János Engländer

Department of Mathematics
University of Colorado Boulder
Boulder CO-80309
U.S.A.

Phone: (303)-492-4846
Fax: (303) 492-7707

email: janos.englander@colorado.edu
URL: https://sites.google.com/view/englandj/home
ORCID: https://orcid.org/0000-0003-4982-0029

Curriculum Vitæ

Born: 1966 — Budapest, Hungary
U.S. citizen

Current position

Professor with tenure, University of Colorado, Boulder

Area of specialization

Probability theory and stochastic processes; nonlinear partial differential equations

Professional experience

2020-	Professor, Department of Mathematics, University of Colorado at Boulder, CO.
2009-	Associate Professor, Department of Mathematics, University of Colorado at Boulder, CO.
2002-2009	Assistant Professor, Department of Statistics and Applied Probability, University of California at Santa Barbara, CA.
1999–2002	Post-doctoral researcher at EURANDOM, European Institute for Statistics, Probability, Operation Research and their Applications, Eindhoven.
1998–1999	Post-doctoral fellow in the EU grant "*Stochastic Analysis and Applications*", Department of Mathematics, Humboldt University, Berlin and Weierstrass Institute for Applied Analysis and Stochastics, Berlin.
1998	Post–doctoral lecturer, Department of Mathematics, Technion – Israel Institute of Technology.
1993-1997	Ph.D. student and teaching assistant, Department of Mathematics, Technion – Israel Institute of Technology. Advisor: Ross G. Pinsky. Ph.D.Thesis: *Applications of criticality theory.*
1991-1993	M.Sc. student and teaching assistant, Department of Mathematics, Technion – Israel Institute of Technology. Advisor: Ross G. Pinsky. M.Sc. Thesis: *A probabilistic investigation of the Martin boundary for certain elliptic operators in a strip.*
1985-1990	Undergraduate student Department of Mathematics, Eötvös Loránd University, Budapest, Hungary. Diploma work : *Decomposition theorems in probability.* Supervisor: Gábor J. Székely.

Academic degrees

1997 D. Sc. Mathematics, Technion, Haifa
1993 M. Sc. Mathematics, Technion, Haifa
1990 Diploma (5 years) Mathematics, Eötvös Loránd University, Budapest

Awards & Honors

- EQUADIFF 2005 Travel Award as invited speaker (US$ 1030)
- Plenary Speaker, 30th Conference on Stochastic Processes and Their Applications, UC Santa Barbara, 2005
- 'EPSRC visiting research fellow' (EPSRC is the UK equivalent of the NSF) for 2 months at the University of Bath, UK, July-August 2007, including an invited conference talk and a graduate course, the activities are detailed at http://people.bath.ac.uk/ak257/englander-kersting/englander-kersting.html; funded by EPSRC, grant number EP/E05448X/1 (July to October 2007), £15,911.
- 4th Cornell Probability Summer School Travel Award, 2008
- Invited Speaker, The Third International Conference on Stochastic Analysis and Its Applications, Beijing Institute of Technology, July 13-17, 2009 at Beijing Institute of Technology, Beijing, China.
- Invited plenary speaker at the 'Symposium on Probability and Stochastic Processes,' November 18 -22, 2013, Centro de Investigacion en Matemáticas (CIMAT), Guanajuato, Mexico.
- Invited article to Probability Surveys Volume 4 (2007).
- Book invitation by World Scientific (Appeared in 2015 in the Advanced Series on Statistical Science and Applied Probability: Volume 20.)

