# Yan-Fu Li

Assistant Professor

Centrale-Supélec

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#### PROFESSIONAL EXPERIENCE

- Department of Industrial Engineering, Ecole Centrale Paris, Paris,
   Chair on Systems Science and the Energy Challenge, Centrale-Supélec, Paris,
   Assistant Professor
   Jan. 2011 Present
- Department of Industrial & Information Engineering, University of Tennessee Knoxville, USA
   Post-doc Research Associate
   Nov. 2009 Oct. 2010
- Department of Industrial & Systems Engineering, National University of Singapore Singapore Research Engineer Aug. 2009 Nov. 2009

#### **EDUCATION**

• National University of Singapore Ph.D. Industrial & Systems Engineering

Singapore Aug. 2005 – Aug. 2009

• Wuhan University

B.Eng. Software Engineering (GPA top 5%), Minor in Biological Science

Aug. 2001 – Jul. 2005

## **RESEARCH INTERESTS**

Reliability Assessment of Components/Systems, Optimization of Complex Energy Systems, Uncertainty Analysis, Simulation, Machine Learning

# **PROJECTS**

- 2013-2016: Development of methods for modeling degradation and maintenance of critical components and of a framework for integrating information and data of different nature, Electricite' de France (EDF)-Centrale Recherche SA (CRSA). Euro 571,000. (participate)
- 2013-2014: Development of Optimized Methods for the Reliability Prediction of Industrial Components and Systems, LIA 2MCSI project, France, Euro 9,000. (PI)
- 2012-2016: REFERENCE, Research NEtwork on FlExible Risk AssEssmeNt and DeCision SciencE, within the PEOPLE MARIE CURIE ACTIONS for International Research Staff Exchange, in the FP7-Seventh Framework Program of the European Union, Euro 75,800. (participate)
- 2011-2013: Modelling of Ageing Components for System Reliability Analysis and Risk Assessment, LIA 2MCSI project, France, Euro 20,000. (participate)
- 2009-2010: Modeling and Analysis for Large-Scale Networks and Self-Improvement in LSNS, Funded by National Science Foundation (NSF), USA, USD 340,000. (participate)

• 2008-2009: Safety and Reliability of Complex Industrial Systems and Process (Singapore-Poland Joint Research Project) funded by Agency for Science, Technology and Research (A\*STAR) of Singapore and the Ministry of Science and Higher Education (MSHE) of Poland. Singapore, SGD 550,000. (participate)

## **PUBLICATIONS**

# Journal Papers

Published (\* corresponding author)

## Reliability Assessment of Components and Systems

- 1. **Y.F. Li**, R. Peng. 2014. Availability Modeling and Optimization of Dynamic Multi-State Series-Parallel Systems with Random Reconfiguration. *Reliability Engineering & System Safety* (accepted).
- 2. **Y.F. Li\***, Y. Ding, E. Zio. 2014. Random Fuzzy Extension of the Universal Generating Function Approach for the Reliability Assessment of Multi-State Systems under Aleatory and Epistemic Uncertainties. *IEEE Transactions on Reliability*. 63(1), 13 25.
- 3. Z. Yang, Y.X. Chen, **Y.F. Li**, E. Zio, R. Kang. 2014. Smart Electricity Meter Reliability Prediction based on Accelerated Degradation Testing and Modeling. *International Journal of Electrical Power & Energy Systems*. 56, 209-219.
- 4. R. Peng, **Y.F. Li**, W.J. Zhang, Q.P. Hu. 2014. Testing effort dependent software reliability model for imperfect debugging process considering both detection and correction. *Reliability Engineering & System Safety* 126, 37–43.
- 5. R. Peng, **Y.F. Li\***, J.G. Zhang, X. Li. 2014. A risk-reduction approach for optimal software release time determination with the delay penalty cost. *International Journal on Systems Science*. (In press).
- 6. **Y.F. Li\***, E. Zio, Y.H. Lin. 2012. A Multi-state Physics Model of Component Degradation based on Stochastic Petri Nets and Simulation. *IEEE Transactions on Reliability*. 61(4), 921-931.
- 7. **Y.F. Li\***, E. Zio. 2012. A Multi-State Model for the Reliability Assessment of a Distributed Generation System via Universal Generating Function. *Reliability Engineering & Systems Safety*. 106, 28–36.
- 8. **Y.F. Li\***, E. Zio. 2012. Uncertainty Analysis of the Adequacy Assessment Model of a Distributed Generation System. *Renewable Energy*. 41, 235-244.
- 9. Y. Ding, E. Zio, **Y.F. Li**, L. Cheng, Q. W. Wu. 2012. Definition of Multi-state Weighted k-out-of-n: F Systems. *International Journal of Performability Engineering*. 8(2), 217-219.
- 10. Y.S. Dai, Y.P. Xiang, **Y.F. Li**, L.D. Xing. 2011. Consequence Oriented Self-Healing and Autonomous Diagnosis for Highly Reliable Systems and Software. *IEEE Transactions on Reliability*. 60(2), 369 380.
- 11. X. Li, **Y.F. Li**, M. Xie, S.H. Ng. 2011. Reliability analysis and optimal version-updating for open source software. *Information and Software Technology*. 53(9), 929-936.

