

**Mikhail D. Lukin**  
**Department of Physics, Harvard University**  
**Lyman Laboratory, 17 Oxford Street**  
**Cambridge, MA 02138 USA**

<http://lukin.physics.harvard.edu>  
email: [lukin@physics.harvard.edu](mailto:lukin@physics.harvard.edu)  
phone: (617) 495-2862

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**Research Interests:**

Quantum science: quantum communication, metrology and computation; Dynamics of strongly correlated atomic, optical and condensed matter systems; Coherent optical, spin and electronic phenomena at nanoscale; Quantum optics in nanophotonic systems; Quantum techniques for metrology and nanoscale sensing in chemistry, biology and material science.

**Education:**

**Texas A&M University** College Station, TX  
*March 1998*. Ph.D. in Physics.  
**Moscow Institute of Physics and Technology** Moscow, Russia  
*June 1993*. M.Sc. (summa cum laude) in applied physics and mathematics

**Professional Experience:**

2023 – Present **Joshua and Beth Friedman University Professor**, Harvard University  
2018 – Present **Co-Director**, Harvard Quantum Initiative in Science and Engineering, Harvard University  
2017 – 2023 **George Vasmer Leverett Professor of Physics**, Harvard University  
2010 – 2023 **Co-Director**, Harvard-MIT Center for Ultracold Atoms, Harvard University  
2010 – 2018 **Chair of Scientific Board**, Harvard Quantum Optics Center, Harvard University  
2006 – 2010 **Co-Director**, Institute for Theoretical, Atomic, Molecular and Optical Physics, Harvard University  
2004 – 2017 **Professor of Physics**, Harvard University  
2001 – 2004 **Assistant Professor of Physics**, Harvard University  
1998 – 2001 **ITAMP Postdoctoral Fellow**, Harvard-Smithsonian CfA

**Honors:**

EKA Lecturer, Columbia University (2025)  
Scott Lecturer, University of Cambridge (2025)  
Physics World Breakthrough of the Year (2024)  
Falling Walls Breakthrough of the Year in Physical Sciences (2023)  
University Professorship, Harvard University (2023)  
International Quantum Award, International Conference for Quantum Communication, Measurement and Computing (2022)  
Norman F. Ramsey Prize of American Physical Society (2022)  
Charles Hard Townes Award of the Optical Society of America (2021)  
George Gamow Award (2020)  
National Academy of Sciences Member (2018)  
James O. Gordon Memorial Speaker, Optical Society of America (2018)  
Sproull Lecturer, Cornell Center for Materials Research (2018)  
Willis Lamb Award for Quantum Optics and Laser Science (2017)  
Alexander M. Cruickshank Lecturer Award, Gordon Research Conference (2016)  
National Security Science and Engineering Faculty Fellowship, US Department of Defense (2015)

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Julius Springer Prize for Applied Physics (2015)  
Distinguished Lecturer, Lewiner Institute for Theoretical Physics, Technion (2015).  
Distinguished Former Student Award, Texas A&M University (2013)  
Fellow of the American Association for the Advancement of Science (2013)  
Karl Friedrich Bonhoeffer Lectureship, Max Planck Institute (2013)  
Fellow of the American Physical Society (2011)  
Alexander-von-Humboldt Professorship (2009, declined)  
I.I. Rabi Prize of American Physical Society (2009)  
AAAS Newcomb Cleveland Prize (2006)  
Alfred P. Sloan Fellowship (2003)  
David and Lucile Packard Fellowship for Science and Engineering (2002)  
NSF Career Award (2002)  
Fellow of the Optical Society of America (2001)  
Adolph Lomb Medal of the Optical Society of America (2000)  
Distinguished Graduate Research Award, Texas A&M University (1998)  
Phi Kappa Phi (1998)  
R.A. Welch Research Fellowship, National Cancer Institute (1997)

**Other Professional Activities and Services:**

- Co-founder, Board Member, and Chief Scientist, QuEra Computing, Inc. (2019-present).
- Co-founder & Board Member, Quantum Diamond Technologies, Inc. (2013-present).
- Member of Advisory Board for Center for Quantum Phenomena (NYU), Center for Engineered Quantum Systems (Univ. of Queensland, Australia, through 2018), Russian Quantum Center (Moscow, 2012-2022), Kavli Institute for Theoretical Physics, (Santa Barbara, 2008-2011).
- Member of multiple Advisory Panels, Study Groups and Committees on AMO Physics and Quantum Information Science & Technology for NSF, DOD, DOE, NAS, APS.
- Member of editorial board of “Quantum Information Processing” (2002-present).
- Regular referee for NSF, Nature, Science, Physical Review Letters, Nature Physics, Optics Letters, Physical Review, Applied Physics Letters.
- Scientific commentator for Nature and Science.
- Co-organizer of Gordon Research Conference series on “Quantum Science”; co-chair of the first conference (Easton, MA 2012).
- Organizer of the multiple scientific conferences including 8 ITAMP and CUA-sponsored workshops.

