

LOW, BRYAN KIAN HSIANG

Assistant Professor, Jan 2010 - Present
Department of Computer Science
School of Computing, National University of Singapore
Computing 1, 13 Computing Drive, Singapore 117417, Singapore
Deputy Director of AI Research & Technology, Mar 2018 - Present
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CURRICULUM VITAE



RESEARCH INTERESTS

- Probabilistic machine learning (e.g., Bayesian deep learning, Bayesian non-parametric models)
- Data-efficient machine learning (e.g., Bayesian optimization, active learning, and adaptive sampling)
- Parallel/distributed machine learning and online learning for big data
- Planning under uncertainty and reinforcement learning
- Multi-agent systems (i.e., multi-agent coordination, planning, and learning)

EDUCATIONAL BACKGROUND

Sep 2004 - Aug 2009 Carnegie Mellon University

PH.D. IN ELECTRICAL AND COMPUTER ENGINEERING

- Thesis Title: Multi-Robot Adaptive Exploration and Mapping for Environmental Sensing Applications
- Advisors: Prof. Pradeep K. Khosla and Dr. John M. Dolan

Jul 2001 - Jul 2002 National University of Singapore

MASTER OF SCIENCE IN COMPUTER SCIENCE (ACCELERATED M.SC. BY RESEARCH)

- Thesis Title: Integrated Robot Planning and Control with Extended Kohonen Maps
- Advisors: Assoc. Prof. Leow, Wee Kheng and Assoc. Prof. Marcelo H. Ang, Jr.
- Award: Winner of Singapore Computer Society Prize for Best M.Sc. Thesis in School of Computing

Jul 2000 - May 2001 National University of Singapore

BACHELOR OF SCIENCE IN COMPUTER SCIENCE (HONOURS 2ND CLASS UPPER)

Jul 1997 - Jul 2000 National University of Singapore

BACHELOR OF SCIENCE IN COMPUTER SCIENCE (PASS WITH MERIT)

- Cumulative Grade-Point Average: 3.78 / 4 or 4.65 / 5

HONORS AND AWARDS

- Sep 2016 - Jun 2018 Invited to serve as a World Economic Forum's Global Future Councils Fellow for the Council on the Future of Artificial Intelligence and Robotics
- Jun 2017 Invited to participate in Global AI Dialogue Series in Seoul, South Korea hosted by Berkman Klein Center for Internet and Society at Harvard University in collaboration with MIT Media Lab and K Governance and Media Lab
- Nov 2012 Best PhD Forum Paper Award in 6th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC'12) won by my PhD student, Prabhu Natarajan

- 2006 Andrew P. Sage Best Transactions Paper Award for the best paper published in all 3 of the IEEE Transactions on Systems, Man, and Cybernetics - Parts A, B, and C in 2006
- Aug 2015 - Jul 2017 Nominated twice for Faculty Teaching Excellence Award in School of Computing, National University of Singapore
- Jun 2010 Featured in AUVSI Unmanned Systems Magazine “Ones to Watch” June 2010 issue
- Sep 2004 - Aug 2009 National University of Singapore Overseas Graduate Scholarship for Ph.D. studies in Department of Electrical and Computer Engineering, Carnegie Mellon University
- Mar 2004 Gold Medalist in 8th National IT Awareness Project Competition (Postgraduate Category) for Overall Best Project “Task Allocation via Self-Organizing Swarm Coalitions in Distributed Mobile Sensor Network”, held by National University of Singapore in conjunction with Ministry of Education
- Jul 2002 - Jul 2003 Winner of Singapore Computer Society Prize for Best M.Sc. Thesis (among 81 graduates of M.Sc. by research) in School of Computing, National University of Singapore
- Jun 2003 1st Runner-up Team in Cooperative Robotic Search Competition held by Defense Science Organization National Laboratories during Singapore Robotic Games 2003
- Jul 2001 - Jul 2002 Research Scholarship for Accelerated M.Sc. (Comp. Sci.) by Research in National University of Singapore with Top-up Supplement from National Science and Technology Board Award
- Jul 1997 - Jun 2000 Invitation to Talent Development Programme (Top 5% in National University of Singapore)
- Jul 1998 - Dec 1998 Dean’s List
- Jul 1997 - Dec 1997 Dean’s List
- Jul 1997 - Jun 1998 National University of Singapore Undergraduate Scholarship awarded by Microcomputer Trade Association of Singapore
- 1994 Invitation to participate in American Invitational Mathematics Examination
- 1994 Honor Roll Pin Winner in American High School Mathematics Examination
- 1993 Certificate of Distinction in Australian Mathematics Competition

RESEARCH EXPERIENCE AND GRANTS

Jul 2017 - Jul 2020 Department of Computer Science, National University of Singapore
 PRINCIPAL INVESTIGATOR, **Scaling up Gaussian Process Predictive Models for Big Data** Project
Academic Research Council (ARC), Ministry of Education (MOE) Academic Research Fund (AcRF) Tier 2, S\$737,461

Apr 2017 - Mar 2019 Singapore-MIT Alliance for Research & Technology (SMART)
 PRINCIPAL INVESTIGATOR, **Automatic Probabilistic Machine Learning for Traffic Modeling and Prediction** Project
SMART Subaward Agreement – Future Urban Mobility (FM) IRG, S\$90,000

Oct 2016 - Present NUS-Singtel Cyber Security R&D Lab, National University of Singapore
 PRINCIPAL INVESTIGATOR, **Predictive Security Analytics based on Traffic Data** Project
 Collaborator: Assoc. Prof. Mun Choon Chan (NUS)
 Centre Director: Prof. David Rosenblum (NUS)

- Develop adaptive sampling techniques for multi-robot wide-area mineral prospecting

Jul 2002 - Jul 2003 Institute of Engineering Science, National University of Singapore

RESEARCH ENGINEER, **Trainable Computer Vision Systems for Surveillance and Mobile Robot Control**