#### **Optimization and Prediction**

12. Y.F. Li\*, N. Pedroni, E. Zio. 2013. A Memetic Evolutionary Multi-Objective Optimization Method for

- Environmental Power Unit Commitment. IEEE Transactions on Power Systems. 28(3), 2660 2669.
- 13. E. Kuznetsova, **Y.F. Li**, C.R. Mora, E. Zio, G. Ault, K. Bell. 2013. Reinforcement learning for microgrid energy management. *Energy*. 59, 133–146.
- 14. **Y.F. Li\***, G. Sansavini, E. Zio. 2013. Non-Dominated Sorting Binary Differential Evolution for the Multi-Objective Optimization of Cascading Failures Protection in Complex Networks. *Reliability Engineering & System Safety*. 111, 195–205.
- 15. R. Ak, **Y.F. Li.**, V. Vitelli, E. Zio, E. L. Droguettc, C. M. C. Jacintod. 2013. NSGA-II-Trained Neural Network Approach to the Estimation of Prediction Intervals of Scale Deposition Rate in Oil & Gas Equipment. *Expert Systems with Applications*. 40(4), 1205-1212.
- 16. **Y.F. Li\***, M. Xie, T.N. Goh. 2011. Estimating Software Project Cost on Multi-Collinear Datasets Using Ridge Regression. *Journal of Systems and Software*. 83(11), 2332-2343.
- 17. **Y.F. Li\***, S.H. Ng, M. Xie, T.N. Goh. 2010. A Systematic Comparison of Metamodeling Techniques for Simulation Optimization in Decision Support Systems. *Applied Soft Computing*. 10, 1257-1273.
- 18. **Y.F. Li\***, M. Xie, T.N. Goh. 2009. A Study of the Non-linear Adjustment for Analogy Based Software Cost Estimation. *Empirical Software Engineering*. 14(6), 603-643.
- 19. **Y.F. Li\***, M. Xie, T.N. Goh. 2009. A Study of Mutual Information Based Feature Selection for Case Based Reasoning in Software Cost Estimation. *Expert Systems with Applications*. 36(3), 5921-5931.
- 20. Y.F. Li\*, M. Xie, T.N. Goh. 2009. A Study of Project Selection and Feature Weighting for Analogy Based Software Cost Estimation. *Journal of Systems and Software*. 82(2), 241-252. (Best Student Paper Award, IEEE TMC, Singapore Chapter)

#### Under Review/Revision

- 21. **Y.F.** Li\*, E. Zio. A Quantum-Inspired Evolutionary Approach for non-Homogeneous Redundancy Allocation in Series-Parallel Multi-State Systems. *IEEE Transactions on Reliability* (In revision).
- 22. C.T. Lin, **Y.F. Li\*** Rate-Based Simulation Model of Open Source Software Debugging/Development Activities. *IEEE Transactions on Software Engineering* (In Revision).
- 23. Y.H. Lin, **Y.F. Li\***, E. Zio. Multi-State Physics Model for the Reliability Assessment of a Component under Degradation Processes and Random Shocks. *IEEE Transactions on Reliability* (1<sup>st</sup> Revision submitted).
- 24. Y.H. Lin, **Y.F. Li\***, E. Zio. Modeling Multiple Dependent Competing Degradation Processes via Piecewise Deterministic Markov Process. *IIE Transactions* (Submitted).
- 25. R. Ak, **Y.F. Li.**, V. Vitelli, E Zio. Adequacy Assessment of a Wind-Integrated System Using Neural Network-based Interval Predictions of Wind Power Generation and Load. *IEEE Transactions on Power Systems* (Revision submitted).
- 26. R. Mena, M. Hennebel, **Y.F. Li**, C. Ruiz, E. Zio. Simulation and Optimization of Renewable Generators Allocation in a Distribution Network. *Renewable & Sustainable Energy Reviews* (Submitted).
- 27. S. Valla, **Y.F. Li\***, E. Zio. A Wind Turbine System Reliability Model and Simulation Framework. *Renewable Energy* (Submitted).
- 28. E. Kuznetsova, **Y.F. Li**, C. Ruiz, E. Zio. An integrated framework of agent-based modelling and robust optimization for microgrid energy management. *Applied Energy Journal* (1<sup>st</sup> revision submitted).

