Guespin. Application of formal methods to biological regulatory networks: Extending Thomas’ asynchronous logical approach with temporal logic. *Journal of Theoretical Biology*, 229(3):339–347, 2004.

- [ij7] J. Guespin-Michel, G. Bernot, J.-P. Comet, A. Mérieau, A. Richard, C. Hulen, and B. Polack. Epigenesis and dynamic similarity in two regulatory networks in *pseudomonas aeruginosa*. *Acta Biotheoretica*, 52(4):379–390, 2004.
- [ij8] A. Richard, J.-P. Comet, and G. Bernot. R. Thomas’ modeling of biological regulatory networks : introduction of singular states in the qualitative dynamics. *Fundamenta Informaticae*, 65(4):373–392, 2005.
- [ij9] D. Filopon, A. Merieau, G. Bernot, J.-P. Comet, R. Leberre, B. Guery, B. Polack, and J. Guespin-Michel. Epigenetic acquisition of inducibility of type III cytotoxicity in *p. aeruginosa*. *BMC Bioinformatics*, 7:272, 2006.
- [ij10] D. Mateus, J.-P. Gallois, J.-P. Comet, and P. Le Gall. Symbolic modeling of genetic regulatory networks. *Journal of Bioinformatics and Computational Biology*, 5(2B):627–640, 2007.
- [ij11] A. Richard and J.-P. Comet. Necessary conditions for multistationarity in discrete dynamical systems. *Discrete Applied Mathematics*, 155(18):2403–2413, 2007.
- [ij12] S. Troncale, R. Thuret, C. Ben, N. Pollet, J.-P. Comet, and G. Bernot. Modelling of the TH-dependent regulation of tadpole tail resorption. *Journal of Biological Physics and Chemistry*, 7(2):45–50, 2007.
- [ij13] J. Ahmad, G. Bernot, J.-P. Comet, D. Lime, and O. Roux. Hybrid modelling and dynamical analysis of gene regulatory networks with delays. *ComplexUs*, 3(4):231–251, 2006 (Cover Date: November 2007).
- [ij14] J. Ahmad, O. Roux, G. Bernot, J.-P. Comet, and A. Richard. Analysing formal models of genetic regulatory networks with delays: Applications to lambda phage and T-cell activation systems. *Int. J. Bioinformatics Research and Applications*, 4(3):240–262, 2008.
- [ij15] M. Poudret, J.-P. Comet, P. Le Gall, F. Képès, A. Arnould, and P. Meseure. Topology-based abstraction of complex biological systems: Application to the Golgi apparatus. *Theory in Biosciences*, 127:79–88, 2008.
- [ij16] S. Troncale, J.-P. Comet, and G. Bernot. Enzymatic competition: Modeling and verification with timed hybrid Petri nets. *Pattern Recognition*, 42(4):562–566, 2009.
- [ij17] Z. Khalis, J.-P. Comet, A. Richard, and G. Bernot. The SMBioNet method for discovering models of gene regulatory networks. *Genes, Genomes and Genomics*, 3(special issue 1):15–22, 2009.
- [ij18] A. Richard and J.-P. Comet. Stable periodicity and negative circuits in differential systems. *Journal of Mathematical Biology*, 63(3):593–600, 2011 [online, december 1st, 2010].
- [ij19] M. Mabrouki, M. Aiguier, J.-P. Comet, P. Le Gall, and A. Richard. Embedding of biological regulatory networks and properties preservation. *Mathematics in Computer Science*, 5(3):263–288, 2011.
- [ij20] S. Taati, E. Formenti, J.-P. Comet, and G. Bernot. On the impact of the distance between two genes on their interaction curve. *Journal of Mathematical Biology*, 64(1):131–147, 2012.
- [ij21] A. Richard, G. Rossignol, J.-P. Comet, G. Bernot, J. Guespin-Michel, and A. Merieau. Boolean models of biosurfactants production in *pseudomonas fluorescens*. *PlosOne*, 7(1):e24651, 2012.
- [ij22] J.-P. Comet, M. Noual, A. Richard, J. Aracena, L. Calzone, J. Demongeot, M. Kaufman, A. Naldi, E.H. Snoussi, and D. Thieffry. On circuit functionality in boolean networks. *Bulletin of Mathematical Biology*, 75(6):906–919, 2013.
- [ij23] J. Behaegel, J.-P. Comet, G. Bernot, E. Cornillon, and F. Delaunay. A hybrid model of cell cycle in mammals. *J. Bioinformatics and Comput. Biol.*, 14(1):1640001 [17 pp.], 2016.
- [ij24] I. Grenet, Y. Yin, and J.-P. Comet. G-networks to predict the outcome of sensing of toxicity. *Sensors*, 18:3483, 2018.
- [ij25] G. Bernot, J.-P. Comet, Z. Khalis, A. Richard, and O. F. Roux. A genetically modified Hoare logic. *Theoretical Computer Science*, 765:145–157, 2019. <https://doi.org/10.1016/j.tcs.2018.02.003>.
- [ij26] I. Grenet, K. Merlo, J.-P. Comet, R. Tertiaux, D. Rouquié, and F. Dayan. Stacked generalization with applicability domain outperforms simple qsar on in vitro toxicological data. *J. Chemical Information and Modeling*, 59(4):1486–1496, 2019.
- [ij27] I. Grenet, J.-P. Comet, F. Schorsch, N. Ryan, J. Wichard, and D. Rouquié. Chemical in vitro bioactivity profiles are not informative about the long-term in vivo endocrine mediated toxicity. *Computational Toxicology*, 12:100098, nov. 2019.
- [ij28] L. Gibart, R. Khoodeeram, G. Bernot, J.-P. Comet, and J.-Y. Trosset. Regulation of eukaryote metabolism: An abstract model explaining the warburg/crabtree effect. *Processes*, 9:1496, 2021.
- [ij29] J.-P. Comet, H. Collavizza, and L. Gibart. Constrained Kripke structure for identifying parameters of biological models. *Theoretical Computer Science*, 996:114505, 2024, [Available online 19 March 2024].
- [ij30] L. Gibart, H. Collavizza, and J.-P. Comet. A phenotypic matrix for greening qualitative regulatory networks with environments. *BMC bioinformatics*, 2024 [accepted].
- [ij31] F. Camilleri, J. Wenda, C. Pecoraro-Mercier, J.-P. Comet, and D. Rouquié. Cell painting and chemical structure read-across can complement each other for rat acute oral toxicity prediction in chemical early de-risking. *Chemical Research in Toxicology*, 2024 [accepted].