Grants

- Co-Principal Investigator, 2005 NSF (DMS) US$ 36,000 (conference grant)
- Co-Principal Investigator, 2005 Army Research Office US$ 20,000 (conference grant)
- Principal Investigator, 2007 National Security Agency (NSA) grant (Mathematical Sciences Program, grant number 07Y-199) US$ 30,000 (research grant)
- Faculty Career Development Award (FCDA) from UCSB
- Individual Faculty General Research Grant from UCSB
- Principal Investigator, 2010 NSF (DMS), US$ 20,000 (conference grant)
- Principal Investigator, 2012 NSF (DMS-1257845), US$ 47,500 (conference grant)
- Principal Investigator, 2012 National Security Agency (NSA) (MSP), US$ 20,000 (conference grant)
- Principal Investigator, 2012 Army Research Office (DOD Army ARO) grant (W9l INF-12-1-0194) (conference grant), US$ 14750

- Co-Principal Investigator, 2012 Navy ONR grant (conference grant), US$ 10038
- Principal Investigator, Simons Foundation Grant — Collaboration Grants for Mathematicians, Nr. 579110 (research grant), September 2018–, US$ 42,000

Publications

Books

1. J. Engländer, B. C. Rider (editors), *Advances in Superprocesses and Nonlinear PDEs*, Springer Proceedings in Mathematics and Statistics, Vol. 38 (2013) (invited)
2. J. Engländer, *Spatial Branching in Random Environments and with Interaction* Advanced Series on Statistical Science and Applied Probability: Volume 20, World Scientific 2015.
3. J. Engländer, S. Volkov. *Coin Turning, Random Walks and Inhomogeneous Markov Chains*, World Scientific 2024.

Journal articles in print & to appear

1. J. Engländer and J. G. Székely, *On the arithmetic of independent discrete distributions*, Ann. Univ. Sci. Budapest. Eötvös Sect. Math. **36** (1993), 5–8
2. J. Engländer and R. G. Pinsky, *The asymptotic behavior of the principal eigenvalue for small perturbations of critical one-dimensional Schrödinger operators with* $V(x) = l_{\pm}/x^2$ *for* $\pm x \gg 1$, J. Funct. Anal. **133** (1995),no. 2, 501–515
3. J. Engländer and R. G. Pinsky, *On the construction and support properties of measure-valued diffusions on* $D \subseteq \mathbf{R}^d$ *with spatially dependent branching*, Ann. Probab. **27** (1999), no. 2, 684–730
4. J. Engländer and K. Fleischmann, *Extinction properties of super-Brownian motions with additional spatially dependent mass production*, Stochastic Process. Appl. **88** (2000), no. 1, 37–58
5. J. Engländer, *On the volume of the supercritical super-Brownian sausage conditioned on survival*, Stochastic Process. Appl. **88** (2000), no. 2, 225–243
6. J. Engländer, *Criteria for the existence of positive solutions to the equation* $\rho(x)\Delta u = u^2$ *in* $\mathbf{R}^d$ *for all* $d \geq 1$*—a new probabilistic approach*, Positivity **4**(2000), no. 4, 327–337
7. J. Engländer and D. Turaev, *A scaling limit theorem for a class of superdiffusions*, Ann. Probab. **30** (2002), no. 2, 683–722
8. J. Engländer and R. G. Pinsky, J. *Uniqueness/nonuniqueness for nonnegative solutions of second-order parabolic equations of the form* $u_t = Lu + Vu - \gamma u^p$ *in* R^n, J. Differential Equations **192** (2003), no. 2, 396–428
9. J. Engländer and F. den Hollander, *Survival asymptotics for branching Brownian motion in a Poissonian trap field*, Markov Process. Related Fields **9** (2003), no. 3, 363–389

10. J. Engländer and A. E. Kyprianou, *Local extinction versus local exponential growth for spatial branching processes*, Ann. Probab. **32** (2004), no. 1A, 78–99

11. J. Engländer, *An example and a conjecture concerning scaling limits of superdiffusions*, Statist. Probab. Lett. **66** (2004), no. 3, 363–368

12. J. Engländer, *Large deviations for the growth rate of the support of supercritical super-Brownian motion*, Statist. Probab. Lett. **66** (2004), no. 4, 449–456

