

JESPER GRODAL: CURRICULUM VITÆ

Department of Mathematical Sciences
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Born: October 31, 1972 (Copenhagen, Denmark)

Fields of research:

Algebraic Topology, Lie groups, finite groups, representation theory, homotopical group theory, homotopy theory of classifying spaces.

Education:

- 1991-1997 University of Copenhagen: B.S. in Mathematics and Physics 1994
Candidatus Scientiarum (M.S.) in Mathematics 1997.
1997-2000 Massachusetts Institute of Technology: Ph.D. in Mathematics Sept 2000.
(Thesis title: Higher limits via subgroup complexes; Advisor: Haynes Miller.)

Employment:

2000-2001	Member	IAS, Princeton
Summer 2001	Clay Math Inst. Liftoff Fellow	Université Paris 13, France
2001 - 2003	L.E. Dickson Instructor	University of Chicago
2003 - 2007	Assistant Professor	University of Chicago (on leave 06-07)
2006 -	Professor	University of Copenhagen
2010 -	Director	Center for Symmetry and Deformation, KU

Visiting positions and long-term (> 1 month) visits:

Toronto (95-96), Barcelona (98), MPI Bonn (01), Aberdeen (01), Aarhus (03), Lausanne (05), Stockholm (06), Vancouver (07), MSRI Berkeley (08).

Selected Prizes and Awards:

- 1997 Fulbright Fellowship (declined)
1997-2000 Danish Research Academy Graduate Fellowship
1997-2000 Knud Højgaards Travel Award
2000-2001 Institute for Advanced Study (Princeton) Fellowship (\$34,000)
2001 Clay Mathematics Liftoff Fellowship (\$12,000)
2001-2007 NSF Grants DMS-0104318 and DMS-0354633 (\$72,480 and \$103,754)
2005-2007 Alfred P. Sloan Research Fellowship (\$45,000)
2006-2010 Ole Rømer Fellowship (DKK 4.5M awarded, adjusted to DKK 2.2M)
2006 Young Danish Elite Researcher Prize 2006 (DKK 100,000)
2007-2012 European Young Investigator (EURYI) Award 2006 (EUR 1.13M)
2007-2008 Univ of Copenhagen Faculty of Science Research Grant (DKK 920K)
2008-2013 Univ of Copenhagen Programme of Excellence (DKK 20M)
2010-2014 DNRF Centre for Symmetry and Deformation (DKK 50M)
2010 Invited Speaker, International Congress of Mathematicians 2010

Major conference talks:

Internat. Conf. on Current Trends in Algebraic Topology, Northwestern Univ., USA, Mar 97
AMS Winter Meeting, Special Session on Homotopy Theory, Baltimore, USA, Jan 98
AMS Winter Meeting, Special Session on Homotopy Theory, Washington DC, USA, Jan 00
JAMI Conference, Johns Hopkins University, USA, Mar 00
Conference on representation theory and computational algebra, Athens GA, USA, May 00
Workshop on Homotopy theory, Haifa, Israel, Jun 00
Euro-Mediterranean Topology meeting, Barcelona, Spain, Jul 00
Oberwolfach Group cohomology meeting, Oberwolfach, Germany, Jul 00
AMS Winter meeting, New Orleans, USA, Special session on Group Cohomology, Jan 01
International Conference in Algebraic topology, Isle of Skye, Scotland, UK, Jun 01
Midwest Topology Seminar, Purdue University, USA, Oct 01
AMS Regional meeting, Special Session on homotopy theory, Ann Arbor MI, USA, Mar 02
AMS Summer Conf. honoring Jon Alperin's 65th, Mt. Holyoke, USA, Jun 02. Plenary Speaker
Topology 2002 in honor of Ib Madsen's 60th, Aarhus, Denmark, Jun 02, Plenary Speaker
Barcelona Conference of Algebraic Topology 2002, Barcelona, Spain, Jul 02
AMS 2002 Fall Southwestern Sectional Meeting, Orlando FL, USA, Nov 02
AMS 2003 Spring Central Sectional Meeting, Bloomington, IN, USA, Apr 03
First joint international meeting between the AMS and RSME, Seville, Spain, Jun 03
International Conference on Homotopy Theory, Kinosaki, Japan, Jul 03
Conference on Applied Homotopy Theory, London ON, Canada, Sep 03
AMS 2003 Fall Eastern Sectional Meeting, Binghamton NY, USA, Oct 03
Topology of Manifolds and Homotopy Theory, Banff, Canada, Mar 04
AMS 2004 Spring Eastern Sectional Meeting, Lawrenceville, NJ, USA, Apr 04
Lehigh Geometry/Topology Conference, Bethlehem PA, USA, Jun 04, Principal Speaker
String Topology Workshop, Stanford CA, USA, Aug 2004
International Conference on Algebraic Topology, Hanoi, Vietnam, Aug 04
International Conference on Homotopy Theory, Arolla, Switzerland, Aug 04, Plenary Speaker
Oberwolfach Topology Meeting, Oberwolfach, Germany, Sept 2004.
Topology and Representation Theory, Lausanne, Switzerland, Apr 05 Plenary Speaker, 2 talks
LMS workshop on fusion systems and groups, Birmingham, UK, May 05
2nd joint AMS-DMV Meeting, Mainz, Germany, Jun 05
Conference on Pure and Applied Topology, Isle of Skye, Scotland, UK, Jun 05
Banff Topology Meeting, Banff, Canada, Aug 05
Barcelona Topology Workshop, Barcelona, Spain, Sep 05
Homotopy theory and group actions, Banff, Canada, Nov 05, Plenary speaker, 2 talks
Flavors of groups, Banff, Canada, Nov 05
Union College Mathematics Conference, Schenectady NY, USA, Dec 05, Plenary speaker
Cornell Topology Festival, Cornell NY, USA, May 06, Plenary speaker, 2 talks
Mittag-Leffler Topology Semester, Stockholm, Sweden, June 06
Munster Topology Conf. in honor of I. Hambleton's and E. Pedersen's 60th, Germany, June 06
Oberwolfach Topology Meeting, Oberwolfach, Germany, Sept 06
Oberwolfach arbeitgemeinschaft on Twisted K-theory, Oberwolfach, Germany, Sept 06
Nordic Topology Meeting, Trondheim, Norway, Nov 06
AMS-PMS Joint International Meeting, Warsaw, Poland, July 07
Oberwolfach Homotopy Theory Meeting, Oberwolfach, Germany, Sept 07

