

## Piotr Mirowski, Ph.D.

Research scientist in artificial intelligence for navigation, climate modelling and computational creativity.  
DeepMind, 14 Handyside St, London N1C 4UZ, UK • <https://piotirmirowski.com> • [piotr.mirowski@computer.org](mailto:piotr.mirowski@computer.org)

### Professional Experience

---

2014 to date	<b>DeepMind</b> , London, UK – <b>Staff Research Scientist</b> Research Scientist (2014 to 2017), Senior Research Scientist (2017 to 2019).
2013 to 2014	<b>Microsoft Bing</b> , London, UK – <b>Applied Scientist II</b> As a member of the core search team (query formulation), reduced “spamdexing”, query duplication and query diversity. Pioneered neural network-based query completion methods.
2011 to 2013	<b>Bell Labs</b> (Alcatel-Lucent), Murray Hill, NJ - <b>Researcher (Member of Technical Staff)</b> Independent research within the Statistics and Learning Research Dept led by Dr. Tin Kam Ho. Technical lead on indoor geo-location project. Developed and patented methods for probabilistic WiFi- and computer vision-based localization, transferred to the Wireless Networking LTE team, enabling three client projects. Built a robot for autonomous RF data collection and RGB-D SLAM. Created Android apps for WiFi/LTE SLAM from the pocket. Technical lead on smart grid client project, investigated time series models (kernel methods, state-space models, sparse coding) for predicting electric usage. Delivered load-forecasting software solution to utility.
Summer 2010	<b>AT&amp;T Labs Research</b> , Florham Park, NJ - <b>Technical Intern II</b> Improved upon AT&T speech recognition by developing a new statistical language model.
Summer 2009	<b>Standard &amp; Poor’s</b> , New York, NY - <b>Summer Associate in Quantitative Research</b> Engineered end-to-end information extraction software for dynamic text topic modeling.
Summer 2008	<b>Google</b> , New York, NY - <b>Software Engineering Intern</b> Developed probabilistic graphical models for recommender system in C++ production code.
2006 to 2008	<b>NYU Medical Center</b> , New York, NY - <b>Research Associate</b> in Neurology Invented a breakthrough neural network system for epileptic seizure prediction from EEG.
2002 to 2005	<b>Schlumberger Research</b> , Ridgefield, CT and Cambridge, UK – <b>Research/Software Engineer</b> Created and patented neural networks software (computer vision, signal processing) for geological classification and for geostatistics. Transferred Matlab/C++ code to engineering.
2001 and 2002	<b>Schlumberger Riboud Product Center</b> , Clamart, France - <b>Engineering Trainee</b>
Summer 2000	<b>EMC</b> , La Celle St-Cloud, France - <b>Engineering Trainee</b>
1999 to 2000	<b>n7 Consulting</b> (student venture company), Toulouse, France - <b>Vice-president</b>

### Education

---

January 2011	<b>Doctor of Philosophy in Computer Science</b> , GPA 3.83/4.00
May 2007	<b>Masters of Science in Computer Science</b> , GPA 3.81/4.00 <b>Courant Institute of Mathematical Sciences, New York University</b> , New York, NY. Thesis: <i>Time series modeling with hidden variables and gradient-based algorithms</i> (Prof. <b>Yann LeCun</b> ).
June 2002	<b>Masters in Computer Science and Applied Mathematics</b> , GPA 3.33/4.00 <b>Ecole Nationale Supérieure ENSEEIHT</b> , Toulouse, France ( <i>Diplôme d’Ingénieur</i> ).
1997 to 1999	<b>Mathématiques Supérieures PCSI</b> and <b>Mathématiques Spéciales PSI</b> , GPA 4.00/4.00 <b>Lycée Sainte Geneviève</b> , Versailles, France ( <i>Classes Préparatoires pour Grandes Ecoles</i> ).

### Honors and Awards

---

2011	<b>Janet Fabri Award</b> for best doctoral dissertation in computer science, NYU.
2009	<b>Young Investigator Award</b> , International Workshop on Seizure Prediction IWSP4.
2009	<b>Henning Biermann Award</b> for outstanding contribution by a PhD student, NYU.
2008	<b>Google Student Award</b> , Machine Learning Symposium, New York Academy of Sciences.
2005 to 2010	<b>Henry McCracken Fellowship</b> .

