Stanford

Yakov Eliashberg

Herald L. and Caroline L. Ritch Professor of Humanities and Sciences

Mathematics

Bio

ACADEMIC APPOINTMENTS

- Professor, Mathematics

Teaching

COURSES

2026-27

- Modern Mathematics: Continuous Methods: MATH 62CM (Win)
- Modern Mathematics: Continuous Methods: MATH 63CM (Spr)

2025-26

- Advanced Complex Analysis: MATH 117 (Win)
- Topics in symplectic geometry: MATH 269 (Aut)

2024-25

- Modern Mathematics: Continuous Methods: MATH 62CM (Win)
- Modern Mathematics: Continuous Methods: MATH 63CM (Spr)

2023-24

- Advanced Complex Analysis: MATH 117 (Win)
- Complex Analysis: MATH 116 (Aut)
- The H-Principle: MATH 271 (Win)

STANFORD ADVISEES

Doctoral (Program)

Matthew Kendall, Vladimir Nowak

Publications

PUBLICATIONS

- **The topology of rationally and polynomially convex domains** *INVENTIONES MATHEMATICAE*
  Cieliebak, K., Eliashberg, Y.
  2015; 199 (1): 215-238
- **RECENT ADVANCES IN SYMPLECTIC FLEXIBILITY** *BULLETIN OF THE AMERICAN MATHEMATICAL SOCIETY*
  Eliashberg, Y.
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- **CONSTRUCTING EXACT LAGRANGIAN IMMERSIONS WITH FEW DOUBLE POINTS** *GEOMETRIC AND FUNCTIONAL ANALYSIS*
  Ekholm, T., Eliashberg, Y., Murphy, E., Smith, I.
  2013; 23 (6): 1772-1803
- **Lagrangian caps** *GEOMETRIC AND FUNCTIONAL ANALYSIS*
  Eliashberg, Y., Murphy, E.
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- **Effect of Legendrian surgery** *GEOMETRY & TOPOLOGY*
  Bourgeois, F., Ekholm, T., Eliashberg, Y., Ganatra, S., Maydanskiy, M.
  2012; 16 (1): 301-389
- **Topology of Spaces of S-Immersions** *Marcus Wallenberg Symposium on Perspectives in Analysis, Geometry and Topology*
  Eliashberg, Y., Mishachev, N.
  BIRKHAUSER VERLAG AG.2012: 147–167
- **Symplectic homology product via Legendrian surgery** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Bourgeois, F., Ekholm, T., Eliashberg, Y.
  2011; 108 (20): 8114-8121
- **Madsen-Weiss for geometrically minded topologists** *GEOMETRY & TOPOLOGY*
  Eliashberg, Y., Galatius, S., Mishachev, N.
  2011; 15 (1): 411-472
- **TOPOLOGICALLY TRIVIAL LEGENDRIAN KNOTS** *JOURNAL OF SYMPLECTIC GEOMETRY*
  Eliashberg, Y., Fraser, M.
  2009; 7 (2): 77-127
- **Wrinkled Embeddings** *Conference on Foliations, Geometry and Topology held in honor of the 70th birthday of Paul Schweitzer*
  Eliashberg, Y. M., Mishachev, N. M.
  AMER MATHEMATICAL SOC.2009: 207–232
- **Geometry of contact transformations and domains: orderability versus squeezing** *GEOMETRY & TOPOLOGY*
  Eliashberg, Y., Kim, S. S., Polterovich, L.
  2006; 10: 1635-1747
- **A few remarks about symplectic filling** *GEOMETRY & TOPOLOGY*
  Eliashberg, Y.
  2004; 8: 277-293
- **Compactness results in Symplectic Field Theory** *GEOMETRY & TOPOLOGY*