National University of Singapore Research Project No. 960684

- Develop multi-robot task allocation mechanisms based on swarm intelligence principles
- Improve performance and convergence of an ensemble of self-organizing neural networks with second-order learning method
- Enhance the action selection capabilities of robots in single- and multi-robot tasks by cooperation and competition of self-organizing neural networks

May 2001 - Jul 2001 Department of Computer Science, National University of Singapore

RESEARCH ASSISTANT, **Trainable Computer Vision Systems for Surveillance and Mobile Robot Control**

National University of Singapore Research Project No. 960684

- Evaluate quantitatively the performance of self-organizing neural networks in learning robot motion control

TEACHING EXPERIENCE AND GRANTS

6-10 Jun 2016 School of Computing, National University of Singapore

ORGANIZING CHAIR, **2016 IEEE RAS Summer School on Multi-Robot Systems**

Proposal accepted and financially supported by IEEE Robotics and Automation Society - Technical Education Program (RAS-TEP), USD \$40,000

Spring 2018 Department of Computer Science, National University of Singapore

LECTURER, **CS3244 Machine Learning** module

Fall 2010-11, 2015-17 Department of Computer Science, National University of Singapore

LECTURER, **CS4246 AI Planning and Decision Making** module

- Nominated twice for Faculty Teaching Excellence Award during Aug 2015 - Jul 2017

Spring 2011, 2013-17 Department of Computer Science, National University of Singapore

LECTURER, **CS3243 Introduction to Artificial Intelligence** module

- Nominated twice for Faculty Teaching Excellence Award during Aug 2015 - Jul 2017

Fall 2009-14 Department of Computer Science, National University of Singapore

LECTURER, **CS1231 Discrete Structures** module

Summer 2016 Temasek Defence Systems Institute, National University of Singapore

LECTURER, **DTS5728 Robotic Technologies for Unmanned Systems** module

Fall 2007 Department of Electrical and Computer Engineering, Carnegie Mellon University

TEACHING ASSISTANT, **18-100 Introduction to Electrical and Computer Engineering** course

- Conduct recitations and lab sessions

Fall, Spring 2003-4 Department of Computer Science, National University of Singapore

TEACHING ASSISTANT, **CS1101C Programming Methodology in C** module

- Assume dual roles of course tutor and lab coordinator (conduct practical exam, set weekly lab assignments)

PUBLICATIONS

CO-AUTHORS : My students §, former thesis advisors †, collaborators ¶

REFEREED JOURNAL ARTICLES

1. Pradeep Varakantham, Bo An, Bryan Low and Jie Zhang (2017). **Artificial Intelligence Research in Singapore: Assisting the Development of a Smart Nation**. In *AI Magazine*, volume 38, issue 3, pp. 102-105.
2. Jie Chen[§], Kian Hsiang Low, Patrick Jaillet[¶], and Yujian Yao[§] (2015). **Gaussian Process Decentralized Data Fusion and Active Sensing for Spatiotemporal Traffic Modeling and Prediction in Mobility-on-Demand Systems**. In *IEEE Transactions on Automation Science and Engineering* (Special Issue on Networked Cooperative Autonomous Systems), volume 12, issue 3, pp. 901-921.
3. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2006). **Autonomic Mobile Sensor Network with Self-Coordinated Task Allocation and Execution**. In *IEEE Transactions on Systems, Man, and Cybernetics - Part C: Applications and Reviews* (Special Issue on Engineering Autonomic Systems), volume 36, issue 3, pp. 315-327 [Andrew P. Sage Best Transactions Paper Award for the best paper published in all 3 of the IEEE Transactions on Systems, Man, and Cybernetics - Parts A, B, and C in 2006].
4. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2005). **An Ensemble of Cooperative Extended Kohonen Maps for Complex Robot Motion Tasks**. In *Neural Computation*, volume 17, issue 6, pp. 1411-1445.

REFEREED CONFERENCE AND WORKSHOP PROCEEDINGS

(Rigorously refereed: 7 AAMAS full papers, 8 AAI, 4 IJCAI, 4 ICML, 2 UAI, 1 NIPS, 1 RSS, 1 ICAPS, among others)

1. Trong Nghia Hoang[§], Quang Minh Hoang[§], Ruofei Ouyang[§], and Kian Hsiang Low (2018). **Decentralized High-Dimensional Bayesian Optimization with Factor Graphs**. In *Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI-18)*, pp. 3231-3238 [24.55% Acceptance Rate].
2. Ruofei Ouyang[§] and Kian Hsiang Low (2018). **Gaussian Process Decentralized Data Fusion Meets Transfer Learning in Large-Scale Distributed Cooperative Perception**. In *Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI-18)*, pp. 3876-3883 [24.55% Acceptance Rate].
3. Erik Daxberger[§] and Kian Hsiang Low (2017). **Distributed Batch Gaussian Process Optimization**. In *Proceedings of the 34th International Conference on Machine Learning (ICML-17)*, pp. 951-960 [25.9% Acceptance Rate].
4. Quang Minh Hoang[§], Trong Nghia Hoang[§], and Kian Hsiang Low (2017). **A Generalized Stochastic Variational Bayesian Hyperparameter Learning Framework for Sparse Spectrum Gaussian Process Regression**. In *Proceedings of the 31st AAAI Conference on Artificial Intelligence (AAAI-17)*, pp. 2007-2014 [24.6% Acceptance Rate].
5. Trong Nghia Hoang[§], Quang Minh Hoang[§], and Kian Hsiang Low (2016). **A Distributed Variational Inference Framework for Unifying Parallel Sparse Gaussian Process Regression Models**. In *Proceedings of the 33rd International Conference on Machine Learning (ICML-16)*, pp. 382-391 [24.3% Acceptance Rate].
6. Yehong Zhang[§], Trong Nghia Hoang[§], Kian Hsiang Low, and Mohan Kankanhalli[¶] (2016). **Near-Optimal Active Learning of Multi-Output Gaussian Processes**. In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI-16)*, pp. 2351-2357 [25.75% Acceptance Rate].

