## Thursday Dec 7th

**09:50 — 10:40 AM @ Hall A (Invited Talk: Breiman Lecture)**
### On Bayesian Deep Learning and Deep Bayesian Learning
Yee Whye Teh

**11:55 AM — 12:00 PM @ Hall A (Spotlight)**
### Scene Physics Acquisition via Visual De-animation
Jiajun Wu (MIT) · Erika Lu (MIT) · Pushmeet Kohli · Bill Freeman (MIT, Google) ·
Josh Tenenbaum (MIT)

**02:00 — 09:30 PM @ Grand Ballroom (Symposium)**
### Metalearning
Organisers include: Chrisantha Fernando
Invited speakers include: Chrisantha Fernando · Max Jaderberg · Oriol Vinyals ·
Jane Wang

**02:00 — 09:30 PM @ Hall C (Symposium)**
### Interpretable Machine Learning
Invited speakers include:  Victoria Krakovna

**02:00 — 09:30 PM @ Beverly Theater**
### Kinds of intelligence: types, tests and meeting the needs of society
Invited speakers include: Demis Hassabis

**02:00 — 09:30 PM @ Hall A (Symposium)**
### Deep Reinforcement Learning
Organisers include: David Silver
Invited speakers include: Michael Bowling

## Friday Dec 8th

**08:00 AM — 06:30 PM @ Room 102 A+B (Workshop)**
### Machine Learning for Creativity and Design
Organisers include: S. M. Ali Eslami · Sander Dieleman

**08:00 AM — 06:30 PM @ Room 102-C (Workshop)**
### Machine Learning for Molecules and Materials
Invited speakers include: Oriol Vinyals

**08:00 AM — 06:30 PM @ Room 104-C (Workshop)**
### Acting and Interacting in the Real World: Challenges in Robot Learning
Organisers include: Raia Hadsell · Martin Riedmiller

**08:00 AM — 06:30 PM @ Room 101-A (Workshop)**
### Visually grounded interaction and language
Organisers include: Mateusz Malinowski · Olivier Pietquin
Invited speakers include: Olivier Pietquin · Felix Hill

**08:00 AM — 06:30 PM @ Room 201-B (Workshop)**
### Machine Learning for Audio Signal Processing (ML4Audio)
Invited speakers include: Sander Dieleman

**01:00 PM — 08:30 PM @ the Marriott Renaissance Long Beach Hotel (Workshop & Dinner)**
### Black in AI event
Dinner speakers include: Simon Osindero

## Saturday Dec 9th

**08:00 AM — 06:30 PM @ 201-A (Workshop)**
### BigNeuro 2017: Analyzing brain data from nano to macroscale
Invited speakers include:  Timothy Lillicrap · Greg Wayne

**08:00 AM — 06:30 PM @ Hyatt Seaview Ballroom (Workshop)**
### Learning Disentangled Features: from Perception to Control
Organisers include: Tejas Kulkarni · David Pfau
Invited speakers include: Irina Higgins · Pushmeet Kohli · Doina Precup
Spotlight presentations include: Hyunjik Kim · Charlie Nash

**08:00 AM — 06:30 PM @ Grand Ballroom A (Workshop)**
### Deep Learning: Bridging Theory and Practice
Organisers include: Oriol Vinyals
Invited speakers include: Doina Precup

**08:00 AM — 06:30 PM @ Hall C (Workshop)**
### Bayesian Deep Learning
Invited speakers include: Meire Fortunato · Nal Kalchbrenner

**08:00 AM — 06:30 PM @ 101-A (Workshop)**
### Deep Learning at Supercomputer Scale
Invited speakers include: Timothy Lillicrap

**08:00 AM — 06:30 PM @ S-7 (Workshop)**
### Medical Imaging meets NIPS
Invited speakers include: Olaf Ronneberger

**08:00 AM — 06:30 PM @ S-1 (Workshop)**
### Bayesian optimization for science and engineering
Invited speakers include: Yutian Chen

**08:00 AM — 06:30 PM @ 102-C (Workshop)**
### Emergent Communication Workshop
Organisers include: Jakob Foerster · Angeliki Lazaridou
Invited speakers include: Pushmeet Kohli

**08:00 AM — 06:30 PM @ Seaside Ballroom (Workshop)**
### Workshop on Meta-Learning
Invited speakers include: Jane Wang · Oriol Vinyals

**08:00 AM — 06:30 PM @ Hyatt Shoreline (Workshop)**
### Aligned Artificial Intelligence
Invited speakers include: Jan Leike

**08:00 AM — 06:30 PM @ Grand Ballroom B (Workshop)**
### Hierarchical Reinforcement Learning
Organisers include: Doina Precup · Tom Schaul
Invited speakers include: David Silver · Matt Botvinick

See https://nips.cc/Conferences/2017/Schedule
for full workshop schedules

# NIPS
# —2017

## DeepMind Itinerary

## Monday Dec 4th

**08:00 — 10:15 AM @ Hall A (Tutorial)**
### Deep Learning: Practice and Trends
Nando de Freitas · Scott Reed · Oriol Vinyals