  Bourgeois, F., Eliashberg, Y., Hofer, H., Wysocki, K., Zehnder, E.
  2003; 7: 799-888
- **Wrinkling of smooth mappings-II Wrinkling of embeddings and K. Igusa's theorem** *TOPOLOGY*
  Eliashberg, Y. M., Mishachev, N. M.
  2000; 39 (4): 711-732
- **Partially ordered groups and geometry of contact transformations** *GEOMETRIC AND FUNCTIONAL ANALYSIS*
  Eliashberg, Y., Polterovich, L.
  2000; 10 (6): 1448-1476
- **Introduction to symplectic field theory** *Meeting on Visions in Mathematics - Towards 2000*
  Eliashberg, Y., Givental, A., Hofer, H.
  BIRKHAUSER VERLAG AG.2000: 560–673
- **Symplectic topology in the nineties** *DIFFERENTIAL GEOMETRY AND ITS APPLICATIONS*
  Eliashberg, Y.
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- **Classification of topologically trivial Legendrian knots** *Workshop on Geometry, Topology and Dynamics*
  Eliashberg, Y., Fraser, M.
  AMER MATHEMATICAL SOC.1998: 17–51
- **Wrinkling of smooth mappings and its applications .1.** *INVENTIONES MATHEMATICAE*
  Eliashberg, Y., Mishachev, N. M.
  1997; 130 (2): 345-369
- **Lagrangian intersections and the stable Morse theory.** *BOLLETTINO DELLA UNIONE MATEMATICA ITALIANA*
  Eliashberg, Y., Gromov, M.
  1997; 11B: 289-326
- **Symplectic geometry of plurisubharmonic functions** *NATO Advanced Study Institute / Seminaire de Mathematiques Superieures on Gauge Theory and Symplectic Geometry*
  Eliashberg, Y.
  KLUWER ACADEMIC PUBL.1997: 49–67
- **Local Lagrangian 2-knots are trivial** *ANNALS OF MATHEMATICS*
  Eliashberg, Y., Polterovich, L.
  1996; 144 (1): 61-76
- **LAGRANGIAN INTERSECTIONS IN CONTACT GEOMETRY** *GEOMETRIC AND FUNCTIONAL ANALYSIS*
  Eliashberg, Y., Hofer, H., Salamon, D.
  1995; 5 (2): 244-269
- **NEW APPLICATIONS OF LUTTINGER SURGERY** *COMMENTARII MATHEMATICI HELVETICI*
  Eliashberg, Y., Polterovich, L.
  1994; 69 (4): 512-522
- **UNKNOTTEDNESS OF LAGRANGIAN SURFACES IN SYMPLECTIC 4-MANIFOLDS** *DUKE MATHEMATICAL JOURNAL*
  Eliashberg, Y., Polterovich, L.
  1993; 72 (2): 295-301
- **EMBEDDINGS OF STEIN MANIFOLDS OF DIMENSION-N INTO THE AFFINE SPACE OF DIMENSION 3N/2+1** *ANNALS OF MATHEMATICS*
  Eliashberg, Y., Gromov, M.
  1992; 136 (1): 123-135
- **CONTACT 3-MANIFOLDS 20 YEARS SINCE MARTINET,J. WORK** *COLLOQUIUM ON GEOMETRY : FOLIATIONS AND SINGULARITIES, IN MEMORY OF CLAUDE GODBILLON AND JEAN MARTINET*
  Eliashberg, Y.
  ANNALES INST FOURIER.1992: 165–92
- **THE DIAMETER OF THE SYMPLECTOMORPHISM GROUP IS INFINITE** *INVENTIONES MATHEMATICAE*
  Eliashberg, Y., Ratiu, T.
  1991; 103 (2): 327-340
- **ON SYMPLECTIC-MANIFOLDS WITH SOME CONTACT PROPERTIES** *JOURNAL OF DIFFERENTIAL GEOMETRY*
  Eliashberg, Y.
  1991; 33 (1): 233-238
- **THE SPECTRAL GEOMETRY OF FLAT DISKS** *DUKE MATHEMATICAL JOURNAL*
  Brooks, R., Eliashberg, Y., McMullen, C.
  1990; 61 (1): 119-131