

Suzanne TOUZEAU

Born 20th December 1970, French

ISA – M2P2

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Inria – MACBES

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INRAE researcher in mathematical epidemiology (MathNum division)

Nov. 2012– **M2P2** team, Institut Sophia Agrobiotech

& **MACBES** team, Centre Inria d'Université Côte d'Azur

2000–2012 Applied Mathematics and Informatics research unit, INRA, Jouy-en-Josas

Education

1997 **PhD in Engineering Sciences**, Université Nice Sophia Antipolis, France: *Control models in fisheries*.

1993 **Master in Industrial Control**, ECL, INSA-Lyon, Universités Lyon 1 & Savoie, France.

1993 **Graduate degree in General Engineering**, École Centrale de Lyon (ECL), France.

Post-doctoral research experience

May–Nov. 2000 University of Edinburgh, Veterinary Epidemiology Group, Scotland.

March 1998 – Dec. 1999 CSIC, Institut de Ciències del Mar, Barcelona, Spain (EU Marie Skłodowska-Curie grant).

Sep. 1997 – Jan. 1998 Helsinki University of Technology, Systems Analysis Laboratory, Espoo, Finland.

April–July 1997 IFREMER, Laboratoire MAERHA, Nantes, France.

Research interests

- Development and analysis of mathematical models in **population dynamics**.
 - Mathematical analysis: model reduction, stability, control.
 - Numerical exploration: parameter identification, sensitivity analysis, simulation.
- Main applications in **crop protection**: plant pest and disease epidemiology; management of crop resistance; design, assessment and optimisation of sustainable control measures.
- Past applications in farm animal epidemiology and immunology, fishery management.

Main ongoing research projects

BEEP Behavioural Epidemiology and Evolution of Plant Pathogens, ANR [French National Research Agency], 2024–2028.

ENDURANCE ENhanced DURability AgaiNst Crop Enemies, ANR, 2024–2027.

CACOLAC Conceptual framework for analysing combinations of agro-ecological levers, Écophyto [French plan to reduce and improve the use of plant protection products], 2024–2027.

PAPEETE Promoting agroecology through the integrative prediction of health risks using participatory epidemiological surveillance data at territorial scale, Écophyto [French plan to reduce and improve the use of plant protection products], 2024–2027.

AIDS Cerise For and integrated and sustainable approach to the management of *Drosophila suzukii* in the cherry sector, Écophyto, 2024–2026.

MISTIC Computational models of crop plant microbial biodiversity, PEPR [French Research Priority Equipments and Programs] Agroecology and ICT, 2023–2028.

NEM-EMERGE An integrated set of novel approaches to counter the emergence and proliferation of invasive and virulent soil-borne nematodes, Horizon Europe, Farm2fork, 2023–2027.

EPITAG EPIdemiological modelling and control for Tropical AGriculture, Inria Associate team with Cameroon universities, 2017–2024; INRAE, TSARA programme, 2022–2024 – principal investigator.

Scientific supervision

Postdocs

- Frank NDJOMATCHOUA, Inference of a demo-genetic model for sustainable plant resistance, 2026–2027.
- Jules GUILBERTEAU, Modelling control strategies against *D. suzukii* in cherry orchards combining different plant protection levers, 2024–2026.
- Natacha Go, Immuno-epidemiological modelling, 2015–2017.
- Jordi FERRER SAVALL, Modelling Salmonella spread along the pork supply chain, 2014–2015.
- Sébastien GAUCEL, Modelling and simulation in veterinary epidemiology, 2006–2007.