## Publications

### Journal articles

- [1] S Ravuri, K Lenc, M Willson, D Kangin, R Lam, P Mirowski, et al, “Skilful precipitation nowcasting using deep generative models of radar”, **Nature**, 2021.
- [2] A Banino, C Barry, B Uria, C Blundell, T Lillicrap, P Mirowski, et al, “Vector-based navigation using grid-like representations in artificial agents”, **Nature**, 2018.
- [3] C-N Yu, P Mirowski, TK Ho, “A sparse coding approach to household electricity demand forecasting in smart grids”, **IEEE Transactions on Smart Grid**, 2017.
- [4] P Mirowski, D Milioris, P Whiting, TK Ho, “Probabilistic Radio-Frequency Fingerprinting and Localization on the Run”, **Bell Labs Technical Journal**, 2014.
- [5] P Mirowski, Chen S, TK Ho, C-N Yu, “Demand Forecasting in Smart Grids”, **Bell Labs Technical Journal**, 2014.
- [6] P Mirowski, P Whiting, H Steck, P Palaniappan, et al, “Probability kernel regression for WiFi localization”, **Journal of Location-Based Services**, 2012.
- [7] P Mirowski, Y LeCun, “Statistical Machine Learning and Dissolved Gas Analysis: A Review”, **IEEE Transactions on Power Systems**, 2012.
- [8] N Ludvig, HM Tang, NS Artan, P Mirowski, et al, “Transmeningeal muscimol can prevent focal EEG seizures in the rat neocortex without stopping multilineuronal activity in the treated area”, **Brain Research**, 2011.
- [9] G Krouk, P Mirowski, Y LeCun, D Shasha, G Coruzzi, “Predictive network modeling of the high-resolution dynamic plant transcriptome in response to nitrate”, **Genome Biology**, 2010.
- [10] P Mirowski, D Madhavan, Y LeCun, R Kuzniecky, “Classification of patterns of EEG synchronization for seizure prediction”, **Clinical Neurophysiology**, vol.120, pp.1927-1940, 2009.
- [11] P Mirowski, DM Tetzlaff, RC Davies, et al, “Stationarity Scores on Training Images for Multipoint Geostatistics”, **Mathematical Geosciences**, vol. 41, pp.447-474, 2009.
- [12] P Mirowski, DM Tetzlaff, “Retrieving Scale from Quasi-Stationary Images”, **Pattern Recognition Letters**, vol.29, pp.754-767, 2008.
- [13] D Madhavan, P Mirowski, N Ludvig, et al, “Effects of subdural application of lidocaine in patients with focal epilepsy”, **Epilepsy Research**, vol.78, pp.235-239, 2008.

