

# CURRICULUM VITAE

NAME	GENSBITTEL
First Name	Fabien
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E-mail	Fabien.Gensbittel@tse-fr.eu
Date of Birth	December 23, 1980
Civil status	Married, one child (born in 2016)

## Current position

2011-present Maître de Conférences (assistant professor) in applied mathematics at Toulouse School of Economics, University Toulouse Capitole, Research group in Decision Mathematics and Statistics

## Education

2010–2011 ATER, University Paris VI, Pierre et Marie Curie. Equipe Combinatoire et Optimisation

2007-2010 **Ph.D. in applied mathematics, University Paris 1.**  
Advisor: Bernard De Meyer  
Subject: *Asymptotic analysis of repeated games with incomplete information*

2006–2007 Master's degree, Applied mathematics, University Paris I.

2005 Agrégation de mathématiques. (French degree for teaching).

## Research interests

*Main topics:* Game theory. Dynamic games. Games with incomplete information.

*Major current research topics:*

- Value of information in games
- Stopping games with incomplete information
- Bayesian persuasion
- Differential games with incomplete information and imperfect monitoring
- Competitive selection problems
- Hybrid games played by strategic players/learning algorithms

## Research Production

### Published and Accepted Papers

1. Value-based distance between information structures  
**Theoretical Economics**, to appear (with M. Peski and J. Renault)
2. A Dynkin game on assets with incomplete information on the return  
**Mathematics of Operations Research**, 2021, 46(1), pp.28-60 (with T.De Angelis and S.Villeneuve)
3. Optimal Strategies in ZeroSum Repeated Games with Incomplete Information:The Dependent Case,  
**Dynamic Games and Applications**, 2020, 10, pp. 819–835 (with M.Oliu-Barton)
4. Continuous time Markov games with asymmetric information  
**Dynamic Games and Applications**, 2019, 9(3), pp. 671-699
5. Stopping games with asymmetric information.  
**Mathematics of Operations Research**, 44(1), pp. 277-302, 2019 (with C. Grün)
6. Zero-sum revision games.  
**Games and Economic Behavior**, 108, pp. 504-522, (with S.Lovo, J.Renault, and T. Tomala).

7. A two player zero-sum game where only one player observes a Brownian motion.  
**Dynamic Games and Applications**, 8(2), pp. 280-314, 2018 (with C.Rainer).
8. A probabilistic representation for the value of zero-sum differential games with incomplete information on both sides.  
**SIAM Journal on Control and Optimization**, 55(2), pp. 693–723, 2017 (with C.Rainer).
9. Continuous-time limits of dynamic games with incomplete information and a more informed player.  
**International Journal of Game Theory**, 45(1), pp. 321-352, 2016.
10. The value of Markov Chain Games with incomplete information on both sides.  
**Mathematics of Operations Research**, 40(4), pp. 820–841, 2015 (with J.Renault).
11. Extensions of the Cav(u) theorem for repeated games with one-side information.  
**Mathematics of Operations Research**, 40(1), pp. 80-104, 2015.
12. Existence of the uniform value in repeated games with a more informed controller.  
**Journal of Dynamics and Games**, 1(3), pp. 411–445, 2014 (with M. Oliu-Barton and X. Venel)
13. Covariance control problems of martingales arising from game theory.  
**SIAM Journal on Control and Optimization**, 51(2), pp. 1152–185, 2013

### Pre-publications

1. Investment Timing and Technological Breakthroughs (with J-P Décamps and T. Mariotti)
2. On a competitive selection problem (with D.Pizarro and J.Renault)

### Work in progress

- Continuous-time dynamic information provision (with C.Rainer)
- On the structure of mixed equilibria in war of attrition models
- On the set of equilibria in continuous-time games with incomplete information

## Grants

2019-present	Member of the chair Game Theory and Artificial Intelligence hold by Jérôme Renault, funded by ANITI
2014-2018	Member of the ANR project GAGA (Geometric aspect of game theory), coordinated by V. Perchet with researchers from University Paris 7, Paris Dauphine, Grenoble and University Toulouse 1 Capitole
2016	Member of the PGMO project Stochastic Revision Games with J.Renault (TSE), S. Lovo and T. Tomala (HEC)
2015	Coordinator of the CNRS PEPS project: Mathematical Models and Social Interactions, with J.Renault (TSE), S. Lovo and T. Tomala (HEC) about Hybrid Dynamic Games (Playing at discrete times in a continuous time environment)
2011-2015	Member of the ANR project JEUDY (Long time behavior for dynamic games in continuous and discrete time), coordinated by Marc Quincampoix with researchers from Brest, HEC Paris, Polytechnique and University Toulouse 1 Capitole.