PhD

- Jean-Marc MANDENG, *What strategies can promote sustainable crop protection in an agricultural landscape: a mathematical epidemiology approach incorporating information*, Université Côte d'Azur, ED STIC, 2026– (DS4H funding, EPITAG support)
- Armando Borel KENNE MELI, *Mathematical modelling of cassava mosaic disease*, University of Yaoundé I, Cameroon, 2025– (EPITAG support)
- Scott HESLOP, *A demo-genetic approach to inferring the demographic impact of resistance bypasses in crop varieties: application to *Leptosphaeria maculans*, the agent of blackleg disease in rapeseed*, Université de Lorraine, ED SIRENa, 2025– (INRAE & ENDURANCE funding)
- Frank KEMAYOU, *Mathematical modelling and analysis of *Radopholus similis* impact on plantain production*, University of Douala, Cameroon, 2022– (EPITAG support).
- Joseph PENLAP TAMAGOUA, *Ecophysiological modeling of plant-nematode interactions. Understanding the origins and consequences of differential plant susceptibility*, Université Côte d'Azur, ED STIC, 2022–2026 (Inria-INRAE funding), HAL: [tel-05599819](#).
- Marine COURTOIS, *Modeling the sterile insect technique in an agricultural context: how to integrate biological and technical realities to optimize its deployment?*, Université Côte d'Azur, ED SVS, 2022–2025 (INRAE funding), HAL: [tel-05530433](#)
- Aurélien KAMBEU YOUNBI, *Development and analysis of a self-financing model for cabbage crop including pest control*, University of Dschang, Cameroon, 2020–2026 (French Embassy grant, EPITAG support), HAL: [tel-05558339](#).
- Clotilde DJUIKEM, *Modelling and control of perennial plant phytopathogens*, Université Côte d'Azur, ED STIC, 2019–2023 (Inria funding, EPITAG support), HAL: [tel-04026720](#).
- Yves FOTSO FOTSO, *Modelling, analysis and control of coffee berry borer*, University of Dschang, Cameroon, 2016–2022 (EPITAG support), HAL: [tel-03608463](#).
- Israël TANKAM CHEDJOU, *Modelling, analysis and control of plantain plant-parasitic nematodes*, University of Yaoundé I, Cameroon, 2015–2021 (EPITAG support), HAL: [tel-03217816](#).
- Samuel NILUSMAS, *Sustainable management of root-knot nematodes in horticultural crops: modelling and optimisation of resistance deployment and agricultural practices*, Université Côte d'Azur, ED STIC, 2016–2020 (INRA & PACA region funding), HAL: [tel-03185191](#).
- Natacha GO, *Modelling the immune response to the Porcine Respiratory and Reproductive Syndrome virus*, AgroParis-Tech, ED ABIES, 2011–2014 (ED funding), HAL: [tel-01100983](#).
- Antoine PERASSO, *Parameter identifiability for systems described by partial differential equations: application to population dynamics*, Université Paris-Sud 11, ED MathSTIC, 2006–2009 (ED funding), HAL: [tel-00464272](#).
- Najat ZIYADI, *Studying mathematical and individual-based models in epidemiology: application to scrapie transmission dynamics in a sheep flock*, Cadi Ayyad University, Marrakech, Morocco, 2004–2008 (IRD grant), HAL: [tel-02823529](#).
- Amandine LURETTE, *Modelling to assess control measures for *Salmonella* carriage in slaughter pigs*, Université Rennes 1, ED VAS, 2004–2007 (INRA ASC funding), HAL: [tel-02823809](#).

Engineers

- Gianmarco RASI, *Inference of a demo-genetic model for sustainable plant resistance*, 2026.
- Jean Bienvenue DINAHARISON, *Development of a digital platform for simulating *D. suzukii* control strategies in cherry orchards*, 2025–27.
- Mohammed BOUZIANE, *Code optimisation for the *D. suzukii* dynamic model in cherry orchards*, 2025.
- Guillaume DUPONT, *Mathematical modelling of *M. unipuncta*, a pasture pest*, 2025.

Internships 18 Master and 4 Bachelor interns, 2004–2023.

Teaching experience

Research schools

- CIMPA Mathematical and statistical modeling of complex systems, N'Djamena, Chad, Jan. 2023 – lecturer.
- CIMPA Vert Numérique: biologie mathématique et écologie théorique, Tunisia, Sep. 2022 – co-organiser and lecturer.
- Data and Models in Ecology and Evolution, Institut Pascal, France, July 2019 – lecturer.
- CIMPA-CETIC Mathematical and Computer Models in Epidemiology, Ecology and Agronomy, Yaoundé, Cameroon, Sep. 2016 – scientific committee member and lecturer.
- **EpiCasa** Introduction to epidemiology: mathematical and statistical models and methods, Casablanca, Morocco, Nov. 2007, April 2010 & April 2012 (CIMPA school) – organiser and lecturer.
- UNESCO Chair in Mathematics and Development, 5th Semester Mathematics for life sciences, Tunis, Tunisia, Feb. 2007 – lecturer.
- CIMPA-UNESCO Mathematical tools and methods for the analysis and the regulation of fisheries, Nouadhibou, Mauritania, July 2005 – lecturer.

