February 2024

Niels Martin Møller

GeoTop - Copenhagen Center for Geometry and Topology
MATH - Department of Mathematical Sciences
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Outreach online

Employment

MATH, University of Copenhagen, Denmark.
Associate Professor on the Promotion Programme (Full Professor-track). 2023–
Associate Professor (permanent/tenured). 2020–
Assistant Professor (tenure-track). 2016–2020

UNESCO's International Centre for Theoretical Physics, Italy.
Shiing-Shen Chern Senior Postdoctoral Research Fellow (5 years renewable, left Aug 2016). 2015–2016
MSRI (UC Berkeley, California). Member during Spring Term 2016.

Princeton University, USA.
Instructor of Mathematics (postdoc on Princeton's payroll). 2012–2015

Academic Degrees

MIT - Massachusetts Institute of Technology, Cambridge (Boston), Massachusetts, USA. 2012
Doctor of Philosophy in Mathematics (PhD). Advisor: T.H. Colding.

University of Aarhus, Aarhus, Denmark.
BSc in Mathematics-Physics, *MSc in Mathematics*. 2005, 2007

Research Grants and Awards (Selected)

- **DNRF "GeoTop: Copenhagen Center for Geometry and Topology", DKK 60.2 million (= $8,900,000)**
  - Center of Excellence Grant from Grundforskningsfonden (Danish National Research Foundation)
  Co-PI/Cofounder, at U Copenhagen, 2020–2030 (expected, funded until 2026 as of 4/2020).
- **"Semper Ardens: Accelerate (Carlsberg Foundation Young Researcher Fellowship)", DKK 3.3 mill. (= $500k)**
  PI (personal grant), at U Copenhagen, 2022–2025. [For the "*most outstanding newly appointed assoc. professors*"]
- **"Sapere Aude DFF Research Leader", DKK 5.9 million (= $945,000)**
  PI (personal grant), 2018–2022, at U Copenhagen. (Ministry/Independent Research Fund Denmark.)
- **NSF - National Science Foundation, USA, DMS-1311795, granted $160,000,**
  as PI (personal grant), at Princeton University, 2013–2018. [2015–: Transf. to Prof. F.C. Marques at Princeton.]
- **MIT PhD Fellowship**, full 5 years offer, value **$110,000**, 2008. [Took only 2011–2012 part.]
- **Valdemar Andersen's PhD Scholarship: $300,000**, Copenhagen, 2007. [Spent at MIT 2008–2011.]
- **Elite Research Travel Scholarship: $50,000**, Aarhus U/Danish Ministry of Science, 2007.

Academic Honors (Selected)

- **Fellow (Vice-chair 2021–22), Young Academy (Royal Danish Academy of Sciences and Letters)**, June 2017.
  [≈7 people/year across Danish university disciplines (all sciences/humanities).]
- **Top of Class for BSc w/ Perfect GPA in Maths: 13.0 of 13** (equiv. A+). Incl. Physics: 12.9/13. U Aarhus, 2005.
- **National Salutatorian at Studentereksamen STX** (academic track high school), Grenaa Gymnasium & HF.
  [2° highest score in Denmark of ≈17000 graduates from total cohort of ≈55000.]

Research Interests

Riemannian Geometry, Nonlinear Partial Differential Equations, Mean Curvature Flow, Minimal Surfaces, Mathematical Physics.

Publications

Total citation count [Google Scholar, 2/2024]: **618** (581 excl. self-citations)

[1] J.M.S. Ma, A. Muhammad, N.M. Møller, *Entropy Bounds, Compactness and Finiteness Theorems for Embedded Self-shrinkers with Rotational Symmetry*,
J. Reine Angew. Math. (to appear), arXiv:2202.08641, 19 pages.

[2] F. Chini, N.M. Møller, *Bi-Halfspace and Convex Hull Theorems for Translating Solitons*,
Int. Math. Res. Not. IMRN **2021**, no. 17, 13011–13045.

[3] N. Kapouleas, S. Kleene, N.M. Møller, *Mean Curvature Self-Shrinkers of High Genus: Non-Compact Examples*,
J. Reine Angew. Math. **739** (2018), 1–39.

[4] S. Kleene, N.M. Møller, *Self-Shrinkers with a Rotational Symmetry*,
Trans. Amer. Math. Soc. **366** (2014), no. 8, 3943–3963.