7. Chun Kai Ling[§], Kian Hsiang Low, and Patrick Jaillet[¶] (2016). **Gaussian Process Planning with Lipschitz Continuous Reward Functions: Towards Unifying Bayesian Optimization, Active Learning, and Beyond.** In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI-16)*, pp. 1860-1866 [25.75% Acceptance Rate].
8. Jie Fu, Hongyin Luo, Jiashi Feng, Kian Hsiang Low, and Tat-Seng Chua (2016). **DrMAD: Distilling Reverse-Mode Automatic Differentiation for Optimizing Hyperparameters of Deep Neural Networks.** In *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI-16)*, pp. 1469-1475 [$<25\%$ Acceptance Rate].
9. Chao Wang[§], Somchaya Liemhetcharat[¶], and Kian Hsiang Low (2016). **Multi-Agent Continuous Transportation with Online Balanced Partitioning.** In *Proceedings of the 15th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-16)*, pp. 1303-1304.
10. Yuhui Wang, Christian von der Weth, Yehong Zhang[§], Kian Hsiang Low, Vivek Singh, and Mohan Kankanhalli[¶] (2016). **Concept-based Hybrid Fusion of Multimodal Event Signals.** In *Proceedings of the IEEE International Symposium on Multimedia (ISM'16)*, pp. 14-19 [26.1% Acceptance Rate].
11. Quoc Phong Nguyen[§], Kian Hsiang Low, and Patrick Jaillet[¶] (2015). **Inverse Reinforcement Learning with Locally Consistent Reward Functions.** In C. Cortes, N. D. Lawrence, D. D. Lee, M. Sugiyama, R. Garnett, editors, *Advances in Neural Information Processing Systems 28: 29th Annual Conference on Neural Information Processing Systems (NIPS-15)*, pp. 1747-1755, Curran Associates, Inc. [21.9% Acceptance Rate].
12. Trong Nghia Hoang[§], Quang Minh Hoang[§], and Kian Hsiang Low (2015). **A Unifying Framework of Anytime Sparse Gaussian Process Regression Models with Stochastic Variational Inference for Big Data.** In *Proceedings of the 32nd International Conference on Machine Learning (ICML-15)*, pp. 569-578 [26.0% Acceptance Rate].
13. Kian Hsiang Low, Jiangbo Yu[§], Jie Chen[§], and Patrick Jaillet[¶] (2015). **Parallel Gaussian Process Regression for Big Data: Low-Rank Representation Meets Markov Approximation.** In *Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI-15)*, pp. 2821-2827 [26.67% Acceptance Rate].
14. Trong Nghia Hoang[§], Kian Hsiang Low, Patrick Jaillet[¶], and Mohan Kankanhalli[¶] (2014). **Nonmyopic ϵ -Bayes-Optimal Active Learning of Gaussian Processes.** In *Proceedings of the 31st International Conference on Machine Learning (ICML-14)*, pp. 739-747 [25.0% Acceptance Rate]. Also appeared in *RSS-14 Workshop on Non-Parametric Learning in Robotics*.
15. Nuo Xu[§], Kian Hsiang Low, Jie Chen[§], Keng Kiat Lim[§], and Etkin Baris Ozgul[§] (2014). **GP-Localize: Persistent Mobile Robot Localization using Online Sparse Gaussian Process Observation Model.** In *Proceedings of the 28th AAAI Conference on Artificial Intelligence (AAAI-14)*, pp. 2585-2592 [28.3% Acceptance Rate]. Also appeared in *RSS-14 Workshop on Non-Parametric Learning in Robotics*.
16. Ruofei Ouyang[§], Kian Hsiang Low, Jie Chen[§], and Patrick Jaillet[¶] (2014). **Multi-Robot Active Sensing of Non-Stationary Gaussian Process-Based Environmental Phenomena.** In *Proceedings of the 13th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-14)*, pp. 573-580 [23.8% Acceptance Rate]. Also appeared in *RSS-14 Workshop on Non-Parametric Learning in Robotics*.
17. Prabhu Natarajan[§], Kian Hsiang Low, and Mohan Kankanhalli[¶] (2014). **Decision-Theoretic Approach to Maximizing Fairness in Multi-Target Observation in Multi-Camera Surveillance.** In *Proceedings of the 13th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-14)*, pp. 1521-1522.
18. Trong Nghia Hoang[§], Kian Hsiang Low, Patrick Jaillet[¶], and Mohan Kankanhalli[¶] (2014). **Active Learning is Planning: Nonmyopic ϵ -Bayes-Optimal Active Learning of Gaussian Processes.** In T. Calders, F. Esposito,