- 29. R. Ak, **Y.F. Li.**, V. Vitelli, E Zio. Multi-objective Genetic Algorithm Optimization of a Neural Network for Estimating Wind Speed Prediction Intervals. *Applied Soft Computing* (1<sup>st</sup> revision submitted).
- 30. **Y.F. Li,** R. Peng. A Model of Virus Epidemics for the Service Reliability Modeling of Distributed Computing System. *Applied Mathematical Modelling* (In revision).
- 31. **Y.F. Li**, H.L. Zhang. Multi-Objective Design and Maintenance Optimization of the Heated Hold-Up Tank Modeled by Piecewise Deterministic Markov Processes. *Reliability Engineering & System Safety* (Submitted).
- 32. R. Rocchetta, **Y.F. Li\***, E. Zio. Simulation-Based Probabilistic Risk Assessment of Distributed Power Generation Systems Considering Extreme Weather Conditions. *Reliability Engineering & System Safety* (Submitted).
- 33. Y.H. Lin, **Y.F. Li\***, E. Zio. Fuzzy Reliability Assessment of Systems with Multiple Dependent Competing Degradation Processes. *IEEE Transactions on Fuzzy Systems* (Submitted).
- 34. E. Kuznetsova, C. Ruiz, **Y.F. Li**, E. Zio. Analysis of robust optimization for decentralized microgrid energy management under uncertainty. *International Journal of Electrical Power and Energy Systems* (Submitted).
- 35. H. Baili, **Y.F. Li**. Online Reliability Prediction of Energy Systems with Wind Generation. *IEEE Transactions on Sustainable Energy* (Submitted).
- 36. **Y.F. Li**, J.L. Huang, M. Xie, H.Y. Sun. A Systematic Analysis of Data Preprocessing for Machine Learning-based Software Cost Estimation. . *IEEE Transactions on Software Engineering* (Submitted).
- 37. R. Mena, M. Hennebel, **Y.F. Li**, E. Zio. A self-adaptable hierarchical clustering differential evolution for optimal integration of renewable distributed generation.

# **Book Chapters**

- 1. **Y.F. Li**, E. Zio, Y.H. Lin. 2012. Methods of Solutions of Inhomogeneous Continuous Time Markov Chains for Degradation Process Modeling, Applied Reliability Engineering and Risk Analysis. Probabilistic Models and Statistical Inference. Dedicated to the Centennial of the birth of Boris Gnedenko, renowned Russian mathematician and reliability theorist. ed. Alex Karagrigoriou, Anatoly Lisnianski, Andre Kleyner, Ilia Frenkel. Wiley.
- 2. C.J. Xiong, **Y.F. Li**, M. Xie, S.H. Ng, T.N. Goh. 2009. Service Reliability and Availability Analysis of Distributed Software Systems Considering Malware Attack, in *Advances in Software Engineering*, vol. 36 of *Communications in Computer and Information Science*. Springer Berlin Heidelberg. Page: 313-320. ISSN: 1865-0929. (ISTP)
- 3. **Y.F. Li**, J. Liu. 2005 Predicting Subcellular Localization of Proteins Using Support Vector Machine with N-Terminal Amino Composition. in *Advanced Data Mining and Applications*, vol. 3584 of *Lecture Notes in Computer Science*. Springer Berlin Heidelberg, Page: 618-625. ISSN: 0302-9743. (ISTP)

## **Conference Proceedings**

- 1. H.L. Zhang, **Y.F. Li**. 2014. Multi-Objective Design and Maintenance Optimization of the Heated Hold-Up Tank. *Lambda Mu 19*, Dijon, France, 21-23, Oct, 2014.
- 2. Y.H. Lin, Y.F. Li, E. Zio. 2014. Modeling Multiple Dependent Competing Degradations under Epistemic