Colloque du GDR Topologie Algébrique et Applications, Angers, France, Oct 07
 Danish Mathematical Society Annual Meeting, Lyngby, Denmark, Dec 07
 Algebra and Geometry of Groups and Classifying Spaces, Barcelona, Spain, Feb 08
 Homological Methods In Representation Theory, MSRI Berkeley, USA, April 08, Plenary speaker
 AMS Fall Western Section Meeting, Vancouver, USA, Oct 08
 British-Nordic Congress of Mathematicians, sectional speaker, Oslo, Norway, June 09
 Isle of Skye Conference, Isle of Skye, Scotland, UK, June 09, Plenary speaker
 Fusion Days, Amiens, France, Sept 09
 Theorie locale, groupes finis, et representations, Luminy, France, Oct 09
 Group rep theory and rel topics (for J. Thevenaz), Lausanne, Switzerland, June 10. Plenary.
 Oberwolfach Topology Meeting, Oberwolfach, Germany, July 10
 Intl. Congr. of Mathematicians 2010, Hyderabad, India, Aug 10, Sectional speaker (Topology)
 Oberwolfach Group Cohomology Meeting, Oberwolfach, Germany, Sept 10
 NRW-Topology Meeting 14, Bonn, Germany, Nov 10

Colloquium talks:

Northwestern University (00), University of Illinois at Chicago (00), University of Copenhagen (00,03), Wayne State University (01), University of Virginia (04), Technical University of Denmark (06), University of Southern Denmark (06), Aalborg University (07), UC San Diego (08), Aarhus University (09), Univ. Bonn (10), KTH-Stockholm (10), Univ. Münster (11).

Seminar talks (abbreviated):

Université de Louvain La Neuve (97,03), University of Chicago (97,99,00,01,02,05,06), Northwestern University (99,01,02), Purdue University (99,01,04), University of Wisconsin (99,01), MIT (00,01,04,07), Princeton University (4 talk lecture series 00-01), Johns Hopkins University (00,01), Université Paris 13 (00), Wayne State University (01, 06 3 talk lecture series), University of Illinois at Chicago (01), Stanford University (02,04,08), University of Illinois at Urbana Champaign (02), Aarhus University (03,03,05), Instituto Superior Technico Lisbon (00), KTH Stockholm (04), Berkeley (06), University of British Columbia (06, 06, 08), Oxford (07), Aberdeen (07), MSRI Berkeley (08), Oregon (08), University of Washington (08).

Teaching and Advising Experience:

Honors Calculus sequence (Univ. Chicago 02, 03, 05)
 Analysis in \mathbf{R}^n (Univ. Chicago 03)
 Elementary Algebraic Topology (Univ. Chicago 03, 04, 05)
 Graduate course: “Group actions via homotopy theory” (Univ. Chicago 04)
 Graduate course: “Cohomology of Groups” (Univ. Chicago, 05)
 Graduate courses: “Proseminar on Algebraic Topology” (w/ J. P. May, Univ. Chicago 04-06)
 Speaker in UofC undergraduate math club (Univ. Chicago 05)
 Graduate course: Homotopy Theory (w/ N. Wahl, Univ. Copenhagen 06)
 Graduate course: Algebraic Topology (w/ J. M. Møller, Univ. Copenhagen 07)
 Graduate course: Algebraic Topology II (Univ. Copenhagen 09)
 Graduate course: Categories and topology (Univ. Copenhagen 09)
 Undergraduate mentor for 4 students students at Univ. Chicago (1 graduate school at Harvard, 3 at MIT)
 Second advisor for 2 graduate students at Univ. Chicago
 Postdoctoral mentor for 10 postdocs at Univ. Copenhagen (R. Stancu, C. Westerland, A. Diaz,

A. Berglund, R. Hepworth, D. Ayala, S. Basu, E. Henke, M. Gelvin, A. Lahtinen)
Graduate advisor for 4 MS students (U. Buchholtz, T. Nørgård-Sørensen, M. Stephan, S. Reeh)
and 2 PhD students (T. Nørgård-Sørensen, S. Reeh) at Univ. Copenhagen.