Articles in “Rχives”

[RXiv1] F. Camilleri, J. Wenda, C. Pecoraro-Mercier, J.-P. Comet, and D. Rouquié. Cell painting morphological profiles can complement qsar models for rat acute oral toxicity prediction. *BioRxiv*, 2024.

National journals

[nj1] J. Guespin, J.-P. Comet, and G. Bernot. Les réseaux de régulation biologique: rencontre entre biologie et informatique. *T.S.I.*, 23(7):939–945, 2004.

[nj2] G. Bernot, J.-P. Comet, and J. Guespin. Elucider le fonctionnement d’un réseau de régulation biologique par l’informatique. *Biofutur (Mensuel de vulgarisation), numéro spécial sur la biologie intégrative*, 275:22–25, 2007.

International Conferences and workshops with proceedings

[ic1] S. Pérès and J.-P. Comet. Contribution of computational tree logic to biological regulatory networks: example from *Pseudomonas aeruginosa*. In *International workshop on Computational Methods in Systems Biology*, volume 2602 of *LNCS*, pages 47–56, February 24–26, 2003, taux d’acceptation : 28%.

[ic2] G. Bernot, F. Cassez, J.-P. Comet, F. Delaplace, C. Müller, O. Roux, and O.H. Roux. Semantics of biological regulatory networks. In *Proceedings of the Workshop on Concurrent Models in Molecular Biology (BioConcur’2003)*, 2003.

