

# Curriculum vitae, Morten Rasch

## Current employment

Scientific leader, Zackenberg Research Station  
Research coordinator of Greenland Ecosystem Monitoring, Nuuk Ecological Research Operations and Zackenberg Ecological Research Operations

## Education

2002-: Engineering Business Administration (Graduate Diploma) at Engineering College of Copenhagen. Finished six out of seven courses  
1996: Ph.D. in Physical Geography  
1991: Master of Science in Physical Geography

## Postgraduate employments

2009-: Scientific Leader of Zackenberg Research Station at National Environmental Research Institute, Aarhus University  
2009-: Research Coordinator of Greenland Ecosystem Monitoring, Nuuk Ecological Research Operations and Zackenberg Ecological Research Operations at National Environmental Research Institute, Aarhus University  
2003-8: Head of logistics at Danish Polar Centre.  
1997-2008: Scientific leader, Zackenberg Research Station at Danish Polar Centre  
1996-2003: GeoBasic manager, Zackenberg Research Station, Danish Polar Centre  
1996: Post. doc., Institute of Geography, University of Copenhagen  
1993-96: Station manager, Arctic Station, University of Copenhagen  
1991-93: Research assistant, Institute of Geography, University of Copenhagen.

## Involvement in externally funded projects

2009: **Coordinator:** *Nuuk Basic*. Funded by The Danish Energy Agency.  
2009: **Coordinator:** *Zackenberg Basic*. Funded by The Danish Energy Agency.  
2009: **Principal investigator:** *Nuuk Basic Coordination*. Funded by The Danish Energy Agency.  
2008: **Coordinator:** *Nuuk Basic*. Funded by The Danish Energy Agency.  
2008: **Coordinator:** *Zackenberg Basic*. Funded by The Danish Energy Agency.  
2008: **Principal investigator:** *Nuuk Basic Coordination*. Funded by The Danish Energy Agency.  
2007: **Coordinator:** *Nuuk Basic*. Funded by The Danish Environmental Protection Agency.  
2007: **Coordinator:** *Zackenberg Basic*. Funded by The Danish Environmental Protection Agency.  
2007: **Principal investigator:** *Nuuk Basic Coordination*. Funded by The Danish Environmental Protection Agency.  
2005-2006: **Coordinator:** *Zackenberg Basic*. Funded by The Danish Environmental Protection Agency.  
2005-2007: **Coordinator:** *Extension of the physical facilities at Zackenberg Research Station*. Funded by Aage V. Jensen Charity Foundation.  
2005-2009: **Participant:** *European Polar Consortium: Strategic Coordination and Networking of European Polar RTD Programmes*. Funded by EU 6<sup>th</sup> Framework Programme.  
2004: **Coordinator:** *Zackenberg Basic*. Funded by Dancea. The Danish Environmental

- Protection Agency.
- 2003: **Principal investigator:** *Zackenberg Basic*. Funded by Dancea. The Danish Environmental Protection Agency.
- 2002: **Sub-contractor:** *Environmental Oil Spill Sensitivity Atlas for the West Greenland Coastal Zone. Phase 2*. Funded by The Danish Energy Agency.
- 2002: **Principal investigator:** *Undersøgelser af en 'surging glacier' på Disko/Grønland, og dens betydning for det fluviale og marine miljø nedstrøms for gletscheren*. Funded by Carlsbergfondet.
- 2002: **Principal investigator:** *Soil water chemistry at Zackenberg, NE Greenland*. Pilot project funded by Dancea, The Danish Environmental Protection Agency.
- 2001-2004: **Leader of workpackage:** *Scandinavian/North European Network of Terrestrial Field Bases (SCANNET)*. Funded by EU 5<sup>th</sup> Framework Programme.
- 2001-2003: **Investigator:** *Livsvilkår og klimavariation i Nordøstgrønland gennem Holocæn. Et naturhistorisk-arkæologisk forskningsinitiativ i Nord- og Østgrønland 2000-2005*. Funded by The Royal Danish Geographical Society.
- 2001: **Principal investigator:** *Undersøgelser af en 'surging glacier' på Disko/Grønland, og dens betydning for det fluviale og marine miljø nedstrøms for gletscheren*. Funded by Carlsbergfondet.
- 2000-2003: **Leader of workpackage:** *European Network for Arctic-Alpine Environmental Research (ENVINET)*. Funded by EU 5<sup>th</sup> Framework Programme.
- 2000: **Principal investigator:** *Pilotundersøgelser af en 'surging glacier' på Disko/Grønland, og dens betydning for det fluviale og marine miljø nedstrøms for gletscheren*. Funded by Carlsbergfondet.
- 2000: **Sub-contractor:** *Environmental Oil Spill Sensitivity Atlas for the West Greenland Coastal Zone*. Funded by The Danish Energy Agency.
- 1999-2001: **Principal investigator:** *Late Quaternary Ice Sheet Dynamics in West Greenland*. Funded by the Natural Environment Research Council (NERC, UK) under the programme ARCICE.
- 1999-2001: **Principal investigator:** *Holocene paleo-hydrographic changes in Greenland coastal waters and fiords, and possible implications for human settlements*. Funded by The Danish National Science Foundation.
- 1999-2000: **Investigator:** *Sulfide mineral oxidation - a source of heavy metal pollution in Arctic ecosystems*. Funded by Dancea, The Danish Ministry of the Environment.
- 1997-2002: Participant: *Danish-Canadian Fiord Studies*. Funded by different Danish and Canadian funding sources.
- 1997-2003: **Principal investigator:** *GeoBasis, monitoring of physical landscape processes at Zackenberg, NE Greenland*. Funded by Institute of Geography, University of Copenhagen, and Danish Polar Center.
- 1996-97: **Investigator:** *Past and present interactions between climate/sea-level and landscape processes in Greenland. Part of the joint project: The arctic landscape: Interactions and feedbacks among physical geographical and biological processes*. Funded by The Danish National Science Foundation.
- 1993-96: **Principal investigator:** *Holocene relative sea-level changes in Disko Bugt, West Greenland*. Funded by The Danish National Science Foundation.