**06:30 — 10:30 PM @ Pacific Ballroom #105 (Poster)**
### Thalamus Gated Recurrent Modules
Danijar Hafner (Google Brain) · Alexander Irpan (Google Brain) · James Davidson (Google Brain) · Nicolas Heess

**06:30 — 10:30 PM @ Pacific Ballroom #128 (Poster)**
### Neural Program Meta-Induction
Jacob Devlin (Google) · Rudy R Bunel (University of Oxford) · Rishabh Singh (Microsoft Research) · Matthew Hausknecht (Microsoft Research) · Pushmeet Kohli

**06:30 — 10:30 PM @ Pacific Ballroom #139 (Poster)**
### Sobolev Training for Neural Networks
Wojciech M. Czarnecki · Simon Osindero · Max Jaderberg · Grzegorz Swirszcz · Razvan Pascanu

**06:30 — 10:30 PM @ Pacific Ballroom #143 (Poster)**
### Robust Imitation of Diverse Behaviors
Ziyu Wang · Josh Merel · Scott Reed · Nando de Freitas · Gregory Wayne · Nicolas Heess

**06:30 — 10:30 PM @ Pacific Ballroom #184 (Poster)**
### Learning Disentangled Representations with Semi-Supervised Deep Generative Models
Siddharth Narayanaswamy (University of Oxford) · T. Brooks Paige (Alan Turing Institute) · Jan-Willem van de Meent (Northeastern University) · Alban Desmaison (University of Oxford) · Frank Wood (University of Oxford) · Noah Goodman (Stanford University) · Pushmeet Kohli · Philip Torr (University of Oxford)

**06:30 — 10:30 PM @ Pacific Ballroom #203 (Poster)**
### Interpolated Policy Gradient: Merging On-Policy and Off-Policy Gradient Estimation for Deep Reinforcement Learning
Shixiang Gu (University of Cambridge, Max Planck Institute) · Timothy Lillicrap · Richard E Turner (University of Cambridge) · Zoubin Ghahramani (University of Cambridge, Uber AI Labs)· Bernhard Schölkopf (Max Planck Institute) · Sergey Levine (UC Berkeley)

**Mon 4th - Thurs Dec 7th @ Long Beach Convention Centre (Workshop)**
### Women in Machine Learning
Contributed talks include: Victoria Krakovna (Mon 04:15 — 04:35 PM)

## Tuesday Dec 5th

**05:55 — 06:00 PM @ Hall A (Spotlight)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #79 (Poster)**
### Modulating early visual processing by language
Harm de Vries (University of Montreal) · Florian Strub (Univ. Lille) · Jeremie Mary (Univ. Lille) · Hugo Larochelle (Google Brain) · Olivier Pietquin · Aaron C Courville (University of Montreal)

**06:30 — 10:30 PM @ Pacific Ballroom #90 (Poster)**
### Self-Supervised Intrinsic Image Decomposition
Michael Janner (MIT) · Jiajun Wu (MIT) · Tejas Kulkarni · Ilker Yildirim (MIT) · Josh Tenenbaum (MIT)

**06:30 — 10:30 PM @ Pacific Ballroom #114 (Poster)**
### Filtering Variational Objectives
Chris Maddison · John Lawson (Google Brain) · George Tucker (Google Brain) · Mohammad Norouzi (Google Brain) · Nicolas Heess · Andriy Mnih · Yee Whye Teh · Arnaud Doucet (University of Oxford)

**06:30 — 10:30 PM @ Pacific Ballroom #116 (Poster)**
### Neural Discrete Representation Learning
Aäron van den Oord · Oriol Vinyals · Koray Kavukcuoglu

**06:30 — 10:30 PM @ Pacific Ballroom #117 (Poster)**
### Variational Memory Addressing in Generative Models
Jörg Bornschein · Andriy Mnih · Daniel Zoran · Danilo Jimenez Rezende

**06:30 — 10:30 PM @ Pacific Ballroom #118 (Poster)**
### Cortical microcircuits as gated-recurrent neural networks
Rui Costa  (University of Oxford) · Yannis M. Assael  · Brendan Shillingford · Nando de Freitas · Tim Vogels (University of Oxford)

**06:30 — 10:30 PM @ Pacific Ballroom #123 (Poster)**
### Visual Interaction Networks
Nicholas Watters · Andrea Tacchetti · Theophane Weber · Razvan Pascanu · Peter Battaglia · Daniel Zoran

**06:30 — 10:30 PM @ Pacific Ballroom #126 (Poster)**
### On-the-fly Operation Batching in Dynamic Computation Graphs
Graham Neubig (Carnegie Mellon University) · Yoav Goldberg (Bar-Ilan University) · Chris Dyer

## Wednesday Dec 6th

**10:35 — 10:50 AM @ Hall A (Oral)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #178 (Poster)**
### REBAR: Low-variance, unbiased gradient estimates for discrete latent variable models
George Tucker (Google Brain) · Andriy Mnih · Chris J Maddison · John Lawson (Google Brain) · Jascha Sohl-Dickstein (Google Brain)

