

# Curriculum Vitae

## Anders Kvellestad

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- CURRENT POSITION      ♦ **Research Associate**, Imperial College London, London, UK (October 2018 – present).
- PREVIOUS POSITIONS    ♦ **Researcher** at the University of Oslo, Oslo, Norway (October 2017 – September 2018).  
♦ **Postdoctoral Fellow** at the Nordic Institute for Theoretical Physics (Nordita), Stockholm, Sweden (November 2015 – October 2017).
- DEGREES                ♦ **Ph.D. in Particle Physics**, October 2015, University of Oslo, Oslo, Norway. Supervisor: Are Raklev. Thesis title: *Chasing SUSY Through Parameter Space*.  
♦ **M.Sc. in Particle Physics**, July 2011, University of Bergen, Bergen, Norway.  
♦ **B.Sc. in Physics**, July 2009, University of Bergen, Bergen, Norway, University of Copenhagen (Spring term 2009), Copenhagen, Denmark.
- RESEARCH INTERESTS    Global fits of new particle physics theories and development of related software tools. Searches for new particles at the Large Hadron Collider (LHC), and the reinterpretation of LHC results for new theories. Bayesian and frequentist statistical methods for parameter estimation and global fits. Machine learning approaches for speeding up particle physics calculations.
- AWARDS, GRANTS AND SCHOLARSHIPS    ♦ **PRACE Project Access** (April 2018 – Mars 2021). Co-I on computing grant from Partnership for Advanced Computing in Europe (PRACE).  
♦ **Nordita Postdoctoral Fellowship** (October 2015 – September 2017). Personal grant for a two-year full-time research position.  
♦ **Richard Feynman Diploma**, awarded at the International School of Subnuclear Physics, Erice, June 2015 (Directors A. Zichichi and G. 't Hooft).  
♦ **Department of Physics, UiO, Doctoral Fellowship** (September 2011 – August 2015). Grant for a four-year full-time position (25% compulsory teaching) for doing research leading to a Ph.D.  
♦ **Martin Landrø's award for outstanding master's thesis in physics, 2011** Awarded at the biannual meeting of the Norwegian Physical Society, August 2013.
- PUBLICATIONS        ♦ **12 journal publications, 4 preprints (3 currently submitted to journals) and 2 conference proceedings**. For the full publication history, links to all papers, citation statistics and more, see [inspirehep.net/author/profile/A.Kvellestad.1](https://inspirehep.net/author/profile/A.Kvellestad.1)

- INVITED LECTURE SERIES
- ◇ **Introduction to GAMBIT**, Dartmouth-TRIUMF-University of Washington HEP/Cosmology Tools Bootcamp, 23–27 October 2017.
- INVITED TALKS AND SEMINARS
- ◇ **How to not get lost in theory space – probability, sampling and software**  
Nuclear physics seminar, University of Oslo, Oslo, 8 November 2018.
  - ◇ **Light SUSY at the LHC?**  
3-PAC seminar, Imperial College London, London, 12 October 2018.
  - ◇ **Combined collider constraints on neutralinos and charginos**  
HEP seminar, University of Oslo, Oslo, 12 September 2018.
  - ◇ **Chasing SUSY through parameter space – global fits in the MSSM**  
Particle and astroparticle physics colloquium, RWTH Aachen University, Aachen, 12 June 2018.
  - ◇ **Finding our way through theory space – global fits of New Physics theories**  
Institute colloquium, Institute for Theoretical Astrophysics, University of Oslo, 1 June 2018.
  - ◇ **Recasting LLP searches with GAMBIT**  
(Re)interpreting the results of new physics searches at the LHC, CERN, 16 May 2018.
  - ◇ **Finding our way through BSM parameter spaces**  
Theory seminar, Nikhef, Amsterdam, 3 May 2018.
  - ◇ **First SUSY results with GAMBIT**  
DESY Theory Workshop 2017, 27 September 2017.
  - ◇ **Adventures in parameter space — New Physics global fits**  
Theory seminar series, University of Stavanger, Stavanger, 27 November 2015.
  - ◇ **Explaining LHC anomalies**  
LHCP conference 2015, St. Petersburg, 3 September 2015.
  - ◇ **Chargino decays in Natural SUSY and beyond**  
3-PAC seminar, Imperial College London, London, 19 September 2014.
  - ◇ **Long-lived charginos in Natural SUSY?**  
Theory seminar series, KBFI, Tallinn, 28 February 2014.
  - ◇ **Kinematics of SUSY cascades and mass measurements**  
Prize lecture at Store Fysikermøtet (biannual meeting of the Norwegian Physical Society), 9 August 2013.
- OTHER RECENT TALKS
- ◇ **MSSM global fits with GAMBIT**  
ICHEP 2018, 6 July 2018.
  - ◇ **GAMBIT: What is it and where is it going?**  
Nordic Conference on Particle Physics 2018, Skeikampen, 4 January 2018.
  - ◇ **A short and sweet GAMBIT tutorial**  
TOOLS 2017, Corfu, 13 September 2017.
  - ◇ **First SUSY results with GAMBIT**  
EPS-HEP 2017, Venice, 7 July 2017.
  - ◇ **Disfavouring EWBG and a hidden Higgs in a THDM**  
Norwegian Theory Workshop, Stavanger, 19 June 2017.
  - ◇ **An Update on GAMBIT**  
(Re)interpreting the results of new physics searches at the LHC, CERN, 13 December 2016.
  - ◇ **An Introduction to GAMBIT**  
Nordic Conference on Particle Physics, Skeikampen, 6 January 2016.
  - ◇ **LHC signals from RPV chargino decays**  
SUSY 2015, Lake Tahoe, 28 August 2015.