- E. Hüllermeier, R. Meo, editors, *Machine Learning and Knowledge Discovery in Databases - European Conference, ECML/PKDD-14 Nectar (New Scientific and Technical Advances in Research) Track, Part III*, LNCS 8726, pp. 494-498, Springer Berlin Heidelberg.
19. Kian Hsiang Low, Nuo Xu[§], Jie Chen[§], Keng Kiat Lim[§], and Etkin Baris Ozgul[§] (2014). **Generalized Online Sparse Gaussian Processes with Application to Persistent Mobile Robot Localization**. In T. Calders, F. Esposito, E. Hüllermeier, R. Meo, editors, *Machine Learning and Knowledge Discovery in Databases - European Conference, ECML/PKDD-14 Nectar (New Scientific and Technical Advances in Research) Track, Part III*, LNCS 8726, pages 499-503, Springer Berlin Heidelberg.
 20. Prabhu Natarajan[§], Kian Hsiang Low, and Mohan Kankanhalli[¶] (2014). **No One is Left “Unwatched”: Fairness in Observation of Crowds of Mobile Targets in Active Camera Surveillance**. In *Proceedings of the 21st European Conference on Artificial Intelligence (ECAI-14), including Prestigious Applications of Artificial Intelligence (PAIS-14)*, pp. 1155-1160.
 21. Kian Hsiang Low, Jie Chen[§], Trong Nghia Hoang[§], Nuo Xu[§], and Patrick Jaillet[¶] (2014). **Recent Advances in Scaling up Gaussian Process Predictive Models for Large Spatiotemporal Data**. In S. Ravela, A. Sandu, editors, *Dynamic Data-Driven Environmental Systems Science - First International Conference, DyDESS’14*, LNCS 8964, pp. 167-181, Springer International Publishing.
 22. Prabhu Natarajan[§], Trong Nghia Hoang[§], Yongkang Wong, Kian Hsiang Low, and Mohan Kankanhalli[¶] (2014). **Scalable Decision-Theoretic Coordination and Control for Real-time Active Multi-Camera Surveillance**. In *Proceedings of the 8th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC’14)* (Invited Paper to Special Session on Smart Cameras for Smart Environments), pp. 115-120.
 23. Etkin Baris Ozgul[§], Somchaya Liemhetcharat[¶], and Kian Hsiang Low (2014). **Multi-Agent Ad Hoc Team Partitioning by Observing and Modeling Single-Agent Performance**. In *Proceedings of the Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC’14)*, pp. 1-7.
 24. Jie Chen[§], Nannan Cao[§], Kian Hsiang Low, Ruofei Ouyang[§], Colin Keng-Yan Tan, and Patrick Jaillet[¶] (2013). **Parallel Gaussian Process Regression with Low-Rank Covariance Matrix Approximations**. In *Proceedings of the 29th Conference on Uncertainty in Artificial Intelligence (UAI-13)*, pp. 152-161 [31.3% Acceptance Rate].
 25. Jie Chen[§], Kian Hsiang Low, and Colin Keng-Yan Tan (2013). **Gaussian Process-Based Decentralized Data Fusion and Active Sensing for Mobility-on-Demand System**. In *Proceedings of the Robotics: Science and Systems Conference (RSS-13)* [30.1% Acceptance Rate].
 26. Trong Nghia Hoang[§] and Kian Hsiang Low (2013). **Interactive POMDP Lite: Towards Practical Planning to Predict and Exploit Intentions for Interacting with Self-Interested Agents**. In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI-13)*, pp. 2298-2305 [13.2% Acceptance Rate].
 27. Trong Nghia Hoang[§] and Kian Hsiang Low (2013). **A General Framework for Interacting Bayes-Optimally with Self-Interested Agents using Arbitrary Parametric Model and Model Prior**. In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI-13)*, pp. 1394-1400 [28.0% Acceptance Rate].
 28. Nannan Cao[§], Kian Hsiang Low, and John M. Dolan[†] (2013). **Multi-Robot Informative Path Planning for Active Sensing of Environmental Phenomena: A Tale of Two Algorithms**. In *Proceedings of the 12th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-13)*, pp. 7-14 [22.9% Acceptance Rate].
 29. David R. Thompson[¶], Nathalie Cabrol, Michael Furlong, Craig Hardgrove, Kian Hsiang Low, Jeffrey Moersch, and David Wettergreen (2013). **Adaptive Sampling of Time Series with Application to Remote Exploration**. In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA’13)*, pp. 3463-3468.

30. Jiangbo Yu[§], Kian Hsiang Low, Ali Oran[¶], and Patrick Jaillet[¶] (2012). **Hierarchical Bayesian Nonparametric Approach to Modeling and Learning the Wisdom of Crowds of Urban Traffic Route Planning Agents.** In *Proceedings of the IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT'12)*, pp. 478-585.
31. Prabhu Natarajan[§], Trong Nghia Hoang[§], Kian Hsiang Low, and Mohan Kankanhalli[¶] (2012). **Decision-Theoretic Coordination and Control for Active Multi-Camera Surveillance in Uncertain, Partially Observable Environments.** In *Proceedings of the 6th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC'12)*, pp. 1-6.
32. Jie Chen[§], Kian Hsiang Low, Colin Keng-Yan Tan, Ali Oran[¶], Patrick Jaillet[¶], John M. Dolan[†], and Gaurav S. Sukhatme[¶] (2012). **Decentralized Data Fusion and Active Sensing with Mobile Sensors for Modeling and Predicting Spatiotemporal Traffic Phenomena.** In *Proceedings of the 28th Conference on Uncertainty in Artificial Intelligence (UAI-12)*, pp. 163-173 [31.6% Acceptance Rate]. Also appeared in *AAMAS-12 Workshop on Agents in Traffic and Transportation (ATT-12)*.
33. Kian Hsiang Low, Jie Chen[§], John M. Dolan[†], Steve Chien[¶], and David R. Thompson[¶] (2012). **Decentralized Active Robotic Exploration and Mapping for Probabilistic Field Classification in Environmental Sensing.** In *Proceedings of the 11th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-12)*, pp. 105-112 [20.4% Acceptance Rate]. Also appeared in *IROS'11 Workshop on Robotics for Environmental Monitoring (WREM-11)*.
34. Prabhu Natarajan[§], Trong Nghia Hoang[§], Kian Hsiang Low, and Mohan Kankanhalli[¶] (2012). **Decision-Theoretic Approach to Maximizing Observation of Multiple Targets in Multi-Camera Surveillance.** In *Proceedings of the 11th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-12)*, pp. 155-162 [20.4% Acceptance Rate].
35. Trong Nghia Hoang[§] and Kian Hsiang Low (2012). **Intention-Aware Planning under Uncertainty for Interacting with Self-Interested, Boundedly Rational Agents.** In *Proceedings of the 11th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-12)*, pp. 1233-1234.
36. Zhuang Jie Chong, Baoxing Qin, Tirthankar Bandyopadhyay, Tichakorn Wongpiromsarn, Edward Samuel Rankin, Marcelo H. Ang, Jr.[†], Emilio Frazzoli[¶], Daniela Rus[¶], David Hsu[¶], and Kian Hsiang Low (2011). **Autonomous Personal Vehicle for the First- and Last-Mile Transportation Services.** In *Proceedings of the 5th IEEE International Conference on Cybernetics and Intelligent Systems and 5th IEEE International Conference on Robotics, Automation and Mechatronics (CIS-RAM'11)*, pp. 253-260. Also appeared in *IROS'11 Workshop on Perception and Navigation for Autonomous Vehicles in Human Environment*.
37. Kian Hsiang Low, John M. Dolan[†], and Pradeep K. Khosla[†] (2011). **Active Markov Information-Theoretic Path Planning for Robotic Environmental Sensing.** In *Proceedings of the 10th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-11)*, pp. 753-760 [22.1% Acceptance Rate].
38. Gregg Podnar, John M. Dolan[†], Kian Hsiang Low, and Alberto Elfes (2010). **Telesupervised Remote Surface Water Quality Sensing.** In *Proceedings of the IEEE Aerospace Conference*.
39. Kian Hsiang Low, John M. Dolan[†], and Pradeep K. Khosla[†] (2009). **Information-Theoretic Approach to Efficient Adaptive Path Planning for Mobile Robotic Environmental Sensing.** In *Proceedings of the 19th International Conference on Automated Planning and Scheduling (ICAPS-09)*, pp. 233-240 [33.9% Acceptance Rate]. Also appeared in *IPSN-09 Workshop on Sensor Networks for Earth and Space Science Applications (ESSA-09)*. Also presented orally in *RSS-09 Workshop on Aquatic Robots and Ocean Sampling*.
40. Kian Hsiang Low, Gregg Podnar, Stephen Stancliff, John M. Dolan[†], and Alberto Elfes (2009). **Robot Boats as a Mobile Aquatic Sensor Network.** In *Proceedings of the IPSN-09 Workshop on Sensor Networks for Earth and Space Science Applications (ESSA-09)*.