13. J. Engländer and R. Pinsky, *Uniqueness/nonuniqueness for nonnegative solutions of a class of second-order parabolic equations.* Proceedings of the Equadiff 11 conference, Bratislava (2005) (peer reviewed), available electronically at www.iam.fmph.uniba.sk/equadiff/htmls/pro2.html

14. J. Engländer and P. L. Simon, *Nonexistence of solutions to KPP-type equations of dimension greater than or equal to one*, Electron. J. Differential Equations **2006**, No. 9, 6 pp. (electronic)

15. J. Engländer and A. Winter, *Law of large numbers for a class of superdiffusions*, Ann. Inst. H. Poincaré Probab. Statist. **42** (2006), no. 2, 171–185

16. J. Engländer and R. Pinsky, *The compact support property for measure-valued processes*, Ann. Inst. H. Poincaré Probab. Statist. **42** (2006), no. 5, 535–0552

17. J. Engländer, *Branching diffusions, superdiffusions and random media*, Probab. Surveys Vol. 4 (2007) 303–364. (Invited)

18. J. Engländer, *Quenched Law of Large numbers for Branching Brownian motion in a random medium.* Ann. Inst. H. Poincaré Probab. Statist., 44 (2008), no. 3, 490-518.

19. J. Engländer, *Law of large numbers for superdiffusions: the non-ergodic case*, Ann. Inst. H. Poincaré Probab. Statist., Vol. 45 (2009), no. 1, 1-6

20. J. Engländer, S. C. Harris and A. E. Kyprianou, *Strong Law of large numbers for branching diffusions*, Ann. Inst. H. Poincaré Probab. Statist., Vol. 46 (2010), no. 1, 279–298.

21. J. Engländer, *The center of mass for spatial branching processes and an application for self-interaction.* Electr. J. Probab. 15 (2010), paper no 63, 1938–1970.

22. J. Engländer, N. Sieben, *Critical branching random walk in an IID random environment*, Monte Carlo Methods and Applications, Vol. 17 (2011) no. 2., 169–193.

23. J. Engländer, R. Song, Y. Ren, *Weak extinction versus global exponential growth of total mass for superdiffusions*, Ann. Inst. Henri Poincaré Probab. Stat. Vol. 52 (2016), no. 1, 448–482.

24. J. Engländer, L. Zhang, *Branching diffusions with particle interactions*, Electr. J. Probab. Vol.21 (2016), paper no. 67, 25 pp.

25. J. Engländer, M. Çaglar, M. Öz, *Conditional speed of branching brownian motion, skeleton decomposition and application to random obstacles*, Ann. Inst. Henri Poincaré Probab. Stat., Vol. 53 (2017), No. 2, 842–864.

26. J. Engländer, Y. Peres. *Survival asymptotics for branching random walks in IID environments.* Electron. Commun. Probab., Vol. 22 (2017), Paper No. 29.

27. J. Engländer, S. Volkov, *Turning a coin over instead of tossing it*, J. Theor. Probab. 31 (2018), 1097–1118.

28. J. Engänder, M. Öz. *Optimal Survival Strategy for Branching Brownian Motion in a Poissonian Trap Field*, Ann. Inst. Henri Poincaré Probab. Stat., Vol. 55 (2019) no. 4, 1890-1915.

29. J. Engländer, *A Generalization of the Submartingale Property: Maximal Inequality and Applications to Various Stochastic Processes.*, J. Theoret. Probab., Vol. 33 (2020), no. 1, 506–521.

30. J. Engländer, S. Volkov, *Impatient random walk*, J. Theor. Probab., 32 (2019), no 2, 2020–2043.

31. Z.-Q. Chen, J. Engländer, *Superdiffusions with super-exponential growth — construction, mass and spread*, Ann. Inst. Henri Poincaré Probab. Stat. 56 (2020), no. 3, 1809–1840.

32. J. Engländer, Stanislav Volkov and Zhenhua Wang. *The 'Coin-turning walk' and its scaling limit*, Electron. J. Probab., Volume 25 (2020), paper no. 3, 38 pp.