SELECTED  
MEDIA AND  
OUTREACH  
ACTIVITIES

- ◇ **The Future of Global Fits to New Physics**  
The International School of Subnuclear Physics, Erice, 30 June 2015.
- ◇ **Emmy og symmetriene** (Emmy and the symmetries)  
Talk about Emmy Noether and symmetries in physics, at the Science Library, University of Oslo, 6 November 2018. The talk was filmed and is available on YouTube [\[link\]](#).
- ◇ **Abels tårn** (Abel’s tower)  
Once or twice per year I participate in the “Abels tårn” science panel on the radio/TV show Ekko by the Norwegian Broadcasting Corporation (NRK), most recently on 31 August 2018 [\[link\]](#).
- ◇ **Galaxies, gravitation and ghosts**  
Pub talk on dark matter, part of the Astronomy on Tap talk series, Oslo, 30 October 2017.
- ◇ **Tumbling Down a Quantum Rabbit Hole**  
Essay on the interpretation of quantum mechanics and probabilities, published in Mentsch Magazine, 29 September 2017 [\[link\]](#).
- ◇ **Dark Matter, theory and practice**  
Talk at Researcher’s Night, Norwegian Museum of Science and Technology, Oslo, 29 September 2017.
- ◇ **Kelner, det er en partikkel i kvantefeltet mitt!** (Waiter, there’s a particle in my quantum field!) Talk about quantum field theory and LHC physics, at the Science Library, University of Oslo, 28 February 2017. The talk was filmed and is available on YouTube [\[link\]](#).
- ◇ **Hvordan henger universet sammen?** (How does the universe hold together?)  
Lecture at Philosophy Week 2016, Oslo, 13 August 2016.
- ◇ **Mysteriet mørk materie** (The Dark Matter Mystery)  
I co-wrote the script for an animated short on dark matter, 7 December 2015, available on YouTube [\[link\]](#).
- ◇ **Emmy Noether og symmetri i fysikk** (Emmy Noether and symmetry in physics)  
Talk for physics teachers visiting the University of Oslo, Oslo, 29 October 2015.
- ◇ **Jakten på det usynlige** (Chasing the invisible)  
Talk on board a “science train” from Oslo to Trondheim, 24 September 2015. The talk was filmed by NRK and is available online [\[link\]](#).
- ◇ **Supre symmetrier og mørke mysterier** (Superb symmetries and dark mysteries)  
Lecture for high school students visiting the University of Oslo, Oslo, 14 November 2014. The lecture was filmed by NRK and is available online [\[link\]](#).
- ◇ **Interview** with Titan (the University of Oslo science news service) on our statistical combination of LHC SUSY search results using GAMBIT, 7 September 2018 [\[link\]](#).
- ◇ **Interview** with forskning.no (the main Norwegian news site for research news) concerning the role of “naturalness” in theoretical physics research, 12 September 2018 [\[link\]](#).
- ◇ **Interview** with Titan on open access publishing and the use of preprints, 27 October 2017 [\[link\]](#).
- ◇ **Interview** with Titan on the “750 GeV LHC bump” that looked so intriguing back in late 2015, 16 December 2015 [\[link\]](#).
- ◇ **Interview** with forskning.no about an analysis we performed on an interesting LHC dataset, 7 November 2014 [\[link\]](#).