[ic3] A. Richard, J.-P. Comet, and G. Bernot. Graph-based modeling of biological regulatory networks: Introduction of singular states. In *Proceedings of the second International workshop on Computational Methods in Systems Biology (CMSB)*, volume 3082 of *LNBI*, pages 58–72, 2004.

[ic4] J.-P. Comet, H. Klaudel, and S. Liauzu. Modeling multi-valued genetic regulatory networks using high-level Petri nets. In *In ICATPN 2005*, volume 3536 of *LNCS*, pages 208–227, 2005.

[ic5] J. Ahmad, A. Richard, G. Bernot, J.-P. Comet, and O. Roux. Delays in biological regulatory networks. In *Proceedings of IWBRA06*, volume 3992 of *LNCS*, pages 887–894, 2006, taux d’acceptation : 37%.

[ic6] M. Poudret, J.-P. Comet, P. Le Gall, A. Arnould, and Ph. Meseure. Topology-based geometric modelling for biological cellular processes. In *first International Conference on Language and Automata Theory and Applications, LATA’07*, See the proceedings on the website of the conference, pages 497–508, 2007, taux d’acceptation : 28%.

[ic7] J. Fromentin, J.-P. Comet, P. Le Gall, and O. Roux. Analysing gene regulatory networks by both constraint programming and model-checking. In *EMBC’07, 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, pages 4595–4598, Lyon, France, 2007, August 23–26.

[ic8] S. Troncale, J.-P. Comet, and G. Bernot. Validation of biological models with temporal logic and timed hybrid Petri nets. In *EMBC’07, 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, pages 4603–4608, Lyon, France, 2007, August 23–26.

[ic9] S. Troncale, J.-P. Comet, and G. Bernot. Verification of biological models with timed hybrid Petri nets. In Xiaobo Pham, Tuan D.; Zhou, editor, *Proc. of the 2007 Intl Symp. on Computational Models for Life Sciences (CMLS07), American Institute of Physics Conference Proc. Series (AIP), ISBN 978-0-7354-0466-3*, volume 952, pages 287–296, Gold Coast, Queensland, Australia, 2007, December 17–19.

[ic10] M. Mabrouki, M. Aiguier, J.-P. Comet, and P. Le Gall. Property preservation along embedding of biological regulatory networks. In *Algebraic Biology*, volume 5147 of *LNCS*, pages 125–138, Austria, July 31st–August 2d 2008.

[ic11] M. Poudret, A. Arnould, J.-P. Comet, and P. Le Gall. Graph transformation for topology modelling. In H. Ehrig et al., editor, *Proceedings of the ICGT 2008*, volume 5214 of *LNCS*, pages 147–161, Leicester, United Kingdom, September 7 - 13 2008. Springer-Verlag Berlin Heidelberg.

[ic12] G. Bernot, J.-P. Comet, and Z. Khalis. Gene regulatory networks with multiplexes. In *European Simulation and Modelling Conference Proceedings*, ISBN: 978-90-77381-44-1, pages 423–432, France, October 27st–29th 2008.

[ic13] G. Bernot, J.-P. Comet, E. Formenti, and S. Taati. Gene regulatory networks: the impact of distance between genes. In *19th International Symposium in Mathematical Theory of Networks and Systems (MTNS’10)*, Budapest (Hungary), July 5–9 2010.

[ic14] J.-P. Comet, J. Fromentin, G. Bernot, and O. Roux. A formal model for gene regulatory networks with time delays. In J.H. Chan, Ong Y.-S., and Cho S.-B., editors, *1st International Conference on Computational Systems-Biology and Bioinformatics (CSBio’2010)*, volume 115 of *Communications in Computer and Information Science (CCIS)*, pages 1–13, Bangkok (Thailand), November 3–5 2010. Springer.

