

Curriculum Vitae

Ole Risbøl

Profession: Archaeologist
Position: Associate Professor
Born: 1963
Nationality: Danish
Sex: Male
E-mail: ole.risbol@ntnu.no

Key qualifications

- Research
- Remote sensing
- Lidar/airborne laserscanning
- Prehistorical archaeology
- Cultural heritage management
- Cultural heritage in forest and outfield areas
- Archaeological surveys
- Monitoring
- Archaeological method development
- Project management

Education

1993	Cand.philol in Nordic prehistorical archaeology	University of Aarhus, Denmark
2006	Evaluated to PhD competence	

Relevant courses

2020	Course in supervising Ph.d.-students
2018	Course for drone operators
2018	Course in research management
2017	Pedagogical development programme
2013	Course in photogrammetry
2004-2005	Course in management and leadership
2007	Course in scientific publishing
2003	GIS course

Work history

August 2016 →	Associate Professor	NTNU University Museum Department of Archaeology and Cultural History
2016	Senior Researcher	NIKU – Norwegian Institute for Cultural Heritage Research
2006 – 2015	Researcher II	
1999 – 2006	Researcher	
1995-1999	Cultural resource management consultant	Vestfold County Council
1994-1995	Project manager for a number of archaeological excavations	Museum of Cultural History, Oslo

Language skills

- Norwegian
- Danish
- English
- German

Project manager experience

- 2024 Project manager of the research project *Skogen som kunnskapsbank* [Forest as knowledge store] involving LiDAR data and citizen science
- 2016-2022 Head of the archaeological excavation unit at the NTNU University Museum
- 2011-2015 Project manager for the research project *The uses of advanced technology in understanding, preservation and management of cultural heritage (Tekno-SIS)* funded by The Research Council of Norway
- 2005 → Project manager for a number of research and development projects related to remote sensing and cultural heritage management
- 1999–2003 Project manager for the archaeological survey project at the military training and shooting range Regionfelt Østlandet, Åmot municipality, Hedmark county.

Scientific assignments (a selection)

- 2016–2022: General management board member of *ArcLand International*
- 2012–2014: Scientific committee member of *Archaeological Prospection* i UISPP (Union Internationale des Sciences Préhistoriques et Protohistoriques / IUPPS - International Union of Prehistoric and Protohistoric Sciences)
- 2010–2011, 2014-2015: General management board member of *ArchaeoLandscapes Europe*
- 2013: Scientific committee member of *10th International Conference on Archaeological Prospection*, Vienna May 29th to June 2nd 2013.

Scientific publications (a selection)

- Eidshaug, Jo Sindre Pålsson, Hein Bjartmann Bjerck, Heidi Mjelva Breivik, Ole Risbøl, Angie M. Tivoli, and A.F.J. Zangrando 2024: From earth to sky: Large-scale archaeological settlement patterns in southernmost South America based on ground surveys, UAV LiDAR, and open-source satellite imagery. *Journal of Island and Coastal Archaeology*, 1–40.
<https://doi.org/10.1080/15564894.2024.2426828>
- Eidshaug, J.S.P., H.B. Bjerck, T. Lohndal & O. Risbøl 2024: Words as archaeological objects: A study of marine lifeways, seascapes, and coastal environmental knowledge in the Yagan–English dictionary. *International Journal of Historical Archaeology*. <https://doi.org/10.1007/s10761-024-00729-7>
- Risbøl, O., J.S.P. Eidshaug, H.B. Bjerck, M. Mojaren Gran, K. Rantala, A.M. Tivoli & A.F.J. Zangrando 2023: UAV LiDAR – case studies from Tierra del Fuego, Argentina and Vega, Norway. *Archaeological Prospection* 1-25. <https://doi.org/10.1002/arp.1918>
- Risbøl, O. & L.F. Stenvik 2022: Tjæreproduksjon i myrmiler – en særegen midtnorsk tradisjon. *Heimen. Tidsskrift for lokal og regional historie*. 1/2022, pp. 113–133.
- Risbøl, O., R. Sauvage, E. Østmoe, Shannen T.L. Sait & Alexandros Asimakopoulos 2021: Eldre jernalders tjæreproduksjon ut av tåken. Om tidlig norsk tjæreproduksjon med utgangspunkt i et funn på Averøy i Møre og Romsdal. *Viking, Norsk Arkeologisk Årbok*, Vol: LXXXV (2021), pp. 63–88.
- Thuestad, A.E., O. Risbøl, J.I. Kleppe, S. Barlindhaug & E.R. Myrvoll 2021: Archaeological Surveying of Subarctic and Arctic Landscapes: Comparing the Performance of Airborne Laser Scanning and Remote Sensing Image Data. *Sustainability* 2021, 13, pp. 1–19.
- Cuenca-García, C., O. Risbøl, R. Bates, A. Anderson Stamnes, F. Skoglund, Ø. Ødegård, A. Viberg, S. Koivisto, M. Fuglsang, M. Gabler, E. Schlosser Mauritsen, W. Perttola, & D-Ø. Solem 2020: Sensing Archaeology in the North: The Use of Non-Destructive Geophysical and Remote Sensing Methods in Archaeology in Scandinavian and North Atlantic Territories. *Remote Sensing* 2020, 12(9), 3102, pp. 1–24.
- Risbøl, O. 2020: Anmeldelse av Lis Helles Olesen, Esben Schlosser Mauritsen & Mathias Christiansen Broch: *Luftarkæologi 2. Luftfotos, droner, laser og geofysik*. De Kulturhistoriske Museer i Holstebro Kommune 2019. 296 pp. I: KUML 2020, Årbog for Jysk Arkæologisk Selskab, pp. 349–352
- Risbøl, O., D. Langhammer, E. Schlosser Mauritsen & O. Seitsonen 2020: Employment, Utilization and Development of Airborne Laser Scanning in Fenno-Scandinavian Archaeology – a Review. In: *Remote Sensing* 2020, 12(9), 1411, pp. 1–41.