TEACHING

- ◇ **Guest lecturer** in PH3-CP Computational Physics, Imperial College London (Fall term 2018).
- ◇ **Teaching assistant** in FYS2130 Oscillations and Waves, University of Oslo (Spring terms 2012–2014).
- ◇ **Teaching assistant** in FYS4170 Quantum Field Theory, University of Oslo (Fall term 2011).

- ◇ **Teaching assistant** in MAT111 Calculus 1 at the University of Bergen (Fall terms 2007–2010).
- SUPERVISION
- ◇ **Main supervisor for MSci students** Iza Veliscek and Nicholas Reed, Imperial College London (June 2018 – present). *Topic:* machine learning (iterative Gaussian processes) and fast LHC simulations.
  - ◇ **Co-supervisor for PhD student** Jeriek Van den Abeele, University of Oslo (August 2016 – present). *Topic:* supersymmetry and dark matter phenomenology.
  - ◇ **Co-supervisor for 4 MSc students:** Ingrid Angelica Vazquez Holm (2016–2018), Jon Vegard Sparre (2015–2017), Mari Røysheim (2014–2016) and Eli Bæverfjord Rye (2014–2016), University of Oslo. *Topics:* machine learning for fast cross-section calculations, supersymmetry, Bayesian statistics, Monte Carlo simulations of the high-luminosity LHC and the International Linear Collider.
- OTHER PROFESSIONAL ACTIVITIES
- ◇ **Founding member** of the Global and Modular Beyond-the-Standard-Model Inference Tool (GAMBIT) Collaboration (since October 2012). For more information on GAMBIT, see [gambit.hepforge.org](http://gambit.hepforge.org).
  - ◇ **Convener** of ColliderBit, the collider physics working group in GAMBIT (since June 2016).
  - ◇ **Referee** for Journal of High Energy Physics (JHEP).
  - ◇ **Lead organizer** of the GAMBIT VII workshop, Djurönäset, Sweden (21–26 May, 2017), 24 participants.
  - ◇ **Co-organizer** of the biannual Student Conference in the Section for Subatomic Physics and Astrophysics, Norwegian Physical Society (28–30 April, 2014).
  - ◇ **Health and Safety Representative** for the Theory Section at the Department of Physics, University of Oslo (2013–2014).
  - ◇ **Member** of the High Energy Particle Physics – Norway (HEPP-Norway) research project (since 2011).
  - ◇ **Member** of the Norwegian Particle, Astroparticle and Cosmology Theory community (N-PACT) (since June 2016).
  - ◇ **Member** of the Norwegian Physical Society (since November 2012).
- SOFTWARE AND COMPUTING
- ◇ **Founding author** of GAMBIT, an open-source tool for performing global fits in New Physics theories, [gambit.hepforge.org](http://gambit.hepforge.org).
  - ◇ **Founding author** of ColliderBit, an open-source GAMBIT module for LHC recast studies. Released alongside GAMBIT.
  - ◇ **Sole author** of BOSS, an open-source tool for dynamic loading of C++ classes from shared libraries at runtime. Released alongside GAMBIT.
  - ◇ **Initiator and lead developer** of GAMBIT light – an easy-to-use, stripped-down version of GAMBIT intended for users outside of particle physics. The first version of GAMBIT light is currently under development, but a beta version is already in use for research in the nuclear physics group at the University of Oslo.