[5] N.M. Møller, B. Ørsted, *Rigidity of Conformal Functionals on Spheres*,
Int. Math. Res. Notices **2014** (2014), 6302–6339.

[6] N.M. Møller, *Extremal Metrics for Spectral Functions of Dirac Operators in Even and Odd Dimensions*,
Adv. Math. **229** (2012), no. 2, 1001–1046.

[7] N.M. Møller, *Dimensional Asymptotics of Determinants on $\mathbb{S}^n$, and Proof of Bär-Schopka's Conjecture*,
Math. Ann. **343** (2009), no. 1, 35–51.

[8] L. Pedersen, N.M. Møller, K. Mølmer, *The distribution of quantum fidelities*.
Phys. Lett. A **372** (2008), 7028–7032.

[9] L. Pedersen, N.M. Møller, K. Mølmer, *Fidelity of quantum operations*.
Phys. Lett. A **367** (2007), no. 1–2, 47–51.

[10] D. Impera, N.M. Møller, M. Rimoldi, *Rigidity and non-existence results for collapsed translators*,
arXiv:2304.11953, 11 pages.

[11] E.S. Gama, F. Martin, N.M. Møller, *Finite entropy translating solitons in slabs*,
arXiv:2209.01640, 43 pages.

[12] F. Chini, N.M. Møller, *Ancient Mean Curvature Flows and their Spacetime Tracks*,
arXiv:1901.05481, 13 pages.

[13] N.M. Møller, *Non-Existence for Self-Translating Solitons*, arXiv:1411.2319, 15 pages.

[14] S. Kleene, N.M. Møller, *Non-Compact Families of Complete, Properly Immersed Minimal Surfaces with Fixed Topology, via Desingularization*, arXiv:1409.8381, 45 pages.

[15] N.M. Møller, *Closed Self-Shrinking Surfaces in $\mathbb{R}^3$ via the Torus*, arXiv:1111.7318, 30 pages.

[16] N.M. Møller, *Mean Curvature Flow Self-Shrinkers with Genus and Asymptotically Conical Ends*,
Doctoral Dissertation, MIT (2012), 124 pages.

Referee & Reviewer Appointments (Selected)

- **Referee Duties Include:** International Mathematical Research Notices (**U Oxford**), Journal of Differential Geometry (**Harvard U**), Journal of the London Mathematical Society (**U Oxford**), Crelle's Journal für die Reine und Angewandte Mathematik (De Gruyter, Berlin), JAMS (Journal of the American Mathematical Society), Advances in Mathematics (Elsevier, New York City), Mathematische Annalen (Springer, Berlin), Duke Mathematical Journal, Transactions of the American Mathematical Society, Calculus of Variations and Partial Differential Equations (Springer), Comment. Math. Helv., Mathematical Research Letters, International Journal of Mathematics, Geometriae Dedicata, Differential Geometry and its Applications.
- **American Mathematical Society Reviews**: ≥ 10 written.

Invited Lecture Series & Mini Courses

- **Korean Institute for Advanced Study (KIAS).** 07/2013
  Week-long invited lecture series on my work in Mean Curvature Flow and Minimal Surfaces.
- **4th Geometric Analysis Festival**, 3 lectures course, Jeonbuk National University, S. Korea (online) 10/2021