Graduate courses

- *Data analysis*, Polytech Nice Sophia, 4th Engineering year, 2014–2019 (25–35 hours/year).
- *Epidemiological modelling*, AgroParisTech, Paris, 2002–2011 (3–9 hours/year).

Scientific expertise

PhD examination panels

- Mahugnon Gildas DADJO, Université de Montpellier, 2025, HAL: [tel-05687585](#).
- Ségolène LIREUX, Université Marie et Louis Pasteur, 2025, HAL: [tel-05227877](#).
- Andrea RADICI, Avignon Université, 2023, HAL: [tel-04443924](#).
- Stefano CASAGRANDA, Université Nice Sophia Antipolis, 2017, HAL: [tel-02169197](#).
- David DEMORY, Université Pierre et Marie Curie, 2017, HAL: [tel-01653093](#).
- Aurélie COURCOUL, Université Rennes 1, 2010, HAL: [tel-00591053](#).
- Sapna NUNDLOLL, Université Nice Sophia Antipolis, 2009, HAL: [tel-00850358](#).

Recruitment panels

- INRA/INRAE junior research scientists (various research profiles), 2008–2024.
- University of Bordeaux lecturer (applied mathematics), 2018.
- AgroParisTech lecturer (applied mathematics), 2015.
- INRA engineers (scientific computing), 2002 & 2006.
- INRA “ASC” [6-year doctoral + postdoctoral grants], 2004 & 2010.

International committees

- Centre International de Mathématiques Pures et Appliquées (CIMPA), executive team, since 2024 – scientific officer.
- Ovide Arino Outreach Award committee, ESMTB & SFBT, since 2019.
- Ibni Prize awarding committee, since 2022.

National committees

- Inria, national commission for secondment of researchers, 2021.
- INRAE, Sustainable Management of Crop Health (SuMCrop) metaprogramme, steering committee, since 2016.
- INRAE, Institut Sophia Agrobiotech council, since 2016 – elected member.
- Inria, International Laboratory for Computer Sciences and Applied Mathematics (LIRIMA), evaluation panel, 2014.
- INRA, CSS [researcher evaluation] in Mathematics, Bioinformatics and Artificial Intelligence, 2007–2015 – appointed & board member.
- INRA, Applied Mathematics and Informatics division, scientific board, 2006–2016 – elected member.
- Ministry of Agriculture, CNECA [lecturer evaluation], section 3 in Mathematics, physics, computer science, rural and process engineering, 2006–2013 – alternate appointed member.

Conferences

- Congress of the French Society of Plant Pathology (SFP), Bordeaux, France, 2025 – scientific committee.
- International Congress of Plant Pathology (ICPP), “How to combine remote sensing with epidemiological modelling to improve plant disease management?” satellite event, Lyon, France, 2023 – organisation committee.
- African Conference on Research in Computer Science and Applied Mathematics (CARI), 2016, 2022, 2024, 2026 – programme committee & PC chair (2026).
- Alcalá 2nd International Conference on Mathematical Ecology (AICME II), “Modelling the spread of diseases in animal populations” session, Alcalá, Spain, 2003 – session organiser.

Journals

- *Interstices*, an Inria online scientific outreach journal, since 2024 – editorial board.
- *PLOS One*, since 2018 – academic editor.