- Uncertainty via Piecewise Deterministic Markov Process. Lambda Mu 19, Dijon, France, 21-23, Oct, 2014.
- 3. M.M. Zhang, **Y.F. Li**, M. Xie. 2014. Maintenance Modeling for a Multistate Component in a Safety-critical System. *Proceedings of the Industrial Engineering Research Conference* (ISERC) 2014.
- 4. **Y.F. Li**, Y. Ding, E. Zio. 2013. Hybrid Universal Generating Function for the Reliability Assessment of Multi-State Systems under Aleatory and Epistemic Uncertainties. *ESREL* 2013. Amsterdam, Netherland, 30 Sep. –3 Oct., 2013.
- 5. R. Ak, **Y.F. Li**, V. Vitelli, E. Zio. 2013. A Genetic Algorithm-and-Neural Network Technique for Predicting Wind Power under Uncertainty. *PHM* 2013. Milan, Italy, 8-11 Sep., 2013.
- 6. Y.H. Lin, **Y.F. Li**, E. Zio. 2013. Multi-State Physics Model for the Reliability Assessment of a Component under Degradation Processes and Random Shocks. *ESREL 2013*. Amsterdam, Netherland, 30 Sep. 3 Oct., 2013.
- 7. R. Mena, **Y.F. Li**, M. Hennebel, C. Ruiz, E. Zio. 2013. Optimal sizing and allocation of distributed generation for reliable energy distribution accounting for uncertainty. *ESREL* 2013. Amsterdam, Netherland, 30 Sep. 3 Oct., 2013.
- 8. E. Kuznetsova, C. Ruiz, **Y.F. Li**, E. Zio. 2013. Reliable microgrid energy management under environmental uncertainty and mechanical failures: an agent-based modelling and robust optimization approach. *ESREL 2013*. Amsterdam, Netherland, 30 Sep. 3 Oct., 2013.
- 9. **Y.F. Li**, E. Zio, Y.H. Lin, A. Despujols. 2012. Un cadre de simulation multi-etats pour mod diser la dégradation des composants de systemes de production d'energie. *Lambda Mu 18*, Tours, France, 16-18, Oct, 2012.
- 10. R. Ak, **Y.F. Li**, V. Vitelli, E. Zio. 2012. Estimation of wind speed prediction intervals by multi-objective genetic algorithms and neural networks. *Acts of the XLVI Scientific Meeting of the Italian Statistical Society (SIS 2012)*, Rome, Italy, 20-22 June 2012 (pp. 1-4).
- 11. R. Ak, **Y.F. Li**, E. Zio. 2012. Estimation of Prediction Intervals of Neural Network Models by a Multi-objective Genetic Algorithm. *FLINS* 2012, Istanbul, Turkey, August 26-29, 2012.
- 12. C.T. Lin, **Y.F. Li**, C.D. Chen. 2012. Rate-Based Queueing Simulation Models of Open Source Software Debugging Activities. *EURO workshop on Stochastic Modelling*, 2012, Paris, France, 30 May 1 June, 2012.
- 13. R. Mena, C. Ruiz, **Y.F. Li**, E. Zio. 2012. Simulation and Optimization of Renewable Generators Allocation in a Distribution Network, *Informs Annual Meeting*, October 14-17 2012, Phoenix, AZ, USA.
- 14. C. Ruiz, **Y.F. Li**, R. Mena, E. Zio. 2012. Robust Reliability Optimization by System Design and Components Allocation, *Informs Annual Meeting*, October 14-17 2012, Phoenix, AZ, USA.
- 15. **Y.F. Li**, Y. H. Lin, E. Zio. 2012. Stochastic Modeling by Inhomogeneous Continuous Time Markov Chains. *EURO workshop on Stochastic Modelling*, 2012, Paris, France, 30 May 1 June, 2012.
- 16. **Y.F. Li**, M. Kumar, E. Zio. 2012. Petri-Net Simulation Model of a Nuclear Component Degradation Process. *PSAM11 & ESREL 2012*. Helsinki, June 2012 (pp. 1-10).
- 17. **Y.F. Li**, E. Zio, G. Sansavini, L.R. Golea. 2012. A Multi-Objective Memetic Optimization Method for Power Network Cascading Failures Protection. *PSAM11 & ESREL 2012*, Helsinki, June 2012 (pp. 1-10).
- 18. E. Kuznetsova, Y.F. Li, K Culver. E. Zio. 2011. Generic simulation model for adequacy assessment of