### Refereed conference articles

- [14] P Mirowski, D Banarse, M Malinowski, S Osindero, C Fernando, “CLIP-CLOP: CLIP-Guided Collage and Photomontage”, **International Conference on Computational Creativity**, 2022.
- [15] B Branch, P Mirowski, KW Mathewson, “Collaborative Storytelling with Human Actors and AI Narrators”, **International Conference on Computational Creativity**, 2021.
- [16] B Branch, C Efstratiou, P Mirowski, KW Mathewson, P Allain, “Tele-Immersive Improv: Effects of Immersive Visualisations on Rehearsing and Performing Theatre Online”, **SIGCHI Conference on Human Factors in Computing Systems**, 2021.
- [17] KM Hermann, M Malinowski, P Mirowski, A Banki-Horvath, et al, “Learning to follow directions in street view”, **AAAI Conference on Artificial Intelligence**, 2020.
- [18] P Mirowski, K Mathewson, B Branch, T Winters, B Verhoeven, J Elfving, “Rosetta code: Improv in any language”, **International Conference on Computational Creativity**, 2020.
- [19] G Loesel, P Mirowski, K Mathewson, “Do Digital Agents Do Dada?”, **International Conference on Computational Creativity**, 2020.
- [20] P Mirowski, KW Mathewson, “Human improvised theatre augmented with artificial intelligence”, **AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment**, 2019.
- [21] A Li, H Hu, P Mirowski, M Farajtabar, “Cross-view policy learning for street navigation”, **International Conference on Computer Vision**, 2019.
- [22] P Mirowski, M Grimes, M Malinowski, KM Hermann, K Anderson et al, “Learning to navigate in cities without a map”, **Neural Information Processing Systems**, 2018.
- [23] K Mathewson, P Mirowski, “Improbatics: Exploring the imitation game using machine intelligence in improvised theatre”, **AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment**, 2018.
- [24] J Bruce, N Sünderhauf, P Mirowski, R Hadsell, M Milford, “Learning deployable navigation policies at kilometer scale from a single traversal”, **Conference on Robot Learning**, 2018.
- [25] K Mathewson, P Mirowski, “Improvded theatre alongside artificial intelligences”, **AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment**, 2017.
- [26] P Mirowski, R Pascanu, F Viola, H Soyer, AJ Ballard, et al, “Learning to navigate in complex environments”, **International Conference on Learning Representations**, 2017.
- [27] P Mirowski, A Vlachos, “Dependency recurrent neural language models for sentence completion”, **Association for Computational Linguistics**, 2015.
- [28] P Mirowski, TK Ho, P Whiting, “Building Optimal Radio-Frequency Signal Maps”, **International Conference on Pattern Recognition**, 2014.
- [29] S Yi, P Mirowski, TK Ho, Pavlovic V, “Pose Invariant Activity Classification for Multi-Floor Indoor Localization”, **International Conference on Pattern Recognition**, 2014.

Workshop  
papers and  
preprints

- [30] P Mirowski, TK Ho, S Yi, M MacDonald, “SignalSLAM: Simultaneous Localization and Mapping with Mixed WiFi, Bluetooth, LTE and Magnetic Signals”, **Indoor Positioning and Indoor Navigation**, 2013.
- [31] P Mirowski, P Palaniappan, TK Ho, “Depth camera SLAM on a low-cost WiFi mapping robot”, **International Conference on Technologies for Practical Robot Applications**, 2012.
- [32] P Mirowski, H Steck, P Whiting, P Palaniappan, et al, “KL-Divergence Kernel Regression for Non-Gaussian Fingerprint Based Localization”, **Indoor Positioning and Indoor Navigation**, 2011.
- [33] P Palaniappan, P Mirowski, M MacDonald, TK Ho, et al, “Autonomous RF Surveying Robot for Indoor Localization and Tracking”, **Indoor Positioning and Indoor Navigation**, 2011.
- [34] P Mirowski, S Chopra, S Balakrishnan, S Bangalore, “Feature-Rich Continuous Language Models for Speech Recognition”, **IEEE Spoken Language Technology**, 2010.
- [35] P Mirowski, Y LeCun, “Dynamic Factor Graphs for Time Series Modeling”, **European Conference on Machine Learning**, 2009.
- [36] P Mirowski, Y LeCun, D Madhavan, R Kuzniecky, “Comparing SVM and Convolutional Networks for Epileptic Seizure Prediction from Intracranial EEG”, **Machine Learning and Signal Processing**, 2008.
- [37] C Fernando, SM Eslami, JB Alayrac, P Mirowski, D Banarse, S Osindero, “Generative art using neural visual grammars and dual encoders”, **arXiv**, 2021.
- [38] H Mehta, Y Artzi, J Baldridge, E Ie, P Mirowski, “Retouchdown: Releasing touchdown on StreetLearn as a public resource for language grounding tasks in street view”, **International Workshop on Spatial Language Understanding**, 2020.
- [39] P Mirowski, A Banki-Horvath, K Anderson, D Teplyashin, et al, “The streetlearn environment and dataset”, **arXiv**, 2019.
- [40] G Wayne, CC Hung, D Amos, M Mirza, A Ahuja, A Grabska-Barwinska, P Mirowski, et al, “Unsupervised predictive memory in a goal-directed agent”, **arXiv**, 2018.
- [41] K Mathewson, P Mirowski, “Improvised comedy as a turing test”, **NeurIPS Workshop on AI for Creativity and Design**, 2017.
- [42] J Bruce, N Sünderhauf, P Mirowski, R Hadsell, M Milford, “One-shot reinforcement learning for robot navigation with interactive replay”, **NeurIPS Deep Reinforcement Learning Workshop**, 2017.
- [43] D Yun, P Mirowski, T Lee, C Kee, “Sub-meter Accuracy 3D Indoor Positioning Algorithm by Matching Feature Points of 2D Smartphone Photo”, **ION PNT**, April 2013.
- [44] P Mirowski, MA Ranzato, Y LeCun, “Dynamic Auto-Encoders for Semantic Indexing”, **NIPS Deep Learning and Unsupervised Learning Workshop**, 2010.
- [45] P Mirowski, D Madhavan, Y LeCun, “Time-Delay Neural Networks and Independent Component Analysis for EEG-Based Prediction of Epileptic Seizures Propagation”, **AAAI Student Workshop**, 2007.
- [46] DM Tetzlaff, RC Davies, D McCormick, C Signer, P Mirowski, et al, “Applications of Multipoint Geostatistics to Honor Multiple Attribute Constraints Applied to a Deepwater Outcrop Analog”, **SEG**, 2005.