41. John M. Dolan[†], Gregg W. Podnar, Stephen Stancliff, Kian Hsiang Low, Alberto Elfes, John Higinbotham, Jeffrey C. Hosler, Tiffany A. Moisan, and John Moisan (2009). **Cooperative Aquatic Sensing Using the Telesupervised Adaptive Ocean Sensor Fleet**. In *Proceedings of the SPIE Conference on Remote Sensing of the Ocean, Sea Ice, and Large Water Regions*, volume 7473.
42. Kian Hsiang Low, John M. Dolan[†], and Pradeep K. Khosla[†] (2008). **Adaptive Multi-Robot Wide-Area Exploration And Mapping**. In *Proceedings of the 7th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-08)*, pp. 23-30 [22.2% Acceptance Rate]. Also presented as a poster in *RSS-09 Workshop on Aquatic Robots and Ocean Sampling*.
43. Kian Hsiang Low, Geoffrey J. Gordon, John M. Dolan[†], and Pradeep K. Khosla[†] (2007). **Adaptive Sampling for Multi-Robot Wide-Area Exploration**. In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA'07)*, pp. 755-760.
44. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2004). **Task Allocation via Self-Organizing Swarm Coalitions in Distributed Mobile Sensor Network**. In *Proceedings of the 19th National Conference on Artificial Intelligence (AAAI-04)*, pp. 28-33 [26.7% Acceptance Rate].
45. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2004). **Reactive, Distributed Layered Architecture for Resource-Bounded Multi-Robot Cooperation: Application to Mobile Sensor Network Coverage**. In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA'04)*, pp. 3747-3752.
46. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2004). **Continuous-Spaced Action Selection for Single- and Multi-Robot Tasks Using Cooperative Extended Kohonen Maps**. In *Proceedings of the IEEE International Conference on Networking, Sensing and Control (ICNSC'04)* (Invited Paper to Special Session on Visual Surveillance), pp. 198-203.
47. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2003). **Action Selection for Single- and Multi-Robot Tasks Using Cooperative Extended Kohonen Maps**. In *Proceedings of the 18th International Joint Conference on Artificial Intelligence (IJCAI-03)*, pp. 1505-1506 [27.6% Acceptance Rate].
48. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2003). **Action Selection in Continuous State and Action Spaces by Cooperation and Competition of Extended Kohonen Maps**. In *Proceedings of the 2nd International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS-03)*, pp. 1056-1057.
49. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2003). **Enhancing the Reactive Capabilities of Integrated Planning and Control with Cooperative Extended Kohonen Maps**. In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA'03)*, pp. 3428-3433.
50. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2002). **A Hybrid Mobile Robot Architecture with Integrated Planning and Control**. In *Proceedings of the 1st International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS-02)*, pp. 219-226 [26% Acceptance Rate].
51. Kian Hsiang Low, Wee Kheng Leow[†], and Marcelo H. Ang, Jr.[†] (2002). **Integrated Planning and Control of Mobile Robot with Self-Organizing Neural Network**. In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA'02)*, pp. 3870-3875 [33% Acceptance Rate in Neural Networks Track].

TECHNICAL REPORTS AND THESES

1. Kian Hsiang Low (2009). **Multi-Robot Adaptive Exploration and Mapping for Environmental Sensing Applications**. *Ph.D. Thesis, Technical Report CMU-ECE-2009-024*, Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA.

2. Kian Hsiang Low, Geoffrey J. Gordon, John M. Dolan[†], and Pradeep K. Khosla[†] (2005). **Adaptive Sampling for Multi-Robot Wide Area Prospecting**. In *Technical Report CMU-RI-TR-05-51*, Robotics Institute, Carnegie Mellon University, Pittsburgh, PA.
3. Kian Hsiang Low (2002). **Integrated Robot Planning and Control with Extended Kohonen Maps**. *M.Sc. Thesis*, Department of Computer Science, National University of Singapore [Singapore Computer Society Prize for best M.Sc. Thesis 2002-2003].
4. Kian Hsiang Low (2001). **Mobile Robots That Learn to Navigate**. *Honors Thesis*, Department of Computer Science, National University of Singapore.