- distributed generation. Complex Systems Design & Management (CSDM) 2011, Paris, France
- 19. L. Marella, R. Sawhney, **Y.F. Li**, E. Iwuchukwu. Hybrid Decision Support System and RFID Technology for Intelligent and Speedy Facility Maintenance. *Proceedings of Reliability and Maintainability: The Pathway to Excellence*, 2011.
- 20. S. Faghihroohi, **Y.F. Li**, M. Xie. 2010. Time-To-State and Availability Assessment of Multi-state Weighted K-out-of-N: G Systems. *Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management (IEEM 2010)*.
- 21. C. J. Xiong, **Y.F. Li**, M. Xie, S.H. Ng. 2009. A Model of Open Source Software Maintenance Activities. *Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management (IEEM 2009)*, 267-271.
- 22. H. Xiao, **Y.F. Li**, M. Xie, K.M. Ng, M.S. Habibullah. 2009. A Model for Reliability Analysis of Repairable Transportation Systems. *Proceedings of the Industrial Engineering Research Conference (IERC 2009)*.
- 23. **Y.F. Li**, M Xie, T.N. Goh. 2008. A Bayesian Inference Approach for Probabilistic Analogy Based Software Maintenance Effort Estimation. *Proceedings of the IEEE Pacific Rim International Symposium on Dependable Computing (PRDC2008)*, 176-183.
- 24. **Y.F. Li**, M Xie, T.N. Goh. 2008. Optimization of Feature Weights and Number of Neighbors for Analogy Based Cost Estimation in Software Project Management. *Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management (IEEM 2008)*, 1542-1546.
- 25. **Y.F. Li**, M Xie, T.N. Goh. 2008. A Study of Analogy Based Sampling for Interval Based Cost Estimation for Software Project Management. *Proceedings of the IEEE International Conference on Management of Innovation and Technology (ICMIT 2008)*, 281-286.
- 26. **Y.F. Li**, M Xie, T.N. Goh. 2007. A Study of Genetic Algorithm for Project Selection for Analogy Based Software Cost Estimation. *Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management (IEEM 2007)*, 1256-1260.
- 27. L.H. Wang, J. Liu, **Y.F. Li**, H.B. Zhou. 2004. Predicting Protein Secondary Structure by a Support Vector Machine Based on a New Coding Scheme. *Proceedings of the 15th International Conference on Genome Informatics (Genome Informatics 2004*), 181–190.

#### **PROFESSIONAL ACTIVITIES**

#### • International Journals Referee

- o Applied Mathematics and Computation (3)
- o Applied Soft Computing (45)
- o Asia-Pacific Journal of Operational Research (2)
- o Computer (1)
- o Computers & Industrial Engineering (1)
- o Computers & Mathematics with Applications (1)
- o Computational Statistics and Data Analysis (1)
- o European Journal of Operational Research (2)
- o IEEE Transactions on Power Systems (1)
- o IEEE Transactions on Reliability (7)
- o IEEE Transactions on Smart Grid (2)

- o IEEE Transactions on Software Engineering (2)
- o Information Sciences (19)
- o International Journal of Electrical Power and Energy Systems (4)
- o International Journal of Performability Engineering (1)
- o International Journal of Systems Science (1)
- o Journal of Risk and Reliability (3)
- o Journal of Systems and Software (5)
- o Knowledge-Based Systems (4)
- o Mathematical and Computer Modelling (1)
- o Reliability Engineering & Systems Safety (2)
- o Software Testing, Verification and Reliability (4)

#### • International Conference Organization

- Technical Program Committee. 20th IEEE Pacific Rim International Symposium on Dependable Computing (PRDC 2014).
- Technical Program Committee. The Tenth International Conference on Digital Technologies (DT 2014).
- o Technical Program Committee ISSRE 2013.
- o Session co-Chair MMR 2013.
- o Technical Program Committee PHM 2013.
- o Technical Program Committee PSAM 11 & ESREL 2012.
- o Session co-Chair QR2MSE 2012.