Patents

- [1] P Mirowski, F Viola, A Banino, R Pascanu, HJ Soyer, et al, “Environment navigation using reinforcement learning”, US Patent 11,074,481, 2021, US Patent 10,572,776, 2020.
- [2] C-N YU, TK Ho, P Mirowski, “Electrical load prediction including sparse coding”, US Patent App. 14/811,989, 2017.
- [3] B Chen, P Mirowski, TK Ho, A Ortega, “Method and Apparatus for Indoor Position Tagging”, US Patent 9,506,761, 2016.
- [4] P Mirowski, Y LeCun, D Madhavan, R Kuzniecky, “Method, System and Computer-Accessible Medium Classification of at Least One Ictal State”, US Patent 9,443,141, 2016.
- [5] D Yun, P Mirowski, H Chang, TV Lakshman, “Localization systems and methods”, US Patent 9,154,919, 2015.
- [6] S Yi, P Mirowski, TK Ho, “Localization Activity Classification Systems and Methods”, US Patent App. 14/152,209, 2015.
- [7] P Mirowski, TK Ho, M MacDonald, “Simultaneous Localization and Mapping Systems and Methods”, US Patent App. 14/063,735, 2015.
- [8] P Mirowski, S Chopra, S Balakrishnan, S Bangalore, “System and Method for Feature-Rich Continuous Space Language Models”, US Patent 9,092,425, 2015.
- [9] P Mirowski, H Steck, P Palaniappan, M MacDonald, “KL-Divergence Kernel Regression for Non-Gaussian Fingerprint Based Localization”, US Patent 8,464,291, 2013.
- [10] P Mirowski, DM Tetzlaff, D McCormick, et al, “Computer-Based Generation and Validation of Training Images for Multipoint Geostatistics”, US Patent 7,630,517, 2009.
- [11] P Mirowski, “System and Method for Inferring Geological Classes”, US Patent 7,433,851, 2008, UK Patent GB2397664, 2005.