PROFESSIONAL SERVICE

- Associate editor for
 1. *2012 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'12)*, 2012
 2. *2011 IEEE International Conference on Robotics and Automation (ICRA'11)*, 2011
- Senior program committee member for
 1. *33rd AAAI Conference on Artificial Intelligence (AAAI-19)*, 2019
 2. *17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-18)*, 2018
 3. *24th International Joint Conference on Artificial Intelligence (IJCAI-15)*, 2015
- Program committee member for
 1. *Robotics: Science and Systems Conference (RSS)*, 2014, 2018
 2. *AAAI Conference on Artificial Intelligence, Main Technical Track*, 2010, 2016-2018
 3. *28th International Conference on Automated Planning and Scheduling (ICAPS-18)*, Planning and Learning Track, 2018
 4. *Asian Conference on Machine Learning (ACML)*, 2018
 5. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2011, 2017
 6. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2011-2014, 2016
 7. *2016 IEEE International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAN'16)*, 2016
 8. *IEEE International Conference on Agents (ICA)*, 2016-2018
 9. *AAAI/AAMAS Workshop on Multiagent Interaction without Prior Coordination*, 2014-2017
 10. *24th International Joint Conference on Artificial Intelligence (IJCAI-15)*, Computational Sustainability Track, 2015
 11. *International Conference on Automated Planning and Scheduling (ICAPS)*, 2010-2012
 12. *11th International Conference on Intelligent Autonomous Systems (IAS-11)*, 2010

- Journal reviewer for
 1. *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2016, 2018
 2. *Journal of Field Robotics (JFR)*, 2017-2018
 3. *Knowledge and Information Systems (KAIS)*, 2018
 4. *Machine Learning Journal (MLJ)*, Special Issue on Asian Conference on Machine Learning, 2017
 5. *International Journal of Robotics Research (IJRR)*, Special Issue on Robotics: Science and Systems Conference 2015, 2016, Special Issue on International Symposium on Experimental Robotics, 2017
 6. *Autonomous Robots (AURO)*, Special Issue on Towards Long-Term Autonomy in Marine Robotics, 2015, Special Issue on Online Decision Making in Multi-Robot Coordination, 2016, Special Issue on Distributed Robots: From Fundamentals to Applications, 2017
 7. *IEEE Robotics and Automation Letters (RA-L)*, 2016
 8. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 2016
 9. *Journal of Autonomous Agents and Multi-agent Systems (JAAMAS)*, Special Issue on Multiagent Interaction without Prior Coordination, 2016
 10. *IEEE Transactions on Robotics (T-RO)*, 2004, 2011, 2014-2015
 11. *Journal of Aerospace Information Systems (JAIS)*, 2015
 12. *ACM Transactions on Sensor Networks (TOSN)*, 2012-2013
 13. *International Journal of Sensor Networks (IJSNet)*, Special Issue on Interdisciplinary Design of Algorithms and Protocols in Wireless Sensor Networks, 2007, 2011
 14. *International Journal of Vehicle Autonomous Systems (IJVAS)*, Special Issue on Modelling and Simulation of Complex Mechatronic Systems, 2007
 15. *Control and Intelligent Systems*, 2006
 16. *Frontiers in Robotics and AI*, Computational Intelligence specialty
- Conference reviewer for
 1. *Annual Conference on Neural Information Processing Systems (NIPS)*, 2013-2016, 2018
 2. *IEEE International Conference on Robotics and Automation (ICRA)*, 2013-2015, 2017
 3. *International Symposium on Multi-Robot and Multi-Agent Systems (MRS)*, 2017
 4. *International Symposium on Robotics Research (ISRR)*, 2017
 5. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2011, 2013-2014
 6. *9th International Conference on Control, Automation, Robotics and Vision (ICARCV'06)*, 2006
 7. *IEEE International Conference on Networking, Sensing and Control (ICNSC'06)*, 2006
- Organizing Chair for *2016 IEEE RAS Summer School on Multi-Robot Systems*, 2016
- Sponsorship Chair for *15th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-16)*, 2016
- Workshop Chair for *2015 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT'15)*, 2015
- Co-chair for *Defense, Science & Research Conference (DSR'11) Workshop on Multi-UAV Coordination and Path Planning*, 2011
- Member of the CS Executive Committee, Department of Computer Science, National University of Singapore, 1 July 2014 - 30 June 2017
- Member of the Graduate Studies Committee, Department of Computer Science, National University of Singapore, November 2014 - November 2016
- Member of the CS Curriculum Committee, Department of Computer Science, National University of Singapore, January 2016 - Present

- Ph.D. thesis committee member for
 1. Goh, Chong Yang (OR MIT) Thesis Title: Learning with structured decision spaces, 2018
 2. Kaveh Taghipour (CS NUS) Thesis Title: Robust trait-specific essay scoring using neural networks and density estimators, 2017
 3. Li, Zhuoru (CS NUS) Thesis Title: Efficient hierarchical reinforcement learning through core task abstraction and context reasoning, 2016
 4. Lim, Zhan Wei (CS NUS) Thesis Title: Planning under uncertainty: From informative path planning to partially observable semi-MDPs, 2015
 5. Nguyen Viet Cuong (CS NUS) Thesis Title: Near-optimality and robustness of greedy algorithms for Bayesian pool-based active learning, 2015
 6. Bai, Haoyu (CS NUS) Thesis Title: Continuous POMDPs for robotic tasks, 2014
 7. Liu, Shilin (CS NUS) Thesis Title: Temporally varying weight regression for speech recognition, 2014
 8. Ye, Nan (CS NUS) Thesis Title: Probabilistic learning: Sparsity and non-decomposable losses, 2013
 9. Nguyen Dinh Truong Huy (CS NUS) Thesis Title: Towards smart assistants in two-party collaboration, 2013
 10. Lau, Qiangfeng Peter (CS NUS) Thesis Title: Effective reinforcement learning for collaborative multi-agent domains, 2013
 11. Wang, Xiangyu (CS NUS) Thesis Title: Multimedia decision fusion, 2012
 12. Ehsan Rehman (CS NUS) Thesis Title: Bounded uncertainty roadmaps, 2012
 13. Achudhan Sivakumar (CS NUS) Thesis Title: UAV swarm coordination and control under realistic weather and network conditions for establishing a wireless communications backbone, 2012
 14. Yin, Hongli (CS NUS) Thesis Title: A model driven approach to imbalanced data learning, 2011
- M.Sc. and M.Comp. thesis committee member for
 1. Divya Sivasankaran (CS NUS) Thesis Title: Context-Aware Fusion for Multi-Modal Biometrics, 2017
 2. Sebastien Alexandre Marie Iooss (CS NUS) Thesis Title: Playing Atari with Value Iteration Networks, 2017
 3. Philip Beh (CS NUS) Thesis Title: Dialog management using active learning algorithms, 2016
 4. Ankit Goyal (CS NUS) Thesis Title: Online learning and planning of dynamical systems using Gaussian processes, 2015
 5. Cai, Shaojun (CS NUS) Thesis Title: Online POMDP planning for vehicle navigation in densely populated area, 2014

