New York, NY 10019
+1 (617) 304–3806

Virgile Galle

vgalle4@gmail.com
https://vgalle.github.io/

Education

Massachusetts Institute of Technology (MIT) **Feb. 2018**
Ph.D. from the Operations Research Center (ORC); GPA: 5.0/5.0 Cambridge, MA
Relevant Courses: Linear, Robust, and Integer Programming, Network Models and Machine Learning

École Centrale Paris **June 2013**
Master of Science in Applied Mathematics; received in Dec. 2015; GPA: 4.0/4.0 (top 4 of 512) Paris, France
Relevant Courses: Advanced Statistics, General Optimization and Stochastic Processes

Lycée Louis-Le-Grand **June 2011**
Preparation in Math and Physics for the highly competitive national entrance exams of French Grandes Écoles Paris, France

Professional and Research Experiences

BP America, Trading & Shipping (T&S) **Feb. 2018 – present**
Quantitative Analyst Houston, TX & New York, NY

- Improving valuation capabilities for LNG Portfolio Optimization model and performance by 20 times speedup (Python dev)
- Developing stochastic combinatorial optimization models for power valuation problems (Tolling and Revenue Put)
- Creating new data-driven calibration model for all cross-commodity deals for Trading and Shipping Organization
- Lead researcher on Quantum Computing Proof-of-Concept for integer optimization algorithms such as QA and QAOA

MIT, Operations Research Center **Sept. 2013 – Feb. 2018**
Research Assistant Cambridge, MA

- Working on increasing efficiency in port operations in a research team including MIT Chancellor and ORC co-director
- Proposed efficient and novel solutions to solve the Container Relocation and the Yard Crane Scheduling Problems using techniques such as mathematical programming, dynamic programming and stochastic optimization
- Submitted 3 papers to top peer-review journals in OR; Presented at INFORMS 2014/2015/2017 and TSL 2017

Schlumberger Doll Research Center **May 2016 – Aug. 2016**
Research Intern Cambridge, MA

- Pointed out the potential improvement of long term rigs scheduling and fleet sizing
- Modeled mathematically the problem and solved it using IP and tuned evolutionary algorithms. In the test cases, the solution incorporated new constraints, halved the cases of customer dissatisfaction and increased up to 5% the field production value
- Implemented a fully documented package in Julia, ready to be linked with the existing software

Amazon.com **June 2015 – Aug. 2015**
Operations Research Intern Seattle, WA

- Modeled a large scale supply-chain problem: The Inbound Network of Amazon.com
- Applied classical OR techniques (e.g. column generation) to solve efficiently the IP formulation
- Performed experiments on forecast and historical data and found a potential gain of 17% in cost and in VLT

MIT, in coordination with Tampa Bay Rays and Boston Celtics **June 2014 – Feb. 2015**
Consultant Cambridge, MA

- Designed a scout scheduling algorithm for the Tampa Bay Rays baseball team to improve minor league scouting
- Built a lineup optimization tool for the Boston Celtics basketball team providing real-time substitution recommendations

École Centrale Paris, Laboratory of Mathematics in Interaction with Computer Science **Sept. 2012 – Feb. 2013**
Assistant Researcher Paris, France

- Created new uniformity tests on the unit sphere and applied those to astro-physical phenomena
- Presented a report including several efficient approaches based on Wilcoxon and Kolmogorov-Smirnov tests

Skills

Programming Matlab (expert), Julia (expert), Python (proficient), R (proficient), C++ (course experience), Gurobi (proficient), Xpress (proficient), SQL (prior experience)
Language English (fluent), French (native), German (intermediate)

Awards and Interests

Awards Jean Gaillard Memorial Fellowship (2013-14) and Robert Guenassia Award (2013-14)
Work authorization USA under OPT (F-1 student visa)