- [ic15] J.-P. Comet, G. Bernot, A. Das, F. Diener, C. Massot, and A. Cessieux. Simplified models for the mammalian circadian clock. In *3rd International Conference on Computational Systems-Biology and Bioinformatics (CSBio'2012)*, volume 11 of *Procedia Computer Science*, pages 127–138, Bangkok (Thailand), October 3-5 2012.
- [ic16] J. Behaegel, J.-P. Comet, G. Bernot, E. Cornillon, and F. Delaunay. A hybrid model of cell cycle in mammals. In *6th International Conference on Computational Systems-Biology and Bioinformatics (CSBio'2015)*, Bangkok (Thailand), November 22-25 2015.
- [ic17] B. Miraglio, G. Bernot, J.-P. Comet, and C. Risso-De Faverney. A qualitative framework dedicated to toxicology. In *Proceedings of the 8th International Conference on Bioinformatics Models, Methods and Algorithms*, 2017.
- [ic18] B. Miraglio, G. Bernot, J.-P. Comet, and C. Risso-De Faverney. Detecting toxicity pathways with a formal framework based on equilibrium changes. In *Proceedings of the 15th conference on Computational Methods for Systems Biology (CMSB)*, 2017.
- [ic19] J. Behaegel, J.-P. Comet, and F. Folschette. Constraint identification using modified Hoare logic on hybrid models of gene networks. In *Proceedings of the 24th International Symposium on Temporal Representation and Reasoning (TIME)*, pages 5:1–5:21, 2017.
- [ic20] I. Grenet, Y. Yin, J.-P. Comet, and E. Gelenbe. Machine learning to predict toxicity of compounds. In *Proceedings of the 27th International Conference on Artificial Neural Networks (ICANN)*, volume 11139 of *LNCS*, pages 335–345, 2018.
- [ic21] J. Behaegel, J.-P. Comet, and M. Pelleau. Identification of dynamic parameters for gene networks. In *Proceedings of the 30th IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*, Volos, Greece., November 5-7 2018.
- [ic22] D. Boyenval, G. Bernot, H. Collavizza, and J.-P. Comet. What is a cell cycle checkpoint? the totembionet answer. In *Proceedings of the 18th International Conference on Computational Methods in Systems Biology (CMSB)*, volume 12314 of *LNCS*, pages 362–372, online, September 23-25 2020.
- [ic23] L. Gibart, G. Bernot, H. Collavizza, and J.-P. Comet. Totembionet enrichment methodology: Application to the qualitative regulatory network of the cell metabolism. In *Proceedings of the 14th International Joint Conference on Biomedical Engineering Systems and Technologies, Volume 3: BIOINFORMATICS*, volume 3, pages 85–92, 2021.
- [ic24] L. Gibart, H. Collavizza, and J.-P. Comet. Greening R. Thomas' framework with environment variables: a divide and conquer approach. In *Proceedings of the 19th International Conference on Computational Methods in Systems Biology (CMSB)*, LNBI, pages 36–56, September 22-24 2021.
- [ic25] R. Michelucci, J.-P. Comet, and D. Pallez. Evolutionary continuous optimization of hybrid gene regulatory networks. In *Proceedings of the 15th International Conference on Artificial Evolution*, LNCS, october 31-november 2 2022.
- [ic26] H. H. Sun, J.-P. Comet, M. Folschette, and M. Magnin. Condition for sustained oscillations in repressilator based on a hybrid modeling of gene regulatory networks. In *Proceedings of the 16th International Joint Conference on Biomedical Engineering Systems and Technologies - BIOINFORMATICS*, pages 29–40. INSTICC, SciTePress, 2023.
- [ic27] R. Michelucci, V. Callegari, J.-P. Comet, and D. Pallez. Cellular genetic algorithms for identifying variables in hybrid gene regulatory networks. In *Proceedings of the 27th European Conference, EvoApplications 2024, Held as Part of EvoStar*, volume 14634 of *LNCS*, pages 135–145. Springer, april 3–5 2024.
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