**Graduate and Postdoctoral Advisors:**

**Graduate Advisor:** Marlan O. Scully, Texas A&M University.

**Postdoctoral Sponsor:** Kate Kirby, American Physical Society.

**Publications: more than 500, h-index 198 according to Google Scholar**

For detailed information see <https://scholar.google.com/citations?user=ppJpl64AAAAJ>

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**Current research support:**

NSF, DOD (ARO, AFOSR, DARPA), DOE, Gordon and Betty Moore Foundation, QuEra Computing, Inc., Amazon Web Services, Wellcome Leap

**Thesis Advisor and Postgraduate-Scholar Sponsor**

**PhD Advisor: (Total: 64)**

Trond Andersen, Google; Axel Andre, Reinsurance Group of America; Michal Bajcsy, Univ. of Waterloo; Mihir Bhaskar, Lightsynq; Dolev Bluvstein, Harvard University; Madelyn Cain, Google; Darrick Chang, ICFO; Yu-Ting Chen, University of Victoria; Lilian Childress, McGill Univ.; Nicholas Chisholm, Fig Tech; Joonhee Choi, Stanford; Soonwon Choi, MIT; Iris Cong, Stanford University; Yiwen Chu, ETH Zurich.; Iris Cong, Stanford University; Tamara Dordevic, Waymo; Bo Dwyer, Motional; Matthew Eisaman, Stony Brook Univ.; Ruffin Evans, Waymo; Frankie Fung, Applied Materials; Michael Goldman, IonQ; Alexey Gorshkov, JQI; Brandon Grinkemeyer, Harvard; Michael Gullans, Princeton University; Mohammad Hafezi, JQI; Liang Jiang, Univ. of Chicago; Aaron Kabcenell, Meta; Alexander Keesling-Contreras, QuEra Computing; Emil Khabibouline, JQI; Erik Knall, Azolla Ventures; Can Knaut, Google; Shimon Kolkowitz, University of Wisconsin-Madison; Peter Komar, AWS; Georg Kucsko, Suno; Nathan Leitao, Harvard University; Harry Levine, University of California-Berkeley; David Levonian, Lightsynq; Igor Lovchinsky, Chromatic; Bart Machielse, Lightsynq; Nishad Maskara, MIT; Peter Maurer, Univ. of Chicago; Jero Maze, UC Chile University; Christian Nguyen, SandboxAQ; Paloma Ocola, Exponent; Janos Perczel, Polygence; Kristine Rezai, IQM Quantum Computer; Emma Rosenfeld, Google Quantum AI; Arthur Safira, Motional; Polnop Samutpraphoot, Apple; John (DaLi) Schaefer, Rigetti Computing; Alp Sipahigil, UC Berkeley; Brendan Shields, Quantum Network Technologies; Tamara Sumarac, Boston Consulting Group; Andrey Sushko, Windbourne Systems; Madison Sutula, Lightsynq; Jacob Taylor, JQI/NIST; Jeff Thompson, Princeton Univ.; Emre Togan, ETH Zurich; Elana Urbach, Harvard Univ.; Aditya Venkatramani, Harvard Univ.; Dominik Wild, Max Planck Institute; Norman Yao, Harvard Univ.; Hengyun Zhou, QuEra Computing; Leo Zhou, UCLA.

**Current Graduate Students: (Total: 36)**

Francisca Abdo Arias, Matthew Bilotta, Pablo Bonilla, Sambuddha Chattopadhyay, Neng-Chun (Allen) Chiu, Siddharth Dandavate, Pavel Dolgirev, Simon Evered, Haoyang Gao, Alexandra Geim, Timothy Guo, Yan Qi Huan, Binhan Hua, Marcin Kalinowski, Nazli Ugur Koyluoglu, Xuan Hoang Le, Sophie Li, Xiaoling Liu, Andrew Maccabe, Trisha Madhavan, Matthew Mammen, Eirini Mandopoulou, Varun Menon, Addison Newringeisen, Quynh Nguyen, Eric Peterson, Harry Putterman, Danilo Shchepanovich, Pieter-Jan Constant Stas, Luke Stewart, Pavel Stroganov, Elias Trapp, Offek Tziperman, Katherine Van Kirk, Yan-Cheng Wei, Andrew Yates.