Invited Talks at Conferences/Workshops

- **"2nd Recife Summer Workshop on Differential Geometry"**, weeklong conference, Recife, Brazil. 3/2024
- **U Hannover - Workshop**, 3 days, Germany. 12/2023
- **"International Workshop on Geometry of Submanifolds"**, weeklong conference, Istanbul U, Turkey. 11/2023
- **"Geometric PDEs Day"**, U Granada, Spain. 10/2023
- **Banff-IMAG "Minimal Surfaces in Symmetric Spaces"**, weeklong conference, U Granada, Spain. 5/2023
- **U Granada - Workshop**, 4-day conference, Spain. 1/2023
- **"Celebration of Gerd Grubb" for her Royal Danish Academy Gold Medal**, MATH, U Copenhagen. 9/2022
- **U Granada "Congress: Geometric Analysis"**, weeklong conference, Spain. 9/2022
- **NTNU Trondheim "Nordic Topology Conference"**, Norway. 8/2022
- **Queen Mary Univ. "Mean Curvature Flow and Related Topics"**, weeklong conference, London, UK. 7/2022
- **Danish Technical University "Geometry Workshop"**, 1-day workshop, Copenhagen, Denmark. 6/2022
- **8th European Congress of Mathematics (ECM)**, embedded workshop (online), Portorož, Slovenia. 6/2021
- **Scuola Normale "Recent Trends in Geometric Analysis"**, CRM de Giorgi, Pisa, Italy. 11/2019
- **"Holomorphic Days 2019"**. Carlsberg Academy, Copenhagen. 06/2019
- **U Lund "14th Differential Geometry Day"**, speaker at 1-day conference, Sweden. 05/2019
- **CUHK "Workshop on Geometric Analysis..."**, Chinese University of Hong Kong. 02/2019
- **"Ricci Flow, Mean Curvature Flow and Related Singular Flows"**, U Hamburg. 09/2018
- **Mittag-Leffler Institute "Geometric Analysis and Mathematical Physics"**, Djursholm, Sweden. 05/2018
- **"PDE Methods In Geometric Flows", Amer. Math. Soc.**, Stony Brook, NY, USA. 03/2016
- **"Parabolic Evolution Equ. of Geom. Type" (Amer. Math. Soc. Sect. Meeting)**, Philadelphia, PA. 10/2013
- **Institute for Advanced Study (IAS/PCMI) Summer School**, Park City, Utah, USA. 07/2013
- **Rutgers University**, **"Workshop on Nonlinear PDEs"**, New Brunswick, NJ, USA. 05/2013
- **MIT Workshop on Minimal Surfaces & 3-Manifold Topology**, Cambridge, MA, USA. 04/2013

- **Johns Hopkins University "Mean Curvature Flow and Related Topics"**, Baltimore, MD, USA. 03/2010
- **U Regensburg "Scalar Curvature and Semi-Linear PDEs"**, Germany. 05/2008
- **U Potsdam "International Meeting on Spectral Geometry and Related Topics"**, Germany. 05/2008
- **Oberwolfach Seminar "Recent Developments in Conformal Geometry"**, Germany. 11/2007
- **Midwest Geometry Conference, University of Iowa**, Iowa City, Iowa, USA. 05/2007

Talks at Seminars & Misc. (Selected)

- **CUNY - City University of New York**, Seminar, USA. 9/2023
- **KTH Stockholm**, Sweden. 6/2023
- **U Köln**, Oberseminar Geometrie, Germany. 5/2023
- **U Hamburg**, UHH Kolloquium, Germany. 1/2023
- **U Hamburg**, Differential Geometry Seminar, Germany. 11/2022
- **U Roma (La Sapienza)**, Seminar, Italy. 6/2022
- **U Göttingen Institut für Mathematik**, Seminar, Germany. 10/2020
- **Max Planck Institut für Mathematik**, Oberseminar Differentialgeometrie, Bonn, Germany. 1/2020
- **Politecnico di Torino**, seminar, Turin, Italy. 1/2020
- **U Bergen**, Analysis Seminar, Norway. 10/2019
- **U Münster**, Oberseminar Differentialgeometrie, Germany. 07/2019
- **U Helsinki**, geometry seminar talk, Finland. 05/2019
- **CUNY - City University of New York**. Geometry seminar. New York, USA. 05/2019
- **U Granada**. Geometry seminar. Andalusia, Spain. 03/2019
- **U Rochester**. Geometry seminar. New York, USA. 01/2019
- **"Topics in Geometric Analysis"**, Freie Universität Berlin (joint w/ U Potsdam), Germany. 01/2019
- **QGM Center Seminar**. Double seminar/mini course. Aarhus University, Denmark. 11/2018
- **U Warwick**. Geometry seminar. Coventry, United Kingdom. 03/2018
- **Niels Bohr International Academy**. "N-Talk" (colloquium). Niels Bohr Institute, Copenhagen. 01/2018
- **Danish Technical University**. Geometry seminar. Lyngby, Denmark. 12/2017
- **Roskilde Universitet**. Colloquium. Roskilde, Denmark. 11/2017
- **U Konstanz**. Oberseminar Geometrische Analysis, Germany. 06/2017
- **U Regensburg**. Oberseminar Geometrische Analysis, Germany. 06/2017
- **Øresund Seminar**, 1-day conference, Lund University & Copenhagen University. 11/2016
- **MSRI - Math. Sciences Research Institute**, Differential Geometry, Berkeley, California, USA. 04/2016
- **ICTP - International Centre for Theoretical Physics**, Geometric Analysis Seminar. Trieste, Italy. 11/2015
- **SISSA - Scuola Internazionale Superiore di Studi Avanzati**, Geometry Seminar. Trieste, Italy. 11/2015
- **Imperial College**. Geometry Seminar. London, United Kingdom. 10/2015
- **McGill University**, Montreal, Canada. Seminar. 09/2015