INVITED TALKS

- “Informative Gaussian Process Planning with Lipschitz Continuous Reward Functions: Towards Unifying Adaptive Sampling, Bayesian Optimization, Active Learning, and Beyond”. International Conference on Robotics and Automation (ICRA) 2018 Workshop on Informative Path Planning and Adaptive Sampling, Brisbane, Australia, May 21, 2018
- “Probabilistic machine learning in robotics”. Intelligent Robotics International Symposium, Japan Advanced Institute of Science and Technology (JAIST), Shiinoki Cultural Complex, Kanazawa, Ishikawa, Feb 24 - 25, 2016
- “Gaussian process-based decentralized data fusion and active sensing agents for large-scale modeling and prediction of spatiotemporal environmental phenomena”. Robotics: Science & Systems (RSS) 2013 Workshop on Robotic Exploration, Monitoring, and Information Collection: Nonparametric Modeling, Information-based Control, and Planning under Uncertainty, Berlin, Germany, Jun 27 - 28, 2013
- “Machine learning seminars”. University of Information Technology (UIT), Vietnam National University (VNU), Ho Chi Minh City, Vietnam, Jun 29 - Jul 2, 2011

STUDENTS AND POSTDOCS ADVISED

CURRENT STUDENTS AND POSTDOCS

1. **Dai, Zhongxiang** (1st year Ph.D. CS NUS, co-advised with Patrick Jaillet, MIT)
Awards. Recipient of SMART SMA3 graduate fellowship and ST Electronics Prizes for being the top Year 1 and Year 2 student in Electrical Engineering
2. **Chen, Yizhou** (1st year Ph.D. CS NUS)
3. **Ryutaro Oikawa** (2nd year Ph.D. CS NUS)
4. **Sreejith Balakrishnan** (2nd year Ph.D. CS NUS, co-advised with Harold Soh)
5. **Zhang, Jingfeng** (2nd year Ph.D. CS NUS, co-advised with Mohan Kankanhalli)
6. **Teng, Tong** (3rd year Ph.D. CS NUS)
7. **Dmitrii Kharkovskii** (4th year Ph.D. CS NUS)
8. **Nguyen, Quoc Phong** (5th year Ph.D. CS NUS, co-advised with Patrick Jaillet, MIT)
Awards. Recipient of NUS research achievement award, SMART SMA3 graduate fellowship, Lee Kuan Yew Gold Medal for best performing graduate in B.Eng. (Computing Engineering) programme, IES Gold Medal for top graduating student in B.Eng. in Computing Engineering, Plenary session speaker at National UROP Congress 2013 for the best UROP project in School of Computing, Top Year 1 Computer Engineering Student trophy
9. **Zhang, Yehong** (Ph.D. CS NUS, 2017, co-advised with Mohan Kankanhalli)
Awards. Recipient of AAAI 2016 scholarship and NUS research achievement award
Thesis title. Data-Efficient Machine Learning with Multiple Output Types and High Input Dimensions
Current employment. Research fellow, Department of Computer Science, NUS
10. **Lim, Kar Wai** (Ph.D. CS ANU, 2016)
Awards. Recipient of ACML 2016 best student paper award and AMP prize for honours thesis in actuarial studies (best thesis award)
Thesis title. Nonparametric Bayesian topic modelling with auxiliary data
Current employment. Research fellow, NUS-Singtel Cyber Security Research and Development Laboratory (Co-advised with Mun Choon Chan)

GRADUATED STUDENTS AND POSTDOCS

1. **Hoang, Trong Nghia** (Ph.D. CS NUS, 2015)
Awards. Recipient of NUS Dean's graduate research excellence award, President's graduate fellowship, and research achievement awards $\times 2$, AAMAS 2012 scholarship, IJCAI 2013 travel grant award
Thesis title. New advances on Bayesian and decision-theoretic approaches for interactive machine learning
Current employment. Postdoctoral fellow, MIT (Advised by Jonathan How), Apr 2017
2. **Chen, Jie** (Ph.D. CS NUS, 2013, co-advised with Patrick Jaillet, MIT as a postdoctoral associate, SMART FM)
Awards. Recipient of NUS Dean's graduate research excellence award and research achievement award, UAI 2012 scholarship
Thesis title. Gaussian process-based decentralized data fusion and active sensing agents: Towards large-scale modeling and prediction of spatiotemporal traffic phenomena
Current employment. Associate research professor, College of Computer Science and Software Engineering, Shenzhen University