Research Management Experience:

Director of “DNRF Centre for Symmetry and Deformation” 10–
Director of “KU Programme of Excellence: Symmetry and Deformation” 08–
Head of Topology Research Group, University of Copenhagen 07–
Editor of “Geometry and Topology” journal 08–
Editor of “Homology, Homotopy and Applications” journal 05–
PI and manager on numerous grants (NSF personal grant, NSF Focused Research Group Grant,
A. P. Sloan Research Grant, Rømer Fellowship, etc)
Organizer: Weekly topology seminars Univ. Chicago 01-06, Univ. Copenhagen 06–
Organizer: Princeton/IAS seminar: “Group actions and cohomology” 00-01.
Organizer: Midwest Topology Seminar Conference Mar 02 and Apr 05.
Organizer: Special Session on Group Cohomology at AMS Meeting, Madison, Oct 02.
Organizer: Special Session on Homotopy Theory at AMS Meeting, Northwestern, Oct 04.
Organizer (04-06) & founder of “AllChicago” topology seminar (Joint UC-NU-UIC seminar)
Problem session moderator of “Homotopy theory and group actions”, Banff Nov 05
Organizer: 5 masterclasses with international speakers at Univ. Copenhagen, 06-07
Organizer: “Georgian Topology Week”, Copenhagen, Sept 06
Organizer: “First Copenhagen Topology Conference”, Copenhagen, Sept 06
Organizer: Workshop on “Finite groups and p -local finite groups”, Copenhagen, July 07
Organizer: Workshop on “Homotopy theory and group actions”, Copenhagen, Aug 07
Organizer: “Beyond p -compact groups” Workshop, Copenhagen, Jan 08
Organizer: “HGTTAG Workshop”, Copenhagen, June 08
Organizer: “Homotopical Group Theory and Topological Algebraic Geometry”, Bonn, June 08
Organizer: “Copenhagen Topology Conference 2010”, Copenhagen, January 10

List of Publications of Jesper Grodal: (see: www.math.ku.dk/~jg)

1. The transcendence degree of the mod p cohomology of finite Postnikov systems. In *Stable and unstable homotopy (Toronto, ON, 1996)*, pages 111–130. Amer. Math. Soc., Providence, RI, 1998.
2. Serre’s theorem and the Nil_i filtration of Lionel Schwartz. In *Cohomological methods in homotopy theory (Bellaterra, 1998)*, pages 177–183. Progress in Math. 196, Birkhäuser Verlag, 2001.
3. Higher limits via subgroup complexes. *Ann. of Math.* (2) 155 (2002), no. 2, 405–457.
4. (with K. Andersen, T. Bauer, and E. Pedersen) A finite loop space not rationally equivalent to a compact Lie group. *Invent. Math.* 157 (2004), no. 1, 1–10.
5. (with S. Smith) Propagating sharp group homology decompositions. *Adv. Math.* 200 (2006), no. 2, 525–538.
6. (with C. Broto, N. Castellana, R. Levi, and B. Oliver) Subgroup families controlling fusion systems and p -local finite groups. *Proc. London Math. Soc.* (3) 91 (2005) no. 2, 325–354.

7. (with C. Broto, N. Castellana, R. Levi, and B. Oliver) Extensions of p -local finite groups. *Trans. Amer. Math. Soc.* 359 (2007), 3791–3858.
8. (with K. Andersen, J. Møller, and A. Viruel) The classification of p -compact groups for p odd. *Ann. of Math. (2)* 167 (2008), no. 1, 95–210.
9. (with K. Andersen) Automorphisms of p -compact groups and their root data. *Geometry & Topology* 12 (2008), 1427–1460.
10. (with K. Andersen) The Steenrod problem of realizing polynomial cohomology rings. *J. Topology* 1 (2008), 747–760.
11. (with K. Andersen) The classification of 2-compact groups. *J. Amer. Math. Soc.* 22 (2009), 387–436.
12. The classification of p -compact groups and homotopical group theory. *Proc. Intl. Congress of Mathematicians 2010 (Hyderabad, 2010)*, 974–101.
13. (with J. H. Smith) Classification of homotopy G -actions on spheres, in preparation.
14. (with B. Oliver) Fundamental groups of p -local finite groups, in preparation.
15. (with K. Andersen) The isogeny theorem for p -compact groups, in preparation.
16. Homotopical group theory (preliminary title), in preparation for *Bull. Amer. Math. Soc.* (survey article solicited by the editorial board)