33. J. Engländer, Stanislav Volkov. *Conservative random walk*, Electron. J. Probab., Volume 27 (2022), Paper No. 138, 29 pp.

34. K. Burdzy, J. Engländer. *The limiting spine in the spatial Fleming-Viot model*, Ann. Probab. 52 (2024), no. 3, 983–1015.

35. K. Burdzy, J. Engländer and D. Marshall. *The spine of the two-particle Fleming-Viot process in a bounded interval*, J. Theoret. Probab., to appear.

36. J. Engländer, G. Iacobelli and R. Ribeiro. *Tree builder random walk beyond uniform ellipticity*, Ann. Inst. Henri Poincaré Probab. Stat., to appear.

37. J. Engländer, G. Iacobelli, G. Pete and R. Ribeiro. *Structural results for the tree building random walk*, Ann. Appl. Probab., to appear.

Miscellanous

- J. Engländer. *A probabilistic investigation of the Martin boundary for certain elliptic operators in a strip,* MSc Thesis, Technion, Haifa
- A. Ádám; Z. Magyar; Á. Szántó; J. Engländer; Book reviews. Period. Math. Hungar. **33** (1996), no. 1, 69–72.
- J. Engländer, A. E. Kyprianou, *Markov branching diffusions: martingales, Girsanov-type theorems and applications to the long term behaviour*, Preprint 1206, Department of Mathematics, Utrecht University, 2001, 39 pages.
  Available electronically at http://www.math.uu.nl/publications
- J. Engländer, *Problems in the Theory of Semilinear PDE's and their Connection to Probability.* (Unpublished manuscript, Available electronically at
  http://euclid.colorado.edu/ englandj/Publications.html)

Teaching & lecturing experience

Pre-CU:

- Calculus (Technion)
- Advanced Calculus (Technion)
- Ordinary and Partial Differential Equations (Technion)
- Measure Theory for Probability (UCSB)
- Introduction to Probability (UCSB)

- Advanced Probability Theory (UCSB)
- Advanced Stochastic Processes (UCSB)
- Financial Modeling–An Engineering Approach (UCSB)
- Statistics for Economics (UCSB)

At CU:

- MATH 3510 and MATH 4510 Introduction to Probability Theory, several times
- MATH 6534 Topics in Mathematical Probability, several times
- MATH 6310 and MATH 6320 Introduction to Real Analysis 1–2, several times
- MATH 4520 Introduction to Mathematical Statistics, several times
- MATH 2400 Calculus 3, Course coordinator, 3 times
- MATH 6550 Introduction to Stochastic Processes, 3 times
- MATH 2001 Discrete Mathematics, once
- MATH 4001 Analysis 2, 3 times
- MATH 3130 Introduction to Linear Algebra, once
- MATH 4820 History of Mathematical Ideas, several times

Participation in FTEP workshops

2/23/2011 'Preparing a Teaching Portfolio'; Faculty Teaching Excellence Program
3/15/2011 'Learning goal'; Faculty Teaching Excellence Program

Lecture notes

2007 *Branching diffusions, superdiffusions and random media* – Course lecture notes, written for graduate students participating in the 2007 summer school "Probability in Bath" at the University of Bath Electronically available at http://www.maths.bath.ac.uk/ ak257/pab/2007.html

PhD students

2007–2009 Raj Sau, at UCSB
2013-2015 Liang Zhang, graduated
2017-2020 Zhenhua Wang, graduated
2024– Aidan Powers, current

Masters students

2010-2011 Bryan Arguello, graduated
2015-2016 Patrick Normile, graduated
2016 Saeed Khalili, continues with Ph.D program
2019–2020 Xiaoliu Chen, graduated

Member of Ph.D Committee

(year denotes start)