Recent publications

- [1] COURTOIS, M. A., VAN OUDENHOVE, L., TOUZEAU, S., GROGNARD, F., and MAILLERET, L., 2026. Polyandry: A threat or an opportunity for the sterile insect technique? *PLOS Computational Biology*, 22(4): e1014212. DOI: [10.1371/journal.pcbi.1014212](#) – HAL: [hal-05208104](#)
- [2] KEMAYOU, F., DJEMA, W., BOWONG, S., GROGNARD, F., and TOUZEAU, S., 2026. Alternating bang-bang biocontrol regimes for optimized banana yield under nematode pressure. In *2026 European Control Conference (ECC)* (Reykjavík, Iceland), IEEE, pp. 3186–3191. HAL: [hal-05730523](#)
- [3] PENLAP TAMAGOUA, J. J., GROGNARD, F., BALDAZZI, V., and TOUZEAU, S., 2026. Plant tolerance is explained by resource-based plant-nematode interactions. *Mathematical Biosciences*, 398: 109711. DOI: [10.1016/j.mbs.2026.109711](#) – HAL: [hal-05394092](#)

- [4] COURTOIS, M. A., MAILLERET, L., TOUZEAU, S., VAN OUDENHOVE, L., and GROGNARD, F., 2025. How residual fertility impacts the efficiency of crop pest control by the sterile insect technique. *Bulletin of Mathematical Biology*, 87(2): 25. DOI: [10.1007/s11538-024-01401-1](https://doi.org/10.1007/s11538-024-01401-1) – HAL: [hal-04403761](https://hal.archives-ouvertes.fr/hal-04403761)
- [5] MIKABERIDZE, A., D. CRUZ, C., ZERIHUN, A., BARRETO, A., BECK, P., CALDERON, R., CAMINO, C., CAMPBELL, R. E., K. L. DELALIEUX, S., FABRE, F., FALLA, E., FRASER, S., M. GOLD, K., GONGORA-CANUL, C., HAMELIN, F. M., O. C. HARTEVELD, D., HONG, C.-F., LECLERC, M., LEE, D., LOBO JR., M., MAHLEIN, A.-K., MCLAY, E., MELLO, P., PARNELL, S., RASCHER, U., RICH, J., SALOTTI, I., SOUBEYRAND, S., SPRAGUE, S., SURANO, A., D. TAKOOREE, S., TAYLOR JR., T. H., TOUZEAU, S., ZARCO-TEJADA, P. J., and J. CUNNIFFE, N., 2025. Opportunities and challenges in combining optical sensing and epidemiological modelling. *Phytopathology*, 115(10): 1260–1285. DOI: [10.1094/phyto-11-24-0359-fi](https://doi.org/10.1094/phyto-11-24-0359-fi) – HAL: [hal-05100639](https://hal.archives-ouvertes.fr/hal-05100639)
- [6] DJUIKEM, C., GROGNARD, F., and TOUZEAU, S., 2024. Impact of ontogenic changes on the dynamics of a fungal crop disease model motivated by coffee leaf rust. *Journal of Mathematical Biology*, 88(3): 30. DOI: [10.1007/s00285-024-02053-4](https://doi.org/10.1007/s00285-024-02053-4) – HAL: [hal-04484395](https://hal.archives-ouvertes.fr/hal-04484395)
- [7] FOTSO FOTSO, Y., TOUZEAU, S., TSANOU, B., GROGNARD, F., and BOWONG, S., 2024. Optimal impulsive control of coffee berry borers in a berry age-structured epidemiological model. *Revue Africaine de Recherche en Informatique et Mathématiques Appliquées*, 38(Numéro spécial CARI 2022–2023): 12. DOI: [10.46298/arima.11338](https://doi.org/10.46298/arima.11338) – HAL: [hal-04100767](https://hal.archives-ouvertes.fr/hal-04100767)
- [8] KAMBEU YOUNBI, A., TOUZEAU, S., GROGNARD, F., and TSANOU, B., 2024. Self-financing model for cabbage crops with pest management. *Mathematical Biosciences*, 378: 109332. DOI: [10.2139/ssrn.4793810](https://doi.org/10.2139/ssrn.4793810) – HAL: [hal-04589904](https://hal.archives-ouvertes.fr/hal-04589904)
- [9] NAVARRETE, M., CASAGRANDE, M., ANGEON, V., BOUVIER-D'YVOIRE, C., CHAVE, M., DELCONTE, R., DJIAN-CAPORALINO, C., DUFILS, A., ECKERT, C., EL BOUKILI, C., FERRE, A.-S., GENETIEZ, E., HOSTALNOU, E., LEFÈVRE, A., LICHOU, G., MAILLERET, L., LESUR-DUMOULIN, C., MOTHES, S., PARROT, L., PLANAS, G., ROCHE, R., SABATIER, R., SIMON, S., and TOUZEAU, S., 2024. Construire des innovations couplées à l'échelle des territoires pour soutenir la réduction de l'usage des produits phytosanitaires en production maraîchère. *Innovations Agronomiques*, 96: 40–57. DOI: [10.17180/ciag-2024-vol96-art04](https://doi.org/10.17180/ciag-2024-vol96-art04) – HAL: [hal-04727645](https://hal.archives-ouvertes.fr/hal-04727645)