## Invited talks

- [1] “Skilful precipitation nowcasting using deep generative models of radar”, **Cracow University of Technology**, Poland (online), May 2022.  
**2d3d.ai**, Tel-Aviv, Israel (online), April 2022.  
**GHOST Day Applied Machine Learning Conference**, Poznan, Poland (online), March 2022.  
**Institute of Advanced Research in Artificial Intelligence**, Vienna, Austria (online), Dec. 2021.
- [2] AI Science Café Series: “AI & Theatre”,  
**European National Institutes of Culture**, London, UK (online), November 2021.
- [3] “Still (!) Learning to Navigate”,  
**CVPR 2020 Workshop on Embodied AI**, Seattle, WA (online), June 2020.
- [4] “Learning to Navigate”,  
Polonium Foundation, **Cambridge University**, UK, November 2019.  
**Multimodal Learning and Understanding for Embodied Applications**, Nice, France, Oct. 2019.  
**Cambridge University**, UK, March 2019.  
ML in PL, **Warsaw University of Technology**, Poland, December 2018.  
**London Machine Learning Meetup**, UK, October 2018.  
**University College London**, UK, May 2018.
- [5] “Improvised theatre with artificial intelligence”,  
**Everyday AI Conference**, London, UK, June 2022.  
**AI Comedy**, **Oxford University**, UK, December 2019.  
Polonium Foundation, **Cambridge University**, UK, November 2019.  
**Zürich Kunsthalle**, Zürich, Switzerland, October 2018.  
**NRW Forum**, Düsseldorf, Germany, May 2018.  
**NeurIPS Workshop on AI for Creativity**, San Diego, CA, December 2017.  
**Devoxx Belgium**, Antwerp, Belgium, November 2017.  
**Devoxx France**, Palais des Congrès, Paris, France, April 2017.  
**London Creative AI Meetup**, UK, January 2017.  
**Jugular: Dialogue on Artificial Intelligence**, London, UK, October 2016.
- [6] “Learning Representations of Text for Natural Language Processing”,  
**INNS Big Data**, Thessaloniki, Greece, November 2016.  
**London Machine Learning Meetup**, UK, November 2016.  
**Strata+Hadoop Big Data Science**, London, UK, June 2016.  
System, Man & Cybernetics, **City University of Hong-Kong**, China, September 2015.
- [7] “Tutorial on Neural Language Models”,  
**London Visualization Meetup**, UK, November 2014.  
**Computational Intelligence Unconference**, London, UK, August 2014.  
**London Big-O Algorithms Meetup**, UK, June 2014.  
**University College London**, UK, May 2014.
- [8] “Tutorial on Auto-Encoders”,  
**Deep Learning London Meetup**, UK, March 2014.
- [9] “Indoor Localization and Robotic Cartography”,  
**DIMACS Center for Discrete Mathematics**, Piscataway, NJ, October 2012.  
**New Jersey Institute of Technology**, Newark, NJ, February 2013.
- [10] “Indoor Mapping and Localization in a Non-Gaussian World”,  
**Stevens Institute of Technology**, Hoboken, NJ, May 2012.  
IEEE Computational Society meeting, **Fordham University**, New York, NY, March 2012.
- [11] “Dynamic Factor Graphs for Time Series Modeling”,  
**IBM Watson Research**, Yorktown Heights, NY, October 2009 and February 2010.  
**Rutgers University**, Piscataway, NJ, December 2009.
- [12] “Could We Predict Epileptic Seizures?”,  
**Schlumberger Boston Research**, Cambridge, MA, December 2009.
- [13] “Machine learning based classification of EEG synchronization for seizure prediction”,  
**International Workshop on Seizure Prediction IWSP4**, Kansas City, MO, June 2009.
- [14] “Comparing SVM and Convnets for Epileptic Seizure Prediction from Intracranial EEG”,  
Center for Computational Learning Systems, **Columbia University**, New York, NY, December 2008.

## Conference posters and presentations

- [1] P Mirowski, K Mathewson, B Branch, “From improv to computational linguistics: artist-in-the-loop artificial intelligence”, Theatre About Science, 2021.
- [2] B Branch, P Mirowski, K Mathewson, “Platforms for Multilingual and Tele-Immersive Storytelling and Improvisation”, Electronic Literature Organisation, 2021.
- [3] P Mirowski, K Mathewson, “Art2: Artificial Intelligence in Artistic Performance”, European Society for the study Literature, Science & the Arts (Anthropocenes), 2020.
- [4] P Mirowski, P Palaniappan, TK Ho, “Depth camera SLAM on a low-cost WiFi mapping robot”, NYAS Machine Learning Symposium, 2012.
- [5] P Palaniappan, P Mirowski, M MacDonald, TK Ho, et al, “Autonomous RF Surveying Robot for