2006 Byung-Dong Seo
2009 Benjamin Katz-Moses
2010 William Stanton
2011 Michael Noyes
2012 Joseph Migler
2014 Kate Smith
2015 Natalie Coston
2016 Noah Williams
2018 Krisztina Dearborn
2019 Noah Williams
2019 Andrew J. Campbell
2019 Joshua Aurand
2020 Hao Xu
2022 Nicholas Christoffersen
2024 Jackson Carpenter

Member of Habilitation Committee

2022-23 Bertrand Cloez, External reviewer of the Habilitation Thesis for University of Montpelier, France

Member of M.A. Committee

2010 Zoltán M. Rácz, External reviewer of the Diploma (Masters) Thesis for Budapest University of Technology and Economics
2018 Kelline Perline
2021 Yuawei Jia

Research Interests

Stochastic Calculus and Diffusion Processes
Branching diffusions, Measure Valued Branching Processes
Partial Differential Equations (linear and non-linear)
Large Deviations, Random media
Applications of Probability and Stochastic Analysis to Biology (population models)
Non-traditional random walks, inhomogeneous Markov chains

Conferences & seminar talks

Note: If the venue/meeting is of national/international importance, there is a ⋆ next to the item.

- International Workshop on Interacting Particle Systems and Their Applications, 17–24 June, 1996, Haifa; ⋆

- Instructional Meeting on Stochastic Partial Differential Equations, 1–11 April, 1997, Edinburgh ; ⋆
- Israel Mathematical Union Meeting, 20 May, 1997, Bar-Ilan University, Ramat Gan; ⋆
- Future of Stochastic Analysis II - workshop, 7–10 Oktober, 1998, KTH, Stockholm; ⋆
- Probability seminar, 20 December, 1998, ETH, Zurich;
- Mathematical Models in Statistical Physics - workshop, 1–10 April, 1999, EURANDOM, Eindhoven; ⋆
- Stochastic Analysis meeting, 20-23 May, 1999, Imperial College, London; ⋆
- Stochastics Colloquium, 17 May, 2000, Utrecht University;
- Mark Kac seminar, 9 June, 2000, Utrecht University;
- Probability Seminar, 16 October, 2000, Technical University of Budapest;
- Probability Seminar, 14 December, Bath University;
- Workshop on Stochastic Analysis, January 8 - 11, 2001, EURANDOM, Eindhoven; ⋆
- Probability seminar, 6 March, 2001 and 20 March 2001, MIT, Boston;
- Stochastics seminar, 19 March, 2001, Georgia Tech., Atlanta;
- Institute seminar, 9 April, 2001, Renyi Inst. of the Hungarian Academy of Sciences;
- Israeli Mathematics Union meeting, 4 May, 2001, Tel Aviv University; ⋆
- Horowitz seminar, 7 May, 2001, Tel Aviv University;
- Probability and Stoch. Proc. seminar, 8 May, 2001, Technion, Haifa.
- Probability seminar, 26 June, 2001, University of Kaiserslautern.
- 27th Conference on Stochastic Processes and their Applications, 10 July, 2001, Cambridge University. ⋆
- Pde seminar, 29 October, 2001, Leiden University.
- Probability seminar, 9 January, 2002, Utrecht University.
- Probability seminar, 18 January, 2002, University of California, Santa Barbara.
- Probability seminar, 'Survival Asymptotics For Branching Brownian Motion in a Poissonian Trap Field, 4/9/02 ' Technion-IIT, Haifa, Israel.
- Probability seminar, 'Spatial Branching Processes - LLN versus Local Extinction,' 10/20/02, University of Southern California.
- Probability seminar, 'Survival Asymptotics for Branching Brownian Motion in a Poissonian Trap Field,' 2/26/03 University of California, Los Angeles.
- PDE seminar 'Existence and uniqueness problems concerning a class of semilinear equations.' 10/03/03 Mathematics Department, University of California, Santa Barbara.
- Probability seminar, 'Local extinction versus local exponential growth for spatial branching processes', University of California, Santa Barbara, 11/04/04.