- [10] DJUIKEM, C., GROGNARD, F., and TOUZEAU, S., 2023. Impulsive modelling of rust dynamics and predator releases for biocontrol. *Mathematical Biosciences*, 356: 108968. DOI: [10.1016/j.mbs.2023.108968](https://doi.org/10.1016/j.mbs.2023.108968) – HAL: [hal-03952381](https://hal.archives-ouvertes.fr/hal-03952381)
- [11] FOTSO FOTSO, Y., TOUZEAU, S., GROGNARD, F., TSANOU, B., and BOWONG, S., 2023. Optimal control of coffee berry borers: synergy between bio-insecticide and traps. *Journal of Optimization Theory and Applications*, 196(3): 882–899. DOI: [10.1007/s10957-022-02151-7](https://doi.org/10.1007/s10957-022-02151-7) – HAL: [hal-03954863](https://hal.archives-ouvertes.fr/hal-03954863)
- [12] SAUBIN, M., LOUET, C., BOUSSET, L., FABRE, F., FUDAL, I., GROGNARD, F., HAMELIN, F. M., MAILLERET, L., STOECKEL, S., TOUZEAU, S., PETRE, B., and HALKETT, F., 2023. Improving sustainable crop protection using population genetics concepts. *Molecular Ecology*, 32(10): 2461–2471. DOI: [10.1111/mec.16634](https://doi.org/10.1111/mec.16634) – HAL: [hal-03394837](https://hal.archives-ouvertes.fr/hal-03394837)
- [13] FOTSO FOTSO, Y., TOUZEAU, S., TSANOU, B., GROGNARD, F., and BOWONG, S., 2022. Mathematical modelling of a pest in an age-structured crop model: The coffee berry borer case. *Applied Mathematical Modelling*, 110: 193–206. DOI: [10.1016/j.apm.2022.05.042](https://doi.org/10.1016/j.apm.2022.05.042) – HAL: [hal-03699541](https://hal.archives-ouvertes.fr/hal-03699541)
- [14] DEMORY, D., WEITZ, J., BAUDOUX, A.-C., TOUZEAU, S., SIMON, N., RABOUILLE, S., SCIANDRA, A., and BERNARD, O., 2021. A thermal trade-off between viral production and degradation drives phytoplankton-virus population dynamics. *Ecology Letters*, 24(6): 1133–1144. DOI: [10.1111/ele.13722](https://doi.org/10.1111/ele.13722) – HAL: [hal-03066279](https://hal.archives-ouvertes.fr/hal-03066279)
- [15] DJUIKEM, C., YABO, A. G., GROGNARD, F., and TOUZEAU, S., 2021. Mathematical modelling and optimal control of the seasonal coffee leaf rust propagation. *IFAC-PapersOnLine*, 54(5): 193–198. Proceedings of IFAC-ADHS 2021. DOI: [10.1016/j.ifacol.2021.08.497](https://doi.org/10.1016/j.ifacol.2021.08.497) – HAL: [hal-03274865](https://hal.archives-ouvertes.fr/hal-03274865)
- [16] DJUIKEM, C., GROGNARD, F., TAGNE WAFO, R., TOUZEAU, S., and BOWONG, S., 2021. Modelling coffee leaf rust dynamics to control its spread. *Mathematical Modelling of Natural Phenomena*, 16: 26. DOI: [10.1051/mmnp/2021018](https://doi.org/10.1051/mmnp/2021018) – HAL: [hal-03188365](https://hal.archives-ouvertes.fr/hal-03188365)
- [17] FOTSO FOTSO, Y., TOUZEAU, S., TSANOU, B., BOWONG, S., and GROGNARD, F., 2021. Modelling and optimal strategy to control coffee berry borer. *Mathematical Methods in the Applied Sciences*, 44(18): 14569–14592. DOI: [10.1002/mma.7726](https://doi.org/10.1002/mma.7726) – HAL: [hal-03334090](https://hal.archives-ouvertes.fr/hal-03334090)
- [18] TANKAM CHEDJOU, I., GROGNARD, F., TEWA, J.-J., and TOUZEAU, S., 2021. When and how to fallow: first steps towards banana crop yield improvement through optimal and sustainable control of a soilborne pest. *Journal of Interdisciplinary Methodologies and Issues in Science*, 8 – Digital Agriculture in Africa. DOI: [10.18713/JIMIS-120221-8-4](https://doi.org/10.18713/JIMIS-120221-8-4) – HAL: [hal-03103785](https://hal.archives-ouvertes.fr/hal-03103785)