- Indoor Localization and Tracking”, NYAS Machine Learning Symposium, 2011.
- [6] P Mirowski, S Chopra, S Balakrishnan, S Bangalore, “Feature-Rich Continuous Language Models for Speech Recognition”, NYAS Machine Learning Symposium, 2010.
- [7] NS Artan, P Mirowski, H Tang, G Medveczky, et al, “Detecting Abnormally Large-Amplitude Multi-Neuron Bursts Before Focal Neocortical EEG Seizure Onset in Freely Behaving Rats”, American Epilepsy Society, 2009.
- [8] P Mirowski, G Krouk, Y LeCun, D Shasha, G Coruzzi, “Dynamic Factor Graphs for Gene Regulatory Networks”, NYAS Machine Learning Symposium, 2009.
- [9] P Mirowski, D Madhavan, Y LeCun, R Kuzniecky, “Seizure Prediction Using Machine Learning on Bivariate Features from EEG”, American Epilepsy Society, 2008.
- [10] H Tang, P Mirowski, S Baptiste, O Devinsky, et al, “Evidence for Increased Neuronal Electrophysiological Activity Before EEG Seizure Onset in the Rat Neocortical Seizure Focus”, American Epilepsy Society, 2008.
- [11] P Mirowski, Y LeCun, “A Dynamical Factor Graph with Latent Variables for Time Series Prediction”, NYAS Machine Learning Symposium, 2008.
- [12] D Madhavan, P Mirowski, N Ludvig, C Carlson, et al, “Effects of the subdural application of lidocaine on EEG spiking in patients with focal epilepsy”, American Epilepsy Society, 2007.
- [13] P Mirowski, D Madhavan, Y LeCun, R Kuzniecky, “Analysis of Ictal Dynamics Using Generative Neural Networks”, American Epilepsy Society, 2007.
- [14] D Madhavan, P Mirowski, HL Weiner, O Devinsky, R Kuzniecky, “Characterization of Epileptogenic Networks in Tuberous Sclerosis Using Independent Component Analysis”, American Academy of Neurology, 2007.
- [15] D Madhavan, P Mirowski, Y LeCun, R Kuzniecky, “Prediction and analysis of ictal dynamics using computational neural networks”, American Epilepsy Society, 2006.
- [16] P Mirowski, M Herron, N Seleznev, S Fluckiger, “New Software for Well-to-Well Correlation of Spectroscopy Logs”, AAPG, 2005.
- [17] P Mirowski, DM Tetzlaff, RC Davies, D McCormick, "Deriving Scale and Orientation Stationarity Statistics For the Validation of Training Images for Multiple-Point Geostatistics", Schlumberger EUREKA Applied Mathematics Workshop, 2005.
- [18] P Mirowski, C Signer, T Randen, D McCormick, "Fracture Detection and Picking on Borehole Image: A Novel Image Processing Workflow", Schlumberger EUREKA Applied Math Workshop, 2005.
- [19] P Mirowski, C Signer, “Automated Fracture Picking”, Schlumberger EUREKA Geology Workshop, 2004.
- [20] P Mirowski, D McCormick, “Inferring lithofacies from well logs by applying Neural Network classifiers”, AAPG, 2003.
- [21] P Mirowski, “Inferring lithofacies from well logs using hybrid neural network HMM”, Schlumberger NumeRock Workshop, 2002.

## Teaching Experience and Outreach

Substitute	Taught lectures on <b>Kernel Methods</b> for the Machine Learning class (2007-2010).
TA	NYU, graduate: <b>UNIX</b> (Fall 2005), <b>Machine Learning</b> (Fall 2006), <b>Compilers</b> (Spring 2007).
School	Taught “ <b>Machines that Learn</b> ” (2010, 2011) and “ <b>Robotic Explorers and Cartographers</b> ” (2012, 2013) at the Courant cSplash annual math festival. Taught “ <b>Robots that Learn</b> ” (2018, 2019, 2020) for DeepMind school outreach activities. Organised and led a day-long workshop on “ <b>Robotics in a day</b> ” in collaboration with Apps For Good.
Tutoring	<b>C++</b> (2009), <b>Computing in Finance</b> (2008), <b>Signal Processing</b> (2007), <b>Mathematics</b> (2002), <b>Mathematics and Physics</b> at tutorship company Acadomia (2001-2002).
Mentoring	<b>Deep Learning Indaba</b> (2020-), <b>DeepMind Scholars</b> (2020-), <b>DeepMind peers</b> (2020-).