- Risbøl, O. & L. Gustavsen 2019: Mapping early iron production features in woodland using remote sensing techniques. In: Investigating early iron production by modern remote sensing technologies (A. A. Stamnes, O. Risbøl & L.F. Stenvik, transactions of The Royal Norwegian Society of Sciences and Letters, Skrifter nr. 2-2019, pp. 35–56. DKNVS, Trondheim
- Risbøl, O. & L. Gustavsen 2018: LiDAR from drones employed for mapping archaeology – Potential, benefits and challenges. In: *Archaeological Prospection*, 2018; 1–10.
- Skrede, J., H. Hølleland, O. Risbøl & G. Jerpåsen 2017 (2018): Views, use and reception of visualisations of development proposals impacting cultural heritage. In: *International Journal of Heritage Studies*, Vol. 24, Issue 4, pp. 390–405.
- Risbøl, O. 2017: Neglected cultural heritage in Norwegian forests – state of affairs, challenges and solutions. In: Archaeological Sites in Forests. Strategies for their Protection (eds. Irlinger, W. & G. Suhr), *Schriftenreihe des Bayerischen Landesamtes für Denkmalpflege*, Nr. 14, pp. 25–31. Volk Verlag, München.
- Risbøl, O., C. Briese, M. Doneus & A. Nesbakken 2015: Monitoring cultural heritage by comparing DEMs derived from historical aerial photographs and airborne laser scanning. In: *Journal of Cultural Heritage*, Vol. 16, pp. 202–209.
- Risbøl, O., T. Petersen & G. Jerpåsen 2013: Approaching a mortuary monuments landscape using GIS and LiDAR generated 3D models. In: *International Journal of Heritage in the Digital Era*, Vol. 2, nr. 4, pp. 509–525.
- Risbøl, O. Bollandsås, O.M., A. Nesbakken, H.O. Ørka, E. Næsset & T. Gobakken 2013: Interpreting cultural remains in airborne laser scanning generated digital terrain models: effects of size and shape on detection success rates. In: *Journal of Archaeological Science*; Vol. 40, pp. 4688–4700.
- Risbøl, O. 2013: Cultivating the “Wilderness” – how Lidar can improve Archaeological Landscape Understanding. In: *Interpreting Archaeological Topography. 3D Data, Visualisation and Observation* (eds. Opitz, R.S. & D.C. Cowley). Occasional Publication of the Aerial Archaeological Research Group, No. 5., pp. 53–64. Oxbow Books, Oxford.
- Bollandsås, O.M., O. Risbøl, L.T. Ene, A. Nesbakken, T. Gobakken & E. Næsset 2012: Using airborne small-footprint laser scanner data for detection of cultural remains in forests: an experimental study of the effects of pulse density and DTM smoothing. In: *Journal of Archaeological Science*; Vol. 39, pp. 2733–2743.
- Risbøl, O. 2012: Kulturminner i skog – bruk av flybåren laserskanning som grunnlag for en bærekraftig forvaltning. In: A. Sætren, I. Fløisand, G. Swensen og B. Skar (red.): *Kulturarv, kulturminner og kulturmiljøer. Presentasjoner fra NIKUs strategiske instituttprogrammer 2006-2010*. NIKU Tema 39. Oslo, pp. 100–104.
- Risbøl, O. & H.R. Amundsen 2011: Tilstandsanalyse og miljøovervåking av kulturminner og –miljøer langs regulerte vassdrag ved bruk av flybåren laserskanning. In: *Viking, Norsk arkeologisk årbok*. Bind LXXIV – 2011. Norsk Arkeologisk Selskap, Oslo 2011, pp. 279–304.
- Risbøl, O. 2010: Towards an improved archaeological record through the use of airborne laser scanning. In: Space, Time and Place. 3rd International Conference on Remote Sensing in