- [19] TANKAM CHEDJOU, I., GROGNARD, F., TEWA, J. J., and TOUZEAU, S., 2021. Optimal and sustainable management of a soilborne banana pest. *Applied Mathematics and Computation*, 397: 125883. DOI: [10.1016/j.amc.2020.125883](https://doi.org/10.1016/j.amc.2020.125883) – HAL: [hal-03111065](https://hal.archives-ouvertes.fr/hal-03111065)
- [20] EZANNO, P., ANDRAUD, M., BEAUNÉE, G., HOCH, T., KREBS, S., RAULT, A., TOUZEAU, S., VERGU, E., and WIDGREN, S., 2020. How mechanistic modelling supports decision making for the control of enzootic infectious diseases. *Epidemics*, 32: 100398. DOI: [10.1016/j.epidem.2020.100398](https://doi.org/10.1016/j.epidem.2020.100398) – HAL: [hal-02895529](https://hal.archives-ouvertes.fr/hal-02895529)
- [21] NILUSMAS, S., MERCAT, M., PERROT, T., DJIAN-CAPORALINO, C., CASTAGNONE-SERENO, P., TOUZEAU, S., CALCAGNO, V., and MAILLERET, L., 2020. Multi-seasonal modelling of plant-nematode interactions reveals efficient plant resistance deployment strategies. *Evolutionary Applications*, 13(9): 2206–2221. DOI: [10.1111/eva.12989](https://doi.org/10.1111/eva.12989) – HAL: [02775269](https://hal.archives-ouvertes.fr/hal-02775269)
- [22] TANKAM CHEDJOU, I., TOUZEAU, S., MAILLERET, L., TEWA, J.-J., and GROGNARD, F., 2020. Modelling and control of a banana soilborne pest in a multi-seasonal framework. *Mathematical Biosciences*, 322: 108324. DOI: [10.1016/j.mbs.2020.108324](https://doi.org/10.1016/j.mbs.2020.108324) – HAL: [hal-02775460](https://hal.archives-ouvertes.fr/hal-02775460)
- [23] BRESCH, C., CARLESSO, L., SUAY-CORTES, R., VAN OUDENHOVE, L., TOUZEAU, S., FATNASSI, H., OTTENWAEELDER, L., PARIS, B., PONCET, C., MAILLERET, LUDOVIC MESSELINK, G. J., and PAROLIN, P., 2019. In search of artificial habitats for predatory mites. *Biocontrol Science and Technology*, 29(2): 131–148. DOI: [10.1080/09583157.2018.1540030](https://doi.org/10.1080/09583157.2018.1540030) – HAL: [hal-01947693](https://hal.archives-ouvertes.fr/hal-01947693)
- [24] GO, N., BELLOC, C., BIDOT, C., and TOUZEAU, S., 2019. Why, when and how should exposure be considered at the within-host scale? A modelling contribution to PRRSV infection. *Mathematical Medicine and Biology: A Journal of the IMA*, 36(2): 179–206. DOI: [10.1093/imammb/dqy005](https://doi.org/10.1093/imammb/dqy005) – HAL: [hal-01947667](https://hal.archives-ouvertes.fr/hal-01947667)
- [25] GO, N., TOUZEAU, S., ISLAM, Z., BELLOC, C., and DOESCHL-WILSON, A., 2019. How to prevent viremia rebound? Evidence from a PRRSV data-supported model of immune response. *BMC Systems Biology*, 13: 15. DOI: [10.1186/s12918-018-0666-7](https://doi.org/10.1186/s12918-018-0666-7) – HAL: [hal-01999499](https://hal.archives-ouvertes.fr/hal-01999499)