## Languages

French, Polish	Native speaker
English	Fluent
Italian	Conversational
German	Elementary

## Reviewer

Editorial	Area Chair for Neural Information Processing Systems ( <b>NeurIPS</b> ), International Conference on Learning Representations ( <b>ICLR</b> ), International Conference on Machine Learning ( <b>ICML</b> ), International Conference on Pattern Recognition ( <b>ICPR</b> ). Associate Editor for <b>Pattern Recognition</b> .
Conferences	Neural Information Processing Systems ( <b>NeurIPS</b> ), International Conference on Learning Representations ( <b>ICLR</b> ), International Conference on Machine Learning ( <b>ICML</b> ), <b>AISTATS</b> , Association for the Advancement of Artificial Intelligence ( <b>AAAI</b> ), Conference on Robot Learning ( <b>CoRL</b> ), International Conference on Robotics and Automation ( <b>ICRA</b> ), International Conference on Intelligent Robots and Systems ( <b>IROS</b> ), ACM Conference on Web, Search and Data Mining ( <b>WSDM</b> ), International Conference in Indoor Positioning and Indoor Navigation ( <b>IPIN</b> ), International Conference on Pattern Recognition Applications and Methods ( <b>ICPRAM</b> ), IAPR Conference on Machine Vision Applications ( <b>MVA</b> ), Ibero-American Congress on Pattern Recognition ( <b>CIARP</b> ), International Conference on Computer Engineering and Systems ( <b>ICCES</b> ), IEEE International Conference on Development and Learning and on Epigenetic Robotics ( <b>ICDLER</b> ), International Workshop on Semantic Evaluation ( <b>SemEval</b> ), Workshop on Applications of Computer Vision ( <b>WACV</b> ), Workshop on Neural Information Retrieval ( <b>NeuIR</b> ).
Journals	<b>Nature</b> , <b>Science</b> , <b>Scientific Reports</b> , Journal of Machine Learning Research ( <b>JMLR</b> ), Public Library of Sciences ( <b>PloS</b> ), Philosophical Transactions of the Royal Society A, IEEE Transactions on Pattern Recognition and Machine Intelligence ( <b>PAMI</b> ), Bell Labs Technical Journal, Artificial Intelligence, Machine Learning, IEEE Transactions on Neural Networks and Learning Systems, Information Fusion, IEEE Computational Intelligence, IEEE Transactions on Knowledge and Data Engineering, Journal of Advances in Robotic Systems, IEEE Robotics and Automation Letters, Robotics and Autonomous Systems, Communication Letters, Pervasive and Mobile Computing, Biomedical Signal Processing and Control, Epilepsy Research, Medical Engineering and Physics, Journal of Neural Engineering, Journal of Pattern Recognition Research, New Journal of Physics, IEEE Transactions on Neural Systems and Rehabilitation Engineering, Mathematical Geosciences, IEEE Transactions on Power Delivery, IEEE Transactions on Network and Service Management.
Grants	Swiss National Foundation, Climate AI, Google Faculty Fellowships.