- **U Bremen**, Germany. Seminar. 06/2015
- **SUNY - State University of New York, Binghamton**, New York, USA. Seminar. 02/2015
- **Copenhagen University**, Denmark. Seminar. 03/2015
- **Montana State University**, Bozeman, Montana, USA. Seminar. 02/2015
- **Rutgers University**, New Brunswick, NJ, USA. Geometric Analysis Seminar. 02/2015
- **Johns Hopkins**, Baltimore, Maryland, USA. Analysis Seminar. 01/2015
- **UC Berkeley**, California, USA. Geometry Seminar. 10/2014
- **UCLA**, Los Angeles, California, USA. Colloquium Talk. 10/2014
- **Stanford University**, California, USA. Geometry Seminar. 10/2014
- **Princeton University**, NJ, USA. Geometry Seminar. 10/2014
- **University of Aarhus**, Denmark. Analysis Seminar. 08/2013
- **Princeton University**, NJ, USA. Geometric Analysis Seminar. 04/2012
- **Johns Hopkins**, Baltimore, MD, USA. Analysis Seminar. 03/2012
- **Imperial College**, London, UK. Chapman Fellowship Competition. 01/2012
- **Stanford University**, California, USA. Stanford Student Geometry & Analysis Seminar. 10/2011
- **MIT - Massachusetts Institute for Technology**, Cambridge, MA, USA. Geometric Analysis Seminar. 10/2011
- **Einstein Institute/Max Planck Institute**, Golm, Germany. Seminar talk. 03/2011
- **Humboldt University**, Berlin, Germany. Sonderforschungsbereich 647 Raum Zeit Materie. 05/2008
- **U Arkansas**, Spring Lecture Series 2008, Fayetteville, Arkansas, USA. 04/2008
- **University of California, San Diego (UCSD)**, California, USA. Seminar talk. 04/2008
- **Princeton University**, NJ, USA. Informal seminar on PDEs/geometric analysis. 02/2008
- **U Bonn**, Germany. Oberseminar Globale Analysis, Hausdorff Center. 10/2007
- **U Aarhus**, Denmark. Analysis Seminar. 10/2007

Organization of Seminars/Workshops/Conferences

- **"Copenhagen Geometry Conference 2024"**, 1 week, U Copenhagen. 6/2024
- **"Recent Progress on Singularity Analysis [...] Mean Curvature Flow"**, 1 week, U Copenhagen. 4/2024
- **29th Nordic Congress of Mathematicians with Euro. Math. Society: Special Session "Geometry"**, 1 week, Aalborg University, Denmark. 7/2023
- **"Joint UHH-UCPH Workshop on Geometry"**, 2 days, U Hamburg, Germany. 12/2022
- **Workshop/Masterclass "Mean Curvature Flow and Related Topics"**, 1 week, U Copenhagen. 3/2022
- **GeoTop Geometry Day Summer 2020**, 1-day workshop, U Copenhagen. 8/2020
- **Copenhagen Curvature Flow Day Winter 2020**, 1-day workshop, U Copenhagen. 2/2020
- **Copenhagen Curvature Flow Day Spring 2019**, 1-day workshop, U Copenhagen. 4/2019
- **Øresund Seminar**, biannual 1-day workshops jointly U Lund & U Copenhagen. 2018–
  Coorganizer together with J.P. Solovej, E. Wahlen (U Lund) and Jens Wittsten (U Lund).
- **GAMP Seminars**, "Geometric Analysis and Mathematical Physics" research group, U Copenhagen. 2017–
  Organizer (occasional seminars joint w/ Topology/Operator Algebra).
- **"Geometric Analysis on Noncompact Manifolds"**, 1-week workshop at U Copenhagen, Denmark. 10/2017
  Organizer together with B. Durhuus w/ support from QMATH (Villum Centre).