**11:35 — 11:40 AM @ Hall A (Spotlight)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #176 (Poster)**
### A Disentangled Recognition and Nonlinear Dynamics Model for Unsupervised Learning
Marco Fraccaro (Technical University of Denmark) · Simon Kamronn (Technical University of Denmark)  · Ulrich Paquet · Ole Winther (Technical University of Denmark)

**03:05 — 03:20 PM @ Hall A (Oral)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #139 (Poster)**
### Imagination-Augmented Agents for Deep Reinforcement Learning
Sébastien Racanière* · Théophane Weber* · David P. Reichert* ·  Lars Buesing ·  Arthur Guez · Danilo Rezende · Adria Puigdomènech Badia · Oriol Vinyals · Nicolas Heess · Yujia Li · Razvan Pascanu · Peter Battaglia · Demis Hassabis · David Silver · Daan Wierstra

**03:25 — 03:30 PM @ Hall A (Spotlight)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #129 (Poster)**
### A simple neural network module for relational reasoning
Adam Santoro · David Raposo · David Barrett · Mateusz Malinowski · Razvan Pascanu · Peter Battaglia · Timothy Lillicrap

**03:45 — 03:50 PM @ Hall A (Spotlight)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #133 (Poster)**
### Simple and Scalable Predictive Uncertainty Estimation using Deep Ensembles
Balaji Lakshminarayanan · Alexander Pritzel · Charles Blundell

**05:10 — 05:15 PM @ Hall A (Spotlight)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #198 (Poster)**
### Unifying PAC and Regret: Uniform PAC Bounds for Episodic Reinforcement Learning
Christoph Dann (Carnegie Mellon University) · Tor Lattimore · Emma Brunskill (Stanford University)

**05:25 — 05:30 PM @ Hall A (Spotlight)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #6 (Poster)**
### Natural value approximators: learning when to trust past estimates
Tom Schaul · Zhongwen Xu · Joseph Modayil · Hado van Hasselt · Andre Barreto · David Silver

**05:40 — 05:45 PM @ Hall A (Spotlight)**
**& 06:30 — 10:30 PM @ Pacific Ballroom #9 (Poster)**
### Successor Features for Transfer in Reinforcement Learning
Andre Barreto · Will Dabney · Remi Munos · Jonathan Hunt · Tom Schaul · David Silver · Hado van Hasselt

**06:30 — 10:30 PM @ Pacific Ballroom #1 (Poster)**
### Deep Reinforcement Learning from Human Preferences
Paul F Christiano (OpenAI) · Jan Leike · Tom Brown · Miljan Martic · Shane Legg · Dario Amodei (OpenAI)

**06:30 — 10:30 PM @ Pacific Ballroom #15 (Poster)**
### Is the Bellman residual a bad proxy?
Matthieu Geist (Université de Lorraine) · Bilal Piot · Olivier Pietquin

**06:30 — 10:30 PM @ Pacific Ballroom #22 (Poster)**
### Conservative Contextual Linear Bandits
Abbas Kazerouni (Stanford University) · Mohammad Ghavamzadeh · Yasin Abbasi (Adobe Research) · Benjamin Van Roy (Stanford University)

**06:30 — 10:30 PM @ Pacific Ballroom #33 (Poster)**
### A Scale Free Algorithm for Stochastic Bandits with Bounded Kurtosis
Tor Lattimore

**06:30 — 10:30 PM @ Pacific Ballroom #80 (Poster)**
### Multi-view Matrix Factorization for Linear Dynamical System Estimation
Mahdi Karami (University of Alberta) · Martha White (University of Alberta) · Dale Schuurmans (Google) · Csaba Szepesvari

**06:30 — 10:30 PM @ Pacific Ballroom #86 (Poster)**
### A multi-agent reinforcement learning model of common-pool resource appropriation
Julien Pérolat · Joel Leibo · Vinicius Zambaldi · Charles Beattie · Karl Tuyls · Thore Graepel

**06:30 — 10:30 PM @ Pacific Ballroom #138 (Poster)**
### DisTraL: Robust multitask reinforcement learning
Yee Whye Teh · Victor Bapst · Razvan Pascanu · Nicolas Heess · John Quan · James Kirkpatrick · Wojciech M. Czarnecki · Raia Hadsell

**06:30 — 10:30 PM @ Pacific Ballroom #145 (Poster)**
### Scene Physics Acquisition via Visual De-animation
Jiajun Wu (MIT) · Erika Lu (MIT) · Pushmeet Kohli · Bill Freeman (MIT, Google) · Josh Tenenbaum (MIT)

**06:30 — 10:30 PM @ Pacific Ballroom #203 (Poster)**
### A Unified Game-Theoretic Approach to Multiagent Reinforcement Learning
Marc Lanctot · Vinicius Zambaldi · Audrunas Gruslys · Angeliki Lazaridou · Karl Tuyls · Julien Perolat · David Silver · Thore Graepel