- Southern California Probability Symposium (invited speaker), University of Southern California, Los Angeles, 11/21/04. ⋆
- 'Aspects of spatial branching in random environment' , 3/15/05, Mathematics Department, University of California, Irvine
- 'Law of large numbers for a class of superdiffusions' , 3/25/05 Seminar on Stochastic Processes 2005, Cornell University, Ithaca ⋆
- Probability seminar, 'Aspects of spatial branching in random environment' , 4/14/05 Mathematics Department, University of Wisconsin, Madison
- 'Aspects of spatial branching in random environment' , Conference on Random Media and Stochastic Partial Differential Equations, University of Southern California, Los Angeles, 6/15/2005 ⋆
- 'Aspects of spatial branching in random environment' (Plenary Speaker), 6/29/2005 30th Conference on Stochastic Processes and Their Applications, UC Santa Barbara ⋆
- 'Existence and uniqueness problems concerning a class of semilinear equations' 7/27/05, EQUADIFF Conference (invited talk), Comenius University, Bratislava ⋆
- 'Branching Brownian motion in a random media' , 02/02/06, Department of Stochastics, Institute of Mathematics, Technical University of Budapest
- 'The compact support property for measure-valued diffusions' , 7/12/06, Conference on Markov Processes, University of Wisconsin, Madison ⋆
- 'The compact support property for measure-valued processes' , 1/31/07, Department of Mathematics, University of Notre Dame, South Bend
- 'Branching population in a random media' , 2/07/07, Department of Mathematics, College of William and Mary, Williamsburg
- 'Branching population in random media' , 5/22/07, Department of Mathematics, University of California, Davis
- 'Branching population in random media', 7/31/07, South West and South Wales Probability Meeting, University of Bath, United Kingdom
- 'Diffusion, Branching and Random Media'; 3/5/08, University of Warwick, UK.
- 'An interacting spatial branching model - work in progress'; 3/12/08, University of Bath, UK.
- 'Strong Law of Large Numbers for Branching Diffusions'; 4/22/08, Department of Mathematics, York University, Toronto, Canada.
- 'Problems in the Theory of Semilinear PDE's and their Connection to Probability', 7th AIMS International Conference on Dynamical Systems and Differential Equations, 5/21/08, University of Texas, Arlington, TX. ⋆
- 'A spatial population model with random obstacles', 4th Cornell Probability Summer School, 6/26/08, Cornell University, Ithaca, NY. ⋆
- 'Problems in the Theory of Superprocesses and Their Connection to Semilinear PDE's', Department of Mathematics, University of Colorado at Boulder, 01/28/2009.

- 'Strong Law of Large Numbers for Branching Diffusions', 3/3/2009, Graduate Center, CUNY, New York, NY.
- 'An interacting branching model', Frontier Probability Days, 3/16/2009, University of Utah, Salt Lake City, UT. ⋆
- 'Strong law of large numbers for branching diffusions', Seminar on Stochastic Processes 2009, 3/27/2009, Stanford University, CA. ⋆
- 'The center of mass for spatial branching processes and an application for self-interaction' 5/23/2009, Workshop on Interacting Stochastic Particle Systems, Le Centre de recherches mathématiques (CRM), Montreal, Canada ⋆
- 'The center of mass for spatial branching processes and an application for self-interaction', Invited Speaker, The Third International Conference on Stochastic Analysis and Its Applications, 7/17/2009, Beijing Institute of Technology, China. ⋆
- 'A spatial branching model with interaction between particles', Department of Mathematics, University of Colorado at Boulder, 11/19/2009.
- 'The center of mass for spatial branching processes and an application for self-interaction', Department of Mathematics, University of Kansas, Probability Seminar, 4/21/2010.
- 'A spatial branching model with interaction between particles', Mathematical Institute, Budapest Technical University, 5/26/2010.
- 'A branching particle system with interaction', 4th International Conference on Stochastic Analysis and Its Applications, Kansai Univeristy, Osaka, 9/3/2010. (talk by invitation) ⋆
- 'Particle models with interaction through the center of mass' Frontier Probability Days, Salt Lake City, 3/10/2011 (talk by invitation) ⋆
- 'Particle models with interaction via the center of mass,' 3/29/2011, probability seminar, University of Illinois, Urbana-Champaign
- 'Some particle models with self interaction and in random environment,' 4/14/2011, probability seminar, University of Wisconsin, Madison
- 'Some particle models with self interaction and in random environment,' 5/3/2011, probability seminar, University of Washington, Seattle
- 'Some particle models with self interaction and in random environment,' 5/16/2011, probability seminar, Beijing University, People's Republic of China
- 'Some challenging open problems for spatial branching models,' 6/23/2011, probability seminar, Technical University, Budapest (BME), Hungary
- 'Some challenging open problems for spatial branching models,' 7/11/2011, probability seminar, Technical University, Munich (TUM), Germany
- 'Some challenging open problems for spatial branching models,' 9/2/2011, Applied Mathematics Colloquium (APPM, CU Boulder)
- 'Branching models with interaction and in random media' 5/28/2013, Probability Seminar, Technion–IIT, Haifa, Israel