Academic Supervision & Mentoring (Selected)

At University of Copenhagen:

Postdocs mentored:
Eric Ling (2023–), **Alexander Mramor** (2022–), **John Ma** (2020–), 2019–
Felix Lubbe (2019–21), **Alexander Friedrich** (2019–21),

Doctoral candidates supervised:

- **Anis Bousclet**. As PhD thesis supervisor (pending formal admission). 2024–
- **Priya Kaveri**. As PhD thesis supervisor. 2023–
- **Harish Upadhyaya**. As PhD thesis supervisor. 2023–
- **Ali Muhammad**. As PhD thesis supervisor. PhD 10/2023
  Thesis title: *"Entropy bounds for self-shrinkers with symmetries and applications"*.
- **Jingxuan Zhang**. As PhD thesis supervisor. PhD 6/2023
  Thesis title: *"Localization theory for propagation of quantum information"*.
- **Francesco Chini**. As PhD thesis supervisor. PhD 2/2020
  Thesis title: *"Some Classification Results for Translating Solitons and Ancient Mean Curvature Flows"*.

MSc/BSc students supervised:

- **Zaïna Parly**. As BSc thesis supervisor. Title: *"Stability of Soap Bubbles and CMC Surfaces"*. 2024
- **Christopher Junker Pugh**. As MSc thesis supervisor.
  Title: *"Self-Translating Solitons"*. 2022
- **Johan Jacoby Klemmensen**. As MSc thesis co-supervisor (joint degree w/ LMU).
  Title: *"On Classifying Solutions of The Kapustin-Witten Equations via Higgs Bundles"*. 2022
- **Rasmus Jouttijärvi**. As MSc thesis supervisor.
  Title: *"Morse Index Theory for Minimal Surfaces"*. 2020
- **Søren Holst Hansen**. As MSc thesis supervisor.
  Title: *"Geometric Measure Theory"*. 2020
- **Ali Muhammad**. As MSc thesis supervisor.
  Title: *"A Global Existence Result for the Cauchy Problem in General Relativity"*. 2019
- **Pavlos Tsiakoumis**. As MSc thesis supervisor.
  Title: *"Mean Curvature Flow for Hypersurfaces in Euclidean Spaces"*. 2019
- **Martin Ravn Christiansen**. As MSc thesis supervisor.
  Title: *"'Manifolds with Holes* [...]" 2019
- **Rasmus Jouttijarvi**. As BSc thesis supervisor. Title: *"Morse Theory"*. 2018
- **Andreas Plenge**. As BSc thesis supervisor. Title: *"Diff. Equ. and Brownian Motion"*. 2018
- **Asbjørn B. Lauritsen**. For MSc-level project. *"Calculus of Variations: Minimax Methods [...]"*. 2019
- **Ulrik T. Hansen**. For MSc-level project. *"Stochastic PDEs on Manifolds"*. 2018
- **Pavlos Tsiakoumis**. For MSc-level project. *"Uncertainty Principles in Analysis"*. 2017
- **Sofie Volder Jensen**. For MSc-level project. *"Riemannian Geometry"*. 2016
- **Liu Wanting**. For MSc-level project. *"Partial Differential Equations"*. 2016

- **Xuwen Zhang**. For MSc-level project. *"Partial Differential Equations"*. 2016
- **Sogand Mehdigholy**. For SRP project (high school senior thesis). *"Knot Theory"*. 2016

At Princeton University:

- **Allen Yang**: As BSc junior thesis supervisor. *"Random Walks, Brownian Motion, and the Heat Equation"*. 2015
- **Albert Zhou**: As BSc thesis 2nd reader. *"Combinatorial Investigation of the cd-Index"*. 2015