## Grant Writing

2021 (granted)	Collaborator on VW Foundation Grant on “The Answering Machine”, with a 4-year funding for developing theatrical techniques for human-machine interaction on the stage.
2018, 2020	Co-Investigator on SNF Grant on <i>Chatbots on Stage</i> . Contributed to the study conception.
2009	Co-Investigator in NIH Challenge Grant on <i>Subdural Drug Delivery Treatment for Intractable Focal Epilepsy</i> . Contributed to the study conception, wrote part of the application about spike train analysis for seizure pre-detection.
2009 (granted)	Key personnel in NYU-Poly Provost Seed Grant on <i>Fault Prediction in Network Transformers</i> , in collaboration with Con Edison. Carried out research, wrote report and presented results.
2007, 2008, 2009	PI in Epilepsy Foundation Pre-Doctoral Fellowship grant application on <i>Seizure Prediction from EEG using Convolutional Networks</i> . Conceived the study, wrote the proposals, provided preliminary results, carried out research, published results and patented the methodology.
2006	Co-PI in NIH K23 grant application on <i>Propagation Analysis of Epileptic Seizures</i> . Conceived the study and co-wrote the proposal.
2005 (granted)	Key Personnel in American Epilepsy Society grant on <i>Novel Method to Predict Seizure Propagation Using Neural Networks</i> . Carried out and published research, co-wrote the final report.

## Advising

2022 to date	Co-advisor on PhD thesis at ONERA/Ecole Nationale des Arts et Métiers on physics-based neural networks for modeling fluid dynamics.
--------------	---

## Volunteering

---

2020 to date	<b>Diversity, Equity and Inclusion</b> lead at DeepMind. Facilitated over 10 allyship workshops.
2007 to 2013	Volunteer improv comedy with <b>Cherub Improv</b> , an 503c organization performing improv as recreational therapy in hospitals, homeless shelters, cancer care, etc. Performed over 100 shows.
2007 to 2009	<b>Graduate student representative</b> for the CS department of <b>NYU</b> . Organized the first Courant Student Conference, in May 2009. Negotiated healthcare insurance coverage with the school administration.
2004 and 2006	<b>Volunteer at SEED, a foundation promoting science for students.</b> In 2004 and 2006, prepared, organized and animated workshops for schoolchildren in Malaysia and Kazakhstan about water issues (lectures, field trips and lab science experiments). Featured in national Malaysian newspaper New Straits Times.
2000	<b>Organized the first Solar Vehicles Race in Toulouse, 2000.</b> Coordinated organization, press communication, legal and safety issues with authorities.

## Theatre

---

Co-founder of **HumanMachine** and **Improbatics**, world's first **AI-enabled improv companies**. My shows featuring a robot and artificial intelligence chatbots have been touring internationally and featured, among others, in the New York Times, Wall Street Journal, New Scientist, Time Magazine, Bloomberg and RTE One.

**HumanMachine** performed in solo shows in Edmonton, Paris and Antwerp (2017), via transatlantic link in London, Düsseldorf and at the Brighton Fringe (2017 and 2018), and on stage at the Edinburgh Festival Fringe (2017), Edmonton Fringe (2018) and at the Zürich Kunsthalle (2018).

**Improbatics** performed at the Camden Fringe Festival (2018, 2019, 2021), Brighton Fringe Festival (2019, 2021, 2022), Subito! (2019), Voilà ! Europe in London (2019), Improtheaterfestival Würzburg (2019), Impro Amsterdam (2019), Improfest Göteborg (2019), Leicester Comedy Festival (2022), Art-AI (2018, 2019, 2021), British Science Festival (2022) and Birmingham Improv Festival (2022).

Trained as an improviser in Toulouse (C cédille with Muriel Darras and Ligue d'Improvisation Universitaire), New York and London (Nursery Theatre, Hoopla!, The Showstoppers, City Academy and Imprology).

**Diploma in Acting at LSDA – London School of Dramatic Art** (2015-2017).

Stage credits include The Hotel (Cambridge Theatreworks, 2003), The Hunchback of Notre Dame (Moose Hall Inwood Shakespeare Festival, New York, 2006), New York Musical Theatre Company (2007), and Playing with Grown-Ups (LSDA, London Fringe, 2017).

Co-founded in 2017 Wretched Strangers; produced and performed in Jean Anouilh's Medea (Brighton Fringe, Reading Fringe and Camden Fringe at The Cockpit Theatre, 2018) and Carole Fréchette's Earthbound (Brighton Fringe and Camden Fringe at The Cockpit Theatre, 2019).

**Singing:** voice classes at Juilliard School of Music, sang with NYU Choral Arts Society (bass-baritone).