- Archaeology (eds. M. Forte, S. Campana & C. Liuzza). *British Archaeological Review, International Series*, vol. 2118. 2010, pp. 105–112.
- Risbøl, O. 2009: Fugleperspektiv på kulturminner. Bruk av flybåren laserskanning i arkeologien. I: *Viking, Norsk arkeologisk årbok*. Bind LXXII – 2009. Norsk Arkeologisk Selskap, Oslo, pp. 211–226.
- Barlindhaug, S., I.M. Holm-Olsen, T. Risan, O. Risbøl & M-L.Bøe Sollund 2008 (alfabetisk): Fortiden sett fra lufta – fjernmålingsmetoder til overvåking av kulturminner og kulturlandskap. I: *Kart og Plan*, vol. 2 – 2008, pp. 106–118.
- Risbøl, O. 2007: Airborne laser scanning of cultural features in Norwegian forests – preliminary results from a pilot project. In: *Past From the Air. Aerial archaeology and Landscape Studies in Northern Europe*. Papers from the international seminar held at Klaipėda University 16-20 November 2005, Department of Cultural Heritage Protection, Klaipėda University, Litauen, pp. 57–70.
- Risbøl, O., A.K. Gjertsen & K. Skare 2007: Flybåren laserskanning og kulturminner i skog. Ny teknologi i arkeologiens tjeneste. I: *Kart og Plan*, vol. 2 – 2007, pp. 78–90.
- Risbøl, O., A.K. Gjertsen & K. Skare 2006: Airborne laser scanning of cultural remains in forests – some preliminary results from a Norwegian project. I: *From Spaceto Place. 2nd International Conference on Remote Sensing in Archaeology* (eds. Campana, S. & M. Forte). *BAR International Series*, vol. 1568. pp. 107–112.
- Risbøl, O. 2005: Bevaring og forvaltning av kulturminner i skog. I: I.M. Egenberg, B. Skar & G. Swensen (red.): *Kultur – Minner og Miljøer. Strategisk instituttprogrammer 2001-2005*. NIKU Tema 18. Oslo, pp. 211–221.
- Risbøl, O. 2005: Protoindustrial iron production and challenges in managing this heritage. I: "Utmark" The Outfield as Industry and Ideology in the Iron Age and the Middle Ages. I. Holm, S. Innselset & I. Øye (eds.). *UBAS International 1 – University of Bergen Archaeological Series*. Bergen pp. 53–65.
- Risbøl, O. 2005: Kulturminner i Gråfjell – kulturhistoriske resultater fra registreringsprosjektet. I: "Utmarkens grøde" - mellom registrering og utgraving i Gråfjellområdet, Østerdalen. Stene, K., T. Amundsen, O. Risbøl & K. Skare (red.), *Varia* 59. Kulturhistorisk Museum, Universitetet i Oslo, pp. 5–26.

Presentations and lectures (a selection)

Skandinavisk tjæreproduksjon i jernalderen. Foredrag på IAK fagseminar, NTNU VM. Trondheim 13.11.2024

LiDAR in archaeology – Norwegian experiences and perspectives. Guest lecture at Valencia University. Valencia 30.04.2024

Erfaringer med bruk av UAV LiDAR. Innlegg på sektoravgiftsseminar hos Riksantikvaren. Oslo 20.03.2024

Iron Age wood tar production in Scandinavia. Talk at EU COST action PoTaRCh-conference. Prague, 07.03.2024

A bio-economic study of proto-industrial wood tar production in Mid-Norway by the use of LiDAR data and Deep Learning. Talk at the AARG-conference. Zagreb, Croatia 22.09.2023

Iron Age wood tar production in Scandinavia. Guest talk at Department of Materials Science and Engineering, Delft University of Technology (TU Delft). Delft, The Netherlands 25.04.2023

LiDAR data, tar and outlands. Talk at UTMA-workshop. Uppsala University, Uppsala, Sweden 29.11.2022

LiDAR uses in archaeology – Norwegian experiences and perspectives. Guest lecture at Department of Archaeology and Ancient History, Uppsala University, Uppsala 09.11.2022

Tjære og samfunn i eldre jernalder. Talk at tar seminar, Nordic Tar Network, Mariehamn, Åland 19.10.2022

Kunnskapsbygging i fellesskap – LiDAR og lokal medvirkning. Paper at the CAA-Norge Conference in Trondheim, 14.10.2019