3. **Prabhu Natarajan** (Ph.D. CS NUS, 2013, co-advised with Mohan Kankanhalli)
Awards. Recipient of ICDSC 2012 best PhD forum paper award, NUS research achievement award, AAMAS 2012 scholarship
Thesis title. Decision-theoretic approach for controlling and coordinating multiple active cameras in surveillance
Current employment. Assistant professor, DigiPen Institute of Technology Singapore, Jun 2016
4. **Xu, Nuo** (Ph.D. CS NUS, 2017)
Awards. Recipient of AAAI 2014 scholarship and NUS research achievement award
Thesis title. Online Gaussian process filtering for persistent robot localization with arbitrary sensor modalities
Current employment. Data scientist, Grab
5. **Ouyang, Ruofei** (Ph.D. CS NUS, 2016)
Awards. Recipient of AAMAS 2014 scholarship
Thesis title. Exploiting decentralized multiagent coordination for large-scale machine learning problems
Current employment. Data scientist, Wecash (Southeast Asia) Pte. Ltd.
6. **Wesley Tan** (M.Comp. CS NUS, 2017)
Awards. Recipient of President's Graduate Fellowship in Nanyang Technological University
Thesis title. Variational Bayesian Actor-Critic
Current status. Ph.D. in Computer Science, Nanyang Technological University, Aug 2017
7. **Son, Jaemin** (M.Sc. CS NUS, 2016, co-advised with Gary Tan)
Thesis title. High-Dimensional Bayesian Optimization with Application to Traffic Simulation
8. **Etkin Baris Ozigul** (M.Sc. CS NUS, 2017)
Thesis title. Shuttle-line Routing for Mobility-on-Demand Systems with Ridesharing
9. **Cao, Nannan** (M.Sc. CS NUS, 2012)
Thesis title. Information-Theoretic Multi-Robot Path Planning
10. **Ling, Chun Kai** (B.Eng. in Computer Engineering, NUS, 2015)
Awards. Recipient of Lee Kuan Yew Gold Medal for best performing graduate in B.Eng. (Computing Engineering) programme, IES Gold Medal for top graduating student in B.Eng. in Computing Engineering, Defence Science Technology Agency Gold Medal for best local final year student for the degree of B.Eng. (Computer Engineering), Micron Prize for being one of the top two local Year 2 Computer Engineering students, and Alcatel-Lucent Telecommunications Prize for best performance in a module in the area of Communications and Networks in BEng (EE) or BEng (CEG) examinations
FYP dissertation title. Planning and learning in spatiotemporal environmental phenomena
Current status. Ph.D. in Computer Science, CMU, Aug 2017
11. **Hoang, Quang Minh** (B.Comp. in Computational Biology, NUS, 2016)
Awards. Recipient of Lee Kuan Yew Gold Medal for best performing graduate in B.Comp. (Computational Biology) programme, Undergraduate Outstanding Researcher Prize in NUS, and ICML 2015 scholarship
UROD dissertation title. Scaling up Gaussian process inference for high velocity in big data
Current status. Ph.D. in Computer Science, CMU, Aug 2018
12. **Erik Alexander Daxberger** (B.Sc. in Media Informatics, Ludwig-Maximilians-Universität München, 2017)
Awards. Recipient of LMU research award for excellent students for the Bachelor's thesis, LMUexchange and PROSA scholarships for a student exchange program at NUS, ICML 2017 travel award
Bachelor's thesis title. Distributed batch Bayesian optimization
Current status. Ph.D., Department of Engineering, University of Cambridge, Aug 2018
13. **Hio, Leonard Man Loong** (B.Comp. (Honours) CS NUS (Highest Distinction), 2018)
FYP dissertation title. Kernel selection for Gaussian processes

14. **Huang, Feixue** (B.Comp. (Honours) CS NUS (Highest Distinction), 2018)
FYP dissertation title. Bayesian optimization for smart devices
15. **Ang, Karen Mei Yi** (B.Comp. (Honours) CS NUS (Highest Distinction), 2017)
Awards. Recipient of Tata Consultancy Services Asia Pacific Prize
FYP dissertation title. Bayesian optimization with high-dimensional inputs
16. **Nguyen, Quoc Dat** (B.Comp. CS NUS, 2017)
FYP dissertation title. Kernel selection for Gaussian processes
17. **Choo, Boon Yong Martin** (B.Comp. CS NUS, 2017)
FYP dissertation title. Playing an interactive game with humanoid robots
18. **Nguyen, Hoang Vu** (B.Comp. CS NUS, 2017)
FYP dissertation title. Bayesian optimization for hyperparameter tuning in deep learning
19. **Chng, Yong Xien** (B.Comp. CS NUS, 2017)
FYP dissertation title. Bayesian optimization for reinforcement learning
20. **Khor, Shi-Jie** (B.Comp. (Honours) CS NUS (Highest Distinction), 2016)
Awards. Recipient of Lee Kuan Yew Gold Medal for best performing graduate in B.Comp. (Computer Science) programme, IEEE Singapore Computer Society Book Prize for the best student in the Honours Year term project, and Tata Consultancy Services Asia Pacific Prize
FYP dissertation title. Kernel Search for Gaussian Processes
Current employment. Software engineer, Facebook Asia Pacific HQ
21. **Nathan Azaria** (B.Comp. (Honours) CS NUS (Highest Distinction), 2016)
Awards. Recipient of National Computer Systems Medal And Prize for the top student in B.Comp. (Computer Science) programme
FYP dissertation title. Stochastic variational inference on multi-output Gaussian process
Current employment. Software engineer, Facebook London
22. **Lim, Keng Kiat** (B.Comp. CS NUS, 2016)
FYP dissertation title. Learning with high-dimensional data
Current employment. Software engineer, Facebook HQ
23. **Nguyen, Hien Linh** (B.Comp. CS NUS, 2015)
FYP dissertation title. Traffic surveillance with a network of cameras
Current employment. Data engineer, Facebook SG
24. **Akshay Viswanathan** (B.Eng. in Computer Engineering (Honours 1st Class), NUS, 2015)
FYP dissertation title. Scaling up machine learning techniques via parallelization for large data
Current employment. Senior software engineer, Visa Inc.
25. **Shailendra Khemka** (University Scholars Programme, von Neumann Programme for B.Comp. CS NUS, 2013)
Awards. Recipient of Tata Consultancy Services Asia Pacific Medal and Prize for 2nd best graduate throughout the course of study for B.Comp, Defence Science & Technology Agency Prize for top UROP student in B.Comp, Sung Kah Kay Memorial Prize Winner in NUS University Scholars Programme (USP)
FYP dissertation title. Autonomous search for victims in a disaster situation
Current employment. Business solutions: software engineer, Deutsche bank AG - Singapore branch

REFEREES

PROF. PRADEEP K. KHOSLA

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