Curriculum Vitae

Date: June 2019

Contact Information

- Name: Josu Doncel

- Nationality: Spanish

- Date and Place of Birth: 07/10/1985. In Getxo (Spain).

- Status: Teaching Assistant

- Origin Institution: University of the Basque Country (Spain)

- Address: Department of Applied Mathematics and Statistics and Operations Research
  University of the Basque Country
  Barrio Sarriena s/n
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Education

2015 PhD Degree in Computer Science. Université de Toulouse. France.
Title: *Efficiency of Distributed Queueing Games and of Path Discovery Algorithms.*
Advisors: Olivier Brun and Balakrishna Prabhu.

2011 Master Degree in Mathematical Modelling, Statistics and Computation. University of the Basque Country. Spain. Title: *Development and Testing of Index Policies in Internet Routers.*
Advisors: Urtzi Ayesta and Peter Jacko.

2010 Bachelors degree in Mathematics. University of the Basque Country. Spain.

2007 Bachelors degree in Industrial Engineering, in Industrial Electronics. University of the Basque Country. Spain.

Research Experience

2017–Today Assistant Professor. University of the Basque Country. Spain.

2018 Invited professor for 3 months at laboratory DAVID. France.

2017 Invited professor for 2 months at Inria Paris. France.

2015–2017 Postdoctoral Researcher. INRIA Grenoble Rhones Alpes (Polaris Team). France.

2012–2015 PhD Student. LAAS-CNRS. France.

2011–2011 Intern Researcher. BCAM-Basque Center for Applied Mathematics. Spain.

2010–2011 Research Staff. University of the Basque Country. Spain.

Research Publications

Submitted Articles

S2 J. Doncel. "Performance Balancing Size-Interval Routing Policies".

S1 J. Doncel, N. Gast, B. Gaujal. "A Mean-Field Games Analysis of SIR dynamics with vaccinations". https://hal.archives-ouvertes.fr/hal-01496885

Journal Articles

J8 J. Anselmi, J. Doncel. "Asymptotically Optimal Size-Interval Task Assignments". Accepted in Transactions on Parallel and Distributed Systems. DOI: 10.1109/TPDS.2019.2920121

J7 J. Doncel, N. Gast, B. Gaujal. "Discrete Mean Field Games: Existence of Equilibria and Convergence". Accepted in Journal of Dynamics and Games. DOI: 10.3934/jdg.2019016

J6 J. Doncel, J.M. Fourneau. "Energy Packet Networks with Multiple Energy Packet Requirements". Accepted in Probability in the Engineering and Informational Sciences. DOI: 10.1017/S0269964819000226

J5 C. Thraves-Caro, J. Doncel, O. Brun. "Optimal Path Discovery Problem with Homogeneous Knowledge". Accepted in Theory of Computing Systems. DOI: 10.1007/s00224-019-09928-w

J4 J. Doncel, S. Aalto, U. Ayesta. "Performance Degradation of Scale in Parallel-Server Systems". IEEE/ACM Transactions on Networking, Volume 47 (2), April 2019.

J3 J. Doncel, U. Ayesta, O. Brun, B. J. Prabhu. "A Resource Sharing Game with Relative Priorities". Performance Evaluation Volume 79, September 2014.

J2 J. Doncel, U. Ayesta, O. Brun, B. Prabhu. "Is the Price of Anarchy the right measure for Load Balancing Games?". ACM Transactions on Internet Technology (ToIT) 14, 2-3, Article 18 (September 2014).

J1 K. Avratchenkov, U. Ayesta, J. Doncel, P. Jacko. "Congestion Control of TCP Flows in Internet Routers by Means of Index Policy". Computer Networks, Volume 57 Issue 17 (2013).

Refereed International Conference Papers

C8 J. Doncel, N. Gast, M. Tribastone, M. Tschaikowski, A. Vandin. "UTOPIC: Under-Approximation Through Optimal Control." Proceedings of International Conference on Quantitative Evaluation of SysTems (QEST). Glasgow, UK. September 2019.

C7 J. Doncel, J.M. Fourneau. "Balancing energy consumption and losses with Energy Packet network models." Proceedings of International Conference on Fog Computing. Prague, Czech Republic. June 2019.

C6 A. Cadas, A. Busic, J. Doncel. "Optimal Control of Dynamic Bipartite Matching Models" Proceedings of 12nd EAI International Conference on Performance Evaluation Methodologies and Tools. Mallorca, Spain. March 2019.

C5 M. Abidini, O. Boxma, J. Doncel. "Size-Based Routing to Balance Performance of the Queues". 11th EAI International Conference on Performance Evaluation Methodologies and Tools. Venice, Italy, December 2017

C4 J. Doncel, S. Aalto, U. Ayesta. "Economies of Scale in Parallel-Server Systems". IEEE Infocom 2017. Atlanta, US, May 2017.

C3 J. Doncel, U. Ayesta, O. Brun, B. J. Prabhu. "A Resource Sharing Game with Relative Priorities". IFIP Performance 2014. Torino, Italy, October 2014.