- [26] CASAGRANDA, S., TOUZEAU, S., ROPERS, D., and GOUZÉ, J.-L., 2018. Principal process analysis of biological models. *BMC Systems Biology*, 12: 68. DOI: [10.1186/s12918-018-0586-6](https://doi.org/10.1186/s12918-018-0586-6) – HAL: [hal-01818033](https://hal.archives-ouvertes.fr/hal-01818033)
- [27] HOCH, T., TOUZEAU, S., VIET, A.-F., and EZANNO, P., 2018. Between-group pathogen transmission: from processes to modelling. *Ecological Modelling*, 383: 138–149. DOI: [10.1016/j.ecolmodel.2018.05.016](https://doi.org/10.1016/j.ecolmodel.2018.05.016) – HAL: [hal-01815766](https://hal.archives-ouvertes.fr/hal-01815766)
- [28] FERRER SAVALL, J., BIDOT, C., LEBLANC-MARIDOR, M., BELLOC, C., and TOUZEAU, S., 2016. Modelling *Salmonella* transmission in pigs from farm to slaughter house: interplay between logistic diversity and epidemiological uncertainty. *International Journal of Food Microbiology*, 229: 33–43. DOI: [10.1016/j.ijfoodmicro.2016.03.020](https://doi.org/10.1016/j.ijfoodmicro.2016.03.020) – HAL: [hal-01334840](https://hal.archives-ouvertes.fr/hal-01334840)
- [29] GO, N., BIDOT, C., BELLOC, C., and TOUZEAU, S., 2014. Integrative model of the immune response to a pulmonary macrophage infection: what determines the infection duration? *PLOS One*, 9(9): e107818. DOI: [10.1371/journal.pone.0107818](https://doi.org/10.1371/journal.pone.0107818) – HAL: [hal-01099937](https://hal.archives-ouvertes.fr/hal-01099937)
- [30] PAPAÏX, J., TOUZEAU, S., MONOD, H., and LANNOU, C., 2014. Can epidemic control be achieved by altering landscape connectivity in agricultural systems? *Ecological Modelling*, 284: 35–47. DOI: [10.1016/j.ecolmodel.2014.04.014](https://doi.org/10.1016/j.ecolmodel.2014.04.014) – HAL: [hal-01099953](https://hal.archives-ouvertes.fr/hal-01099953)
- [31] PAPAÏX, J., ADAMCZYK-CHAUVAT, K., BOUVIER, A., KIÉU, K., TOUZEAU, S., LANNOU, C., and MONOD, H., 2014. Pathogen population dynamics in agricultural landscapes: The Ddal modelling framework. *Infection, Genetics and Evolution*, 27: 509–520. DOI: [10.1016/j.meegid.2014.01.022](https://doi.org/10.1016/j.meegid.2014.01.022) – HAL: [hal-01099950](https://hal.archives-ouvertes.fr/hal-01099950)

Misc

- Member of scientific societies:
 - African Society in Digital Science (ASDS), since 2024;
 - Centre International de Mathématiques Pures et Appliquées (CIMPA), since 2023;
 - Société Francophone de Biologie Théorique (SFBT), since 2022;
 - European Society for Mathematical and Theoretical Biology (ESMTB), since 2004.
- Elected board member of ADAS [works council for social activities], INRA Jouy-en-Josas, 2002–2010.