Mapping human-seascape in Tierra del Fuego, Argentina: remote Sensing and “emic” geography. Paper with Jo Sindre P. Eidshaug at the AARG-konferansen in Constanta, Romania 13.09.2019

Lidar in Norwegian archaeology – a short introduction. Lecture at the Marine Ventures II seminar at CADIC – Centro Austral de Investigaciones Cientificas, Ushuaia, Argentina 30.01.2019

Lidar in Norwegian archaeology – research, development and utilization. Paper at the workshop: Sensing Archaeology in the North, TEMAR, NTNU University Museum, Trondheim 29.08.2018

Forvaltningsarkeologien i et musealt fremtidsperspektiv – rammer og spillerom. Lecture at NTNU Vitenskapsmuseet, Trondheim 04.02.2016

Kartlegging av jernvinnerelatert virksomhet i Østerdalen – hva har teknologiske nyvinninger bidratt med? Paper with Lars Gustavsén at the work-shop «Utmarksjern», NTNU, Vitenskapsmuseet. Trondheim, 13.03.2015

Remote sensing archaeology in the outskirts of Europe. Paper at the conference: Sensing the Past – New Approaches to European Landscapes i regi av ArchaeoLandscapes Europe. Frankfurt, Tyskland 25.02.2015.

Lidar and cultural heritage in woodlands - towards a better understanding of human impact in the past. Lecture at the conference: Approches to archaeological landscapes – tools, methodology and case studies, National Heritage Institute, The National History Museum of Romania, Bucharest 22.-23.10.2014

Flybåren magnetometer i Elverum – uttesting av en ny metode for utmarksregistrering. Paper with Lars Gustavsén at the 6. CAA Norge conference, Riksantikvaren, Oslo 15.10.2014.

Airborne magnetometer and cultural remains – preliminary results from a test and work in progress. Paper with Michael Pregesbauer at the AARG, Annual Meeting, UCD School of Archaeology og Discovery Programme. Dublin, Irland 25.09.2014.

Cultural heritage, lidar and forestry. Lecture at the TRAIL 2014-work shop, Université de Franche-Comté, Frasne, Frankrike 26. – 28.03.2014.

Bruk av flybåren laserskanning til kartlegging og overvåking av kulturminner. Paper at the meeting: Geomatikk – Moderne kartlegging. Tekna – Teknisk-naturvitenskapelig forening, NTNU. Trondheim 10.01.2014.

A combined use of multi-temporal historical aerial photos and ALS-generated DEMs for the identification of landscape changes. Paper at the ArcLand-work shop “Recovering lost landscapes”, Beograd. 19.-20.11. 2013.

Approaching the social Bronze and Iron Age landscape using GIS and LIDAR generated 3D models. Paper at the 19th EAA Annual Meeting 2013, Pilsen, Tjekkia 04. - 08.09.2013.

Neglected cultural heritage in Norwegian forests – state of affairs, challenges and solutions. Paper at the 19th EAA Annual Meeting 2013, Pilsen, Tjekkia 04. - 08.09.2013

Identifying and documenting landscape changes by the use of multi-temporal historical aerial photos and ALS-generated DEMs – an automated and retrospective approach. Paper at 10th International Conference on Archaeological Prospection 2013, Austrian Academy of Sciences, Wien, Østerrike 29.05.2013

Lidar – et teknisk-metodisk kvantesprang for arkeologien. Paper at the 5. CAA Norge-konference, Arkeologisk Museum, Stavanger 16.10.2012.

Dokumentasjon og miljøovervåking av kulturmiljøer ved bruk av flybåren laserskanning i kombinasjon med andre fjernmålingsmetoder – erfaringer og perspektiver. Lecture at the seminar: Digital registrering, overvåking og formidling av kulturmiljø. Museumssenteret i Hordaland, 06.09.2012.

Other publications (a selection)

Risbøl, O. & L. Gustavsen 2016: Håndbok. Bruk av luftbåren laserskanning (lidar) i arkeologien. Riksantikvaren, august 2016 (ISBN 978-82-75-7412-5), pp. 1–61.

Gustavsen, L., K. Paasche & O. Risbøl 2013: Arkeologiske undersøkelser. En vurdering av nyere avanserte arkeologiske registreringsmetoder i forbindelse med vegutbyggingsprosjekter. Statens vegvesens rapporter nr. 192. Vegdirektoratet, Trafikksikkerhet, miljø- og teknologiavdelingen, miljøseksjonen, Oslo.

Framstad, E., H. Berglund, V. Gundersen, R. Heikkilä, N. Lankinen, T. Peltola, O. Risbøl & M. Weih 2009: Increased biomass harvesting for bioenergy – effects on biodiversity, landscape amenities and cultural heritage values. Nordic Council of Ministers, TemaNord 2009:591.