- 'Local vs. global growth for spatial branching processes' 11/19/2013,
  Invited plenary speaker at the 'Symposium on Probability and Stochastic Processes,' November 18 -22, 2013, Centro de Investigacion en Matemáticas (CIMAT), Guanajuato, Mexico ⋆
- 'Local vs. global growth in spatial branching models' 2/10/2014, Probability Seminar, University of Washington, Seattle
- 'Conditional Speed of Branching Brownian Motion, Skeleton Decomposition and Application to Random Obstacles' 10/7/2014, Probability Seminar, University of California, Irvine
- 'Conditional Speed of Branching Brownian Motion, Skeleton Decomposition and Application to Random Obstacles,' AMS meeting, 3/7/2015, Georgetown University ⋆
- 'Conditional Speed of Branching Brownian Motion, Skeleton Decomposition and Application to Random Obstacles' 1/20/2016, Probability Seminar, Pacific Institute of Mathematical Sciences (PIMS) at the University of British Columbia, Vancouver
- 'Weak extinction versus global exponential growth of total mass for SPDE's and super-Brownian motions.' 4/10/2016, AMS Spring Western Sectional Meeting, University of Utah, Salt Lake City
- 'Branching Brownian motion among Poisson obstacles', 4/25/ 2016, Probability Seminar, University of Washington, Seattle
- 'Turning a coin instead of tossing it', 8/30/2016, Kempner Colloquium, University of Colorado, Boulder
- 'Turning a coin over instead of tossing it', 2/16/2017, Colloquium, University of Colorado, Colorado Springs
- 'Turning a coin over instead of tossing it', 3/20/2017, Analysis Seminar, University of Wyoming, Laramie
- 'Turning a coin instead of tossing it', 8/8/2017, Math Physics Seminar, Institute for Science and Technology, Vienna, Austria
- 'Survival asymptotics for branching random walks in IID environments', 12/15/2017, Centro de Investigacion en Matemáticas (CIMAT), Guanajuato, Mexico ⋆
- 'Impatient random walk,' 6/14/2018, Conference on Stochastic Processes and their Applications, Chalmers University, Gothenburg, Sweden. ⋆
- 'Turning a coin over instead of tossing it', 6/21/2018, Stochastics Seminar, Institute of Mathematics, TU Budapest.
- 'The coin turning walk,' 9/5/2018, The 9th International Conference on Stochastic Analysis and Its Applications, Bielefeld University. ⋆
- 'The coin turning walk,' Probability Seminar, 10/9/2019, Temple University, Philadelphia.
- 'Impatient random walk,' 1/7/2019, Probability Seminar, University of Washington, Seattle.
- 'The coin-turning walk and its scaling limit,' 5/17/2019, Statistics Seminar, Lund University, Sweden.
- 'The coin-turning walk and its scaling limit,' 5/22/2019, University of Bristol, UK.
- 'The coin-turning walk and its scaling limit,' 5/23/2019, University of Bath, UK.