C2 H. Ben Cheikh, J. Doncel, O. Brun, B.J. Prabhu. "Predicting Response Times of Applications in Virtualized Environments". NCCA 2014, IEEE Network Cloud Computing and Applications. Rome, Italy, February 2014.

C1 J. Doncel, U. Ayesta, O. Brun, B.J. Prabhu. "On the Efficiency of Non-Cooperative Load Balancing". IFIP/TC6 Networking 2013. New York, US, May 2013.

Workshop Papers

W6 E. Anton, C. Carballo, J. Doncel, C. Gorria, E. Iriondo, M. Lezaun. "Improvement of the Contact Center Performance". European Studying Group with Industry. Bilbao, Spain, May 2017.

W5 J. Doncel, N. Gast, B. Gaujal. "Are mean-field games the limits of finite stochastic games?". Workshop on Mathematical performance Modeling and Analysis (MAMA). Antibes Juan-les-Pins, France, June 2016.

W4 J. Doncel, N. Gast, B. Gaujal. "A Mean-Field Game with Explicit Interactions for Epidemic Models". Atelier d'Evaluation de Performance. Toulouse, France, March 2016.

W3 K. Avratchenkov, U. Ayesta, J. Doncel, P. Jacko. "Optimal Congestion Control of TCP Flows in Intenet Routers". Workshop on Mathematical performance Modeling and Analysis (MAMA). London, UK, June 2012.

W2 J. Doncel, J. M. Olaso, R. Justo, V. Guijarrubia, A. Perez, M. I. Torres. "Dialogue system based on EDECAN architecture". IMPRESS 2010, Interactive Multimodal Pattern Recognition in Embedded Systems. Bilbao, Spain, September 2010.

W1 J. Doncel, J. M. Olaso, R. Justo, V. Guijarrubia, A. Perez, M. I. Torres. "Kiosko Basado en Sistema de Dialogo Multimodal." CEDI 2010. Valencia, Spain, September 2010.

Teaching Experience

2016–Today: First and second year courses at the University of the Basque Country.

- Biostatistics, Introduction to Numeric Methods, Applied Statistics, Descriptive Statistics and Advanced Mathematics.

2018–2019: Master 2 course at the University of Versailles.

- Modèles pour les performances des réseaux et l'énergie

2015–2016: First year course at ENSIMAG (Grenoble).

- Introduction to Algoritmic.

2013–2015: Master 2 course at INSA Tolouse.

- Models and algoritms for network planning.

2013–2015: First year course at IUT Blagnac.

- Introduction to C, Static web programming and Introduction to Cloud Computing.

Research Projects Participation

2018–Today Multiscale Inversion of Porous Rock Physics using High-Performance Simulators: Bridging the Gap between Mathematics and Geophysics.
Funded by European Comission.
PI. David Pardo.

2017–Today Electromagnetic Imaging of the Earth's Subsurface using Advanced Galerkin Methods.
Funded by Spanish Ministry of Science.
PI. David Pardo.

2015–2017 Quanticol
Funded by the European Comission.
PI: Jane Hilston.

2013–2015 Panacea
Funded by the European Comission.
PI: Olivier Brun.

2012–2013 think global Services for persOnal comPuters (SOP)
Funded by the French National Research Agency.
PI: Thierry Monteil.

2010–2011 Multimodal Interaction in Patter Recognition and Computer Vision (MIPRCV)
Funded by Spanish Ministry of Science.
PI: Paco Casacuberta.

Industrial Research Projects

2017–2018 Dimensioning and routing in a multilevel call center.
Industrial partner: Eroski.

2017–2018 Optimization and storage management of wheel manufacturing.
Industrial partner: Bridgestone.

2017–2018 Modelling and optimization of reinvestments in volatile markets.
Industrial partner: PKF ATTEST.

Student Supervision

2018–2019 Luis de la Pisa. Undergraduate student at University of the Basque Country (Spain). **Work carried out in collaboration with IMDEA Networks.**

2018–2019 Iker Resano. Undergraduate student at University of the Basque Country (Spain)

2018–2019 Isabel Gallardo. Undergraduate student at University of the Basque Country (Spain)

2017–2018 Jokin Labaien. Undergraduate student at University of the Basque Country (Spain). **Work carried out in collaboration with the Computer Vision group of Tecnalia.**

2017–2018 Uxue Aiestaran. Undergraduate student of University of the Basque Country (Spain).

2017–2018 Fernando Miguelez. Undergraduate student of University of the Basque Country (Spain).

2014–2015 Irati Unzurrunzaga. Undergraduate student of UPV/EHU (Spain).

2014–2014 Anouar Aaboub. Undergraduate student of INPT (Moroco).

2014-2014 Ayoub Maouheb. Undergraduate student of ENSEEIHT, Toulouse France.

2013-2013 Raouf Harzi. Undergraduate student of Ecole Nationale des Sciences de l'Informatique, Tunisie.