Teaching

- **Nominee, "Aarets Harald (Bohr Prize)": U Copenhagen's university-wide teaching prize**. 2021
- **Nominee, U Copenhagen's prize for professors facilitating the best study environment**. 2021
- **University Teaching Qualification** (325 hours of mandatory training), Copenhagen University. 2017–2018
- **Department of Mathematics, University of Copenhagen**, Denmark. 2016–
  Lectures held as Associate/Assistant Professor of Mathematics (≥ 430 hours of lectures):
  - S2023: "Geom1" Geometry 1 (BSc). 7.5 ECTS.
  - S2022: "Geom1" Geometry 1 (BSc). 7.5 ECTS.
  - S2022: "Diff" - Ordinary Differential Equations (BSc). 7.5 ECTS.
  - F2021: "GeomTopics 2021" - Topics in Geometry (MSc/PhD). 7.5 ECTS.
  - S2021: "Diff" - Ordinary Differential Equations (BSc). 7.5 ECTS.
  - F2020: "GeomTopics 2020" - Topics in Geometry (PhD). 7.5 ECTS.
  - S2020: "Diff" - Ordinary Differential Equations (BSc). 7.5 ECTS.
  - S2019: "Diff" - Ordinary Differential Equations (BSc). 7.5 ECTS.
  - F2018: "PDEs" - Partial Differential Equations (MSc/PhD). 7.5 ECTS.
  - S2018: "Diff" - Ordinary Differential Equations (BSc). 7.5 ECTS.
  - F2017: "PDEs" - Partial Differential Equations (MSc/PhD). 7.5 ECTS.
  - S2017: "Diff" - Ordinary Differential Equations (BSc). 7.5 ECTS.
  - F2016: "NumIntro" - Intro. to Numerical Analysis (shared w/ J.P. Solovej & K. Erleben). 7.5 ECTS.
- **Department of Mathematics, Princeton University**, New Jersey, USA. 2012–2015
  Lectures held as Instructor of Mathematics (≥ 270 hours of lectures + preparation):
  - S2015: MAT 201 - Multivariable Calculus (Book: G.B. Thomas, Princeton edition). Course Head.
  - F2014: MAT 320 - Measure Theory, Integration & Hilbert Spaces (Book: Stein & Shakarchi). Course Head.
    (*Student feedback*: 4.42, where "4.0" is "Very Good" and "5.0" is "Excellent".)
  - S2014: MAT 202 - Linear Algebra (Book: Bretscher + own notes), 2 sections.
  - F2013: MAT 203 - Advanced Vector Calculus (Book: Marsden & Tromba).
  - S2013: MAT 201 - Multivariable Calculus (Book: G.B. Thomas, Princeton edition).
  - F2012: MAT 104 - Calculus II (Book: G.B. Thomas), 2 sections.
- **Department of Mathematics, MIT,** Boston (Cambridge), Massachusetts, USA. 2011–2012
  Classes as Teaching Assistant in Mathematics:
  - S2012: 18.06 - Linear Algebra. Course Head & Recitation Leader.
  - F2011: 18.06 - Linear Algebra. Recitation Leader. Grader of exams & homework.
- **Department of Mathematical Sciences, University of Aarhus,** Denmark. 2004–2007
  Classes as Teaching Assistant in Mathematics (6 hrs/week + grading):
  - Geometry 1 (Book: Do Carmo + Ib Madsen's notes on Point Set Topology), twice.
  - Analysis 1 (Measure Theory, Integration and Banach/Hilbert Spaces. Book: H. Royden), twice.
  - Ordinary Differential Equations (Basic ODEs + Stability & Lyaponov Theory).
  - Vector Analysis/Fourier Analysis, Calculus I/Calculus II.
- **Department of Medical Biochemistry, University of Aarhus,** Denmark. 2004
  Teaching Assistant in Biochemistry. Load: 6 hours/week for 3 months.