#### • Invited Lectures and Seminars

- Invited talk on "Optimization of Energy Components and Systems with Respect to Reliability and Risk". *EDF R&D-Chatou*, Paris, France, June 27, 2013.
- Invited seminar on "Reliability assessment and optimization of energy components and systems",
   Department of Systems Engineering and Engineering Management, City University of Hong Kong,
   Hong Kong, February 15, 2013.
- o Invited presentations on "Sciences des systèmes et défi energétique" and "Risk modelling, simulation, optimization of complex energy systems: some examples of work in progress". Commission « Energie » du Conseil Scientifique, *Supelec*, Paris, France, 30 May, 2012.
- o Invited lectures on "Bayesian belief networks for reliability and risk analysis" and "Petri nets modelling", Department of Energy, *Polytechnic University of Milan*, Milan, Italy, May 14-18, 2012.
- Invited seminar on "Modeling, simulation & optimization of complex energy systems" Department of Electrical Engineering, Technical University of Denmark, Copenhagen, Denmark, September 16, 2011.

#### Memberships

- o Member, IEEE (Institute of Electrical and Electronics Engineers), 2011-present.
- Member, INFORMS (Institute for Operations Research and the Management Sciences), 2012-present.
- o Member, EURO (The European Association of Operational Research Societies). 2013-present.
- o Executive committee member, *ASICEF* (Association des Scientifiques et des Ingénieurs Chinois en France), 2013-present.

#### AWARDS AND SCHOLARSHIPS

•	Who's Who in the world 2014, Marquis, USA	2014
•	Outstanding Reviewer, Applied Soft Computing Journal, Elsevier, The Netherlands	2014
•	Top 10 graduates 2001-2011, all Schools of Software Engineering, China	2011
•	Best Student Paper Award, IEEE Technology Management Council, Singapore Chapter	2010
•	Research Scholarship, National University of Singapore Aug. 2005 – Aug.	g. 2009
•	Outstanding Undergraduate Award, Wuhan University	2005
•	Consecutive recipients of the 1 <sup>st</sup> class Scholarship, Wuhan University. 2001 –	- 2005
•	Second-class Award in 'Chinese National Undergraduate Mathematical Contest in Modeling'	2004

## **TEACHING**

• Coordinator (2014-2015), advanced master program 'Industrial Management in China' at Ecole Centrale Paris, France and Ecole Centrale Pekin, China.

#### **SUPERVISING**

#### PhD students

- o Ronay AK (2011-2014), thesis title 'Modeling, simulation and analysis of energy systems'.
- o Elizaveta KUZNETSOVA (2011-2014), thesis title 'Agent-based modeling of micro-grid systems'. (Thesis defended).
- o Yan-Hui LIN (2012-2015), thesis title 'Multi-state physics-based modeling of aging of components and structures'.
- o Rodrigo MENA (2012-2015), thesis title 'Advanced simulation modeling and optimization for distributed generation systems'.
- o Mu-Xia SUN (2013-2016), thesis title 'Development and improvement of multi-objective optimization models and algorithms for reliability, availability, maintainability and safety (RAMS) of Energy Systems'.

#### Master students

- o Mithlesh KUMAR (2011), master thesis entitled 'Hybrid Petri net and Bayesian Network approach in simulating nuclear component degradation process considering external uncertainties'. Ecole Centrale Paris.
- o Sébastien VALLA (2012-2013), one year master research project 'Methods and Models for Evaluating the Reliability of Wind Turbine Components'. Ecole Centrale Paris.
- o Roberto ROCCHETTA (2013-2014), master thesis "Simulation-Based Probabilistic Risk Assessment of Distributed Generation Systems Considering Extreme Weather Conditions". University of Bologna, Italy.
- Nadia BOUDRIKA (2013-2014), one year master research project 'Study and development of methods for modeling the degradation of critical components in energy production plants'. Ecole Centrale Paris.
- o Qi HE (2014-2015), one year master research project 'Review of methods of operation research for application in reliability and risk analysis of energy systems'. Ecole Centrale Paris

#### • International Bachelor students

o Ganesh ARAVIND (2014), student of NIT Trichy and winner of the Charpak Research Internship scholarship 2014 (<a href="http://www.inde.campusfrance.org/en/node/187215">http://www.inde.campusfrance.org/en/node/187215</a>) for a 2 month research project 'Multi-objective quantum inspired evolutionary algorithm for system reliability optimization'.

# LANGUAGES

• English: fluent

• French: limited working proficiency

• **Chinese**: native