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**Postdoctoral advisor: (Total: 75)**

Alexey Akimov, University of Buffalo; Ehud Altman\*, UC Berkley; Nabeel Aslam\*, Leipzig University; Vlatko Balic\*, Tudor Investment; Rivka Bekenstein\*, Hebrew University of Jerusalem; Steven Bennett, Date Plus Math; Hannes Bernien, Univ. of Chicago; Johannes Borregaard, Harvard University; Michael Burek\*, Illumina; Alexei Bylinskii, QuEra Computing, Inc.; Paola Capellaro, MIT; Emmanuel Dalla Torre\*, Bar-Ilan Univ.; Kristiaan de Greve, KU Leuven/IMEC; Nathalie de Leon, Princeton Univ.; Ivana Dimitrova, Northeastern University; Gurudev Dutt, Univ. of Pittsburgh; Manuel Endres, Caltech; Dirk Englund, MIT; Ofer Firstenberg\*, Weizmann Inst.; Xun Gao, JILA; Jan Gieseler, IAV Digital Lab; Daniel González-Cuadra, Institute for Theoretical Physics; Sarang Gopalakrishnan\*, Princeton; Elmer Guardado-Sanchez, Stealth Startup; Wen Wei Ho\*, Stanford University; Jonathan Hodges, DUST Identity, Inc.; Sebastian Hofferberth\*, Univ. of Bonn; Ania Jayich, UC Santa Barbara; Eric Kessler, AWS; Helena Knowles, Univ. of Cambridge; Frank Koppens, ICFO/ICREA; Renate Landig, Meta; Christiane Latta, Sympany; Chris Laumann, Boston Univ.; Jinguo Liu\*, Hong Kong University of Science and Technology; Alexander Kubanek, Univ. of Ulm; Leigh Martin, Google; Khadijeh (Sona) Najafi\*, Q-CTRL; Travis Nicholson, Duke; Simone Notarnicola, Univ of Padova; Ahmed Omran, Google; Johannes Otterbach, SPRIN-D; Dmitry Petrov, CNRS; Thibault Peyronel, Facebook; Hannes Pichler, Innsbruck University; Thomas Pohl, Aarhus Univ.; Mark Polking\*, MIT Lincoln Lab; Anatoly Polkovnikov\*, Boston Univ.; Peter Rabl, Tech. Univ. of Munich; Ralf Reidinger, Univ. of Hamburg; Florentin Reiter, Fraunhofer IAF; Ana Maria Rey, JILA; Joaquin Rodriguez-Nieva\*, TAMU.; Javier Sanchez-Yamagishi, UC Irvine; Crystal Senko, Univ. of Waterloo; Alp Sipahigil, UC Berkeley; Sylvain Schwartz, ONERA; Martin Schuetz, AWS; Giulia Semeghini, Harvard University; Efi Shahmoon\*, Weizmann Inst.; Aziza Suleymanzade, UC Berkeley; Anders Sorensen, Univ. of Copenhagen; Denis Sukachev, Lightsynq; Alexander Sushkov\*, Boston Univ.; Jeff Thompson, Princeton Univ.; Tobias Tiecke, Facebook; Quirin Unterreithmeier, EPCOS AG; Oscar Viyuela, McKinsey & Co.; Caspar van der Wal, Univ. of Groningen; Daw-Wei Wang\*, Nat'l. Tsing-Hua Univ.; Philip Walther, Univ. of Vienna; Sheng-Tao Wang, QuEra Computing, Inc.; Sina Zeytinoglu\*, NTT Research, Aleksandr A. Zibrov\*, Qunett; Hengyun Zhou, QuEra Computing, Inc.

**Current Postdoctoral Associates: (Total: 12)**

Mohamed Abobeih, Johannes Feldmeier\*, Simon Hollerith, Evgenii Kniazev, Shayan Majidy, Tom Manovitz, Piotr Put\*, Andrei Ruskuc, Kushal Seetharam, Daniel Bochen Tan, Yiqi Wang, Muqing Xu (\*indicates co-supervised postdocs).

**Current Other Professionals (Total: 3)**

Johannes Borregaard, Research Associate; Tout Wang, Research Associate; Alexander S. Zibrov, Senior Scientist.