Academic Service & Committee Work

- **Vice-Chairman, Young Academy (Royal Danish Academy Of Sciences And Letters)**, Copenhagen. 2021–22
- **Young Academy's Committee for Selection of New Members**, Copenhagen. 2019, 2020
- **Dean's PhD Committee at SCIENCE** (elected VIP member), Faculty of Science, U Copenhagen. 2020–
- **FU - Forskningsudvalget at MATH**, Faculty of Science, U Copenhagen. 2020–
- **Israel Science Foundation (ISF)**. External subject specialist (one proposal evaluated), Jerusalem. 2020
- **European Young Academies**, Representative for Denmark at the Finnish Academy, Helsinki. 2019
- **Corps of External University Examiners**, Danish Ministry of Higher Education.
  - Engineering (Diploma and Civil tracks). 2021–
  - Mathematics. 2018–
- **University Elections Ambassador**, Department of Mathematical Sciences, Copenhagen University. 2018–
- **PhD Degree Committees/Referee: Scuola Normale Superiore, U Göttingen** 2018–
- **European Young Academies**, Denmark's corepresentative at the Royal Dutch Academy, Amsterdam. 2018
- **Oxford University,** Oxford, UK. 2017
  External consultancy on the SIAM monograph "Exploring ODEs" by Prof. Trefethen et al.
- **Faculty Member Substitute, MATH's Local Cooperation Committee**, Copenhagen University. 2016–
- **National University of Ireland,** Dublin, Ireland. 2016
  External subject specialist in Differential Geometry, on external review board for PhD scholarships.
- **Pearson Higher Education,** New York City, NY, USA. 2015
  Publisher's review board member, for G.B. Thomas's college Calculus series.

Outreach, Media & General Audience

- **Bloom 2022 Festival for Science**, Copenhagen. 5/2022
  - Panelist/speaker: *"Symposium: Known Unknowns"* (Stage: Spring).
- **"KulturNat "**. Lectures & booth w/ math experiments, HCØ, U Copenhagen. (2021 & 2022) 2021–
- **"Matematik til Fyraften"**. Lectures for high school teachers. Copenhagen, Denmark. 9/2021
- **Dagbladet Information**. *"Moderne Tider - Vi fortæller naturvidenskaben forfra"*,
  Consultancy for the editorial group for year-long article series on science. 2021–
- **Videnskab.dk - *Videnselskabet***. Interview/podcast. Copenhagen, Denmark. 8/2020
- ***"Tanker i Lockdown"*, Det Unge Akademi (2020)**. One chapter. Copenhagen, Denmark. 8/2020
- **Georg Mohr Winner Seminar**. Invited speaker. Sorø Akademi, Denmark.
  2×45 mins. talks at Danish Mathematics Olympiad training camp. 2/2020
- **Bloom 2019 Festival for Science**, Copenhagen. 5/2019
  - Panelist/speaker: *"Det Unge Akademi præsenterer: Det Umålelige"*. (Also recorded as podcast).
  - Speaker: *"The Greatest Theories in the History of the Universe"* (Stage: Under the Oak).
- **"Visit MATH" at U Copenhagen**, lectures for Danish high school teachers of Mathematics. 11/2018
- **Videnskabsklubben (= "The Science Club")**, Royal Danish Academy of Sciences and Letters.
  - Workshops on Mathematics for gifted high school students. (Both in 2018, 2019.) 2018–
  - Den Store VidenskabsDyst 2021 (video stream/broadcast), quiz show on Science/Mathematics.
  - Program "Geometri & Algoritmer" (2021) in Mathematics & Computer Science (w/ K.G. Larsen et al.).

- **"Some Careers in Maths"**, Career Day Talk 4/2017
- **Radio NRK P2 (Norwegian National Radio)**, Participant in Several Broadcasts. 2015–2017
  1. *Abel's Tower/Ekko: "Ask The Experts"-panel.* [Celestial & Fluid Mechanics/Thermodynamics.]
  2. *Ekko: Radio interview/general audience talk on John Forbes Nash's work in Geometric Analysis.*
  3. *Ekko: Radio interview, program on Einstein's Theory of General Relativity.*
  [NRK P2 has $\sim 277,000$ daily listeners (2014), and "Ekko" has $\geq 100,000$ regular listeners.]
- **Bestil En Forsker (= "Book a Professor"),** Copenhagen, Denmark. 2017–
  Numerous general audience talks about optimal paths in curved spaces (geodesics).
- **Coppa Aurea - Mathematics Competition,** Trieste, Italy. 2016
  Coach for Italian high school students competing in Mathematics olympiads.
- **TV 2 News**, Denmark. 06/2008
  TV local news interview on the topic of "The joys of studying higher Mathematics".
- **Department of Mathematics, University of Aarhus,** Denmark. 2006
  "The Science Tent" science outreach for primary/high school. Developed/presented teaching materials.
- **Department of Physics and Astronomy, University of Aarhus,** Denmark. 2004
  Instructor/Lecturer in the Visitor's Service in Physics for visiting high school students.

Outreach materials online: `http://www.math.ku.dk/~nmoller/outreach.html`