- 'Superdiffusions with super-exponential growth: construction, mass and spread', 12/3/2019, XV Latin American Congress of Probability and Mathematical Statistics (the official meeting of the Latin American Chapter of the Bernoulli Society), Merida, Mexico. ⋆
- 'Turning a coin instead of tossing it,' 2/25/21, Department of Mathematics and Statistics Colloquium, Northern Arizona university, Flagstaff.
- 'Tree builder random walks,' Probability seminar, 2/27/22, Purdue University.
- 'The multi-dimensional coin-turning walk,' Probability seminar, 3/10/22, University of Colorado, Boulder
- 'Tree builder random walks,' Probability seminar, 6/17/22, Matematikcentrum, Lunds Universitet, Sweden
- 'Tree builder random walks,' Probability seminar, 2/1/23, University of British Columbia, Vancouver, Canada
- 'Tree builder random walks,' Probability seminar, September 2023, Bristol University, UK
- 'Tree builder random walks,' Probability seminar, October 2023, Lund University, Sweden
- 'Tree builder random walks,' Probability seminar, October 2023, Budapest University of Technology and Economics, Hungary
- 'Tree builder random walks,' Probability seminar, November 2023, CIMAT, Guanajuato, Mexico
- 'Tree builder random walks,' Probability Seminar - IM-UFRJ (online talk), June 3 , 2024, Rio de Janeiro, Brasil

Departmental Service at CU Boulder

- Undergraduate Committee (2009–2011)
- ARPAC Unit Self Study Committee (2009/2010)
- Problem of the Month Committee (several years)
- Analysis Preliminary PhD Exam Committee (several years)
- Actuarial studies and quantitative finance committee (2011–2013)
- Joint MATH-APPM Committee for the creation of a Probability and Statistics Center (2011–2012)
- Graduate committee (2012–2013)
- Elected member of the Executive Committee (2013–2015 and 2017-2019)
- Chair of the PUEC three times (2018-2019)
- Faculty award committee (2015-2017)
- deLong lecture series committee (2017-)
- Hiring Committee (2016 and 2019)

- PUEC (for O'Rourke's tenure case) member 2020.
- PUEC (for Timmer's reappointment case) chair 2021.
- PUEC (for Vernerey's reappointment case) member 2021.
- PUEC (for Vernerey's teaching professor case) member 2021–22.
- Kempner colloqium committee member 2024–

Other professional service

- Conference organization:
  - 2004-2005: local organizer of the *30th Conference on Stochastic Processes and Applications, 2005* (the main international conference in probability theory, approx. 100 attendants) in Santa Barbara (UCSB);
  - 2010: local organizer of the conference *Advances in Superprocesses and Nonlinear Partial Differential Equations*, approx. 30 attendants, in Boulder (CU);
  - 2010-2013: local organizer of the *36th Conference on Stochastic Processes and their Applications, 2013* (the main international conference in probability theory, approx. 300 attendants) in Boulder (CU).
  - 2024– : organizer of *Rossfest*, a conference honoring the 70th birthday of Ross Pinsky
- Reviewing for granting agencies:
  - NSF (Panelist), 2019;
  - Simons Foundation, 2019;
  - Israel Science Fund, 2001 and 2018;
  - OTKA (Hungarian Science Fund), 2013;
  - Natural Sciences and Engineering Research Council (NSERC), Canada, 2022
- Refereeing papers for several scientific journals, such as *The Annals of Probability, The Annals of Applied Probability, Stochastic Processes and Their Applications, Electronic Communications in Probability, Journal of Functional Analysis*, etc. (1998 –);
- Publishing reviews of 35+ articles in Mathematical Reviews, 2006–;
- Providing reference letters in tenure cases.