## Conferences, Seminars

### Invited Talks in International Conferences and Workshops

- 2021: Workshop on Stochastic Games with Partial and Asymmetric Information, Collegio Carlo Alberto, Turin
- 2018: Paris Symposium on Games, IHP
- 2015: Workshop Incomplete Information : Repeated Games and Cheap-Talk, Paris 1
- 2015: Conference in honor of Abraham Neyman, Hebrew university of Jerusalem
- 2015: French Symposium on Games, University Paris Diderot, Paris
- 2015: Workshop Strategic aspects of information in games and financial markets, Paris Dauphine
- 2014: Mathematical Aspects of Game Theory and Applications. Roscoff.
- 2013: Workshop on Stochastic Methods in Game Theory. Erice, Italy.
- 2013: Workshop: Stochastic Dynamic Games. HIM, Bonn.
- 2012: Workshop: Games, Model Uncertainty and Related Fields. Jinan, China.
- 2011: Mathematical Aspects of Game Theory and Applications. Toulouse
- 2011: Workshop on Stochastic Differential Games. Weihai, China

## Invited Seminars

- 2015: Game theory seminar, Maastricht University
- 2014: University of Brest (UBO). Applied analysis seminar
- 2014: Federman center for the study of rationality, Hebrew university of Jerusalem
- 2014: Games research group seminar, Tel-Aviv University
- 2013: Parisian Optimization seminar (SPO), IHP
- 2012: Optimization seminar (SPOT). University Toulouse Capitole.
- 2012: Parisian seminar of game theory, IHP.
- 2011: Applied analysis seminar. University of Brest.
- 2010: Mathematics of Decision seminar. TSE, University Toulouse Capitole.
- 2010: Parisian seminar of game theory, IHP.
- 2008: Parisian seminar of game theory, IHP.

## Contributed Talks

- 2014: International Symposium on Dynamic Games and Applications, University of Amsterdam
- 2012: International Conference on Game Theory, Stony Brook.
- 2012: Games and Strategy in Paris (in honor of Sylvain Sorin's 60th birthday).
- 2012: SMAI-MODE Days. Dijon.
- 2011: Austrian-French-German Conference on Optimization. Toulouse
- 2010: SMAI-MODE Days. Limoges. **Young researchers best presentation award.**
- 2009: QED Conference. Amsterdam.

## National Workshops

- 2021: Workshop on Dynamic Games, Quimper
- 2017: Toulouse 1/Toulouse 3 meeting at TSE.
- 2013: Workshop "Repeated games/Differential games". Roscoff.
- 2012: Workshop "Repeated games/Differential games". Foljuif.
- 2009: Workshop "Repeated games/Differential games(IV)". Paris.
- 2008: Workshop "Repeated games/Differential games(III)". Roscoff.

## Organization of conferences, thematic sessions and seminars

- Member of the organization committee of the SMAI-MODE days 2016 in Toulouse.
- Co-Organizer of the MAD seminar in TSE for the years 2013-2016
- Organizer of the thematic session Game Theory in the 2016 SMAI-MODE days in Toulouse
- Organizer of the thematic session Dynamic games in the 2015 SMAI Congress in Seignosses
- Organizer of the PhD game theory seminar in IHP Paris in 2009-2010

## Students Supervision and Internships

2020-present	Post-doc Co-advisor of Dana Pizarro with J. Renault
2020-present	PhD Co-advisor of Maurizio D'Andrea with J. Renault
2020	1st year Magistère Thesis of Srecko Durasinovic: On concentration inequalities and applications in statistics and machine learning
2017-present	PhD Co-advisor of Natalia Kovaleva with J-P Decamps since september 2017
2017-2018	Master 1 thesis of Yasser Abbas: On all-pay auctions with incomplete information
2017	Co-supervision, with J.Renault, of the internship of P. Brunello, 1st year ENSAE student, June 12-July 7 on the conjectures of the Lonely Runner and of the Quitting Games.
2015-2016	Master 1 thesis Laurent Geran: On the impact of the graduation system on students' effort
2013	Co-supervision, with J.Renault of the memoir of Hugo Martin, L3 ENS Cachan Bretagne

## Recruitment Committees

Member of recruitment committees for maître de conférences in applied mathematics (section 26)

- 2013: University Toulouse 1 Capitole, TSE, GREMAQ
- 2014: University Paris 1, CES
- 2017: University Aix-Marseille, GREQAM

## Administrative responsibilities

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| 2016-present | Responsable pédagogique for the 3rd year of the double Licence Economie and MIASHS   |
| 2014-2018    | Member of the Bureau du département de Mathématiques, University of Toulouse Capitole  |
| 2014-2017    | Member of the board of the MODE (Mathematics of Optimization and Decision) group of the french SMAI (Society for Applied and Industrial Mathematics) |

## Refereeing

Refereeing for journals: Mathematics of Operations Research, Journal of Economic Theory, Theoretical Economics, Games and Economic Behavior, Annals of Applied Probability, SIAM Journal on Control and Optimization, Journal of Mathematical Analysis and Applications, Stochastic Processes and their applications, Applied Mathematics and Optimization, Journal of Mathematical Economics, Dynamic Games and Applications, International Journal of Game Theory, Journal of Dynamic and Games, Operation Research Letters

## Teaching

### Courses

- Master 2: Introduction to stochastic calculus (first part of stochastic control in economics)
- Master 2: Refresher on convex analysis
- Master 1: Games and Equilibria
- Licence 3: Probability, Advanced analysis, Optimization

### Tutorials

- Master 2: Game Theory
- Master 1: Martingales and Markov chains, Game theory, Convex analysis, Optimization
- Licence 3: Decision Mathematics, Optimization, Advanced analysis, Linear programming, Topology, Differential calculus
- Licence 2: Oral examinations (kholles)
- Licence 1: Mathematics (fundamentals), oral examinations (kholles)

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