## Teaching experience

- 2000: Teaching in Arctic geomorphology on 'For-forskerskole' for Greenlandic high school students at Arctic Station in Qeqertarssuaq (36 lectures)
- 1995: Teaching in Quaternary geology and coastal geomorphology at a 10 days field course for graduate physical geography students from University of Copenhagen at

- Arctic Station (80 lectures).
- 1995: Practical course in information technology at the technical school in Qeqertarsuaq, Greenland (36 lectures).
- 1993: Teaching in Quaternary geology and Arctic geomorphology on a ten days field course for graduate geology students from University of Copenhagen at Arctic Station (80 lectures).
- 1992-98: Different theoretical courses in geomorphology, climatology, hydrology, pedology and glaciology for undergraduate students at Institute of Geography and Institute of Geology, University of Copenhagen (234 lectures).
- 1987: Theoretical course in basic surveying techniques (*Landmåling 1B*) for undergraduate students at the Royal Veterinary and Agricultural University (36 lectures).
- 1986-96: Six field courses in physical geography for undergraduate students from Institute of Geography and Institute of Geology, University of Copenhagen (480 lectures).

### **Oral presentations - not systematically registered**

- 1997-: Approximately two presentations per year at international meetings, workshops or conferences concerning Zackenberg Ecological Research Operations and/or Nuuk Ecological Research Operations.
- 1997-: Approximately two presentations per year for relevant national stakeholders, governmental officials and politicians concerning climate issues, Zackenberg Ecological Research Operations and/or Nuuk Ecological Research Operations.
- 1997-: Approximately two presentations per year at international meetings, workshops or conferences concerning Zackenberg Ecological Research Operations and/or Nuuk Ecological Research Operations.
- 1997-: One-two presentations per year for Danish or foreign journalists concerning research in Greenland, Climate Change in arctic regions, Zackenberg Ecological Research Operations and/or Nuuk Ecological Research Operations.
- 1997-: One-two public presentations per year mostly concerning research in Greenland, Climate Change in arctic regions, Zackenberg Ecological Research Operations and/or Nuuk Ecological Research Operations.
- 1997-: Numerous presentations each year on internal meetings, workshops etc. concerning Zackenberg Ecological Research Operations and/or Nuuk Ecological Research Operations.
- 1993-96: Approximately ten presentations per year about Arctic Station in Qeqertarsuaq and about research activities in West Greenland

### **Personal data**

Born: 10 December 1962

## Portrait



## Working address by 1 January 2009

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## Current responsibilities

1. Scientific and operational leader of Zackenberg Research Station (since 1997)
2. Scientific Coordinator of Greenland Ecosystem Monitoring (since 2009), Zackenberg Ecological Research Operations (since 1997) and Nuuk Ecological Research Operations (since 2006)
3. Scientific coordinator of Zackenberg Basic, monitoring of climate change effects on ecosystems in Northeast Greenland (since 1997)
4. Scientific coordinator of Nuuk Basic, monitoring of climate change effects on ecosystems in West Greenland (externally financed since 2006)
5. Executive Secretary for the international organisation Forum of Arctic Research Operators (FARO)
6. Co-editor of ZERO, Zackenberg Ecological Research Operations, Annual Report (since 1998)
7. Co-editor of NERO, Nuuk Ecological Research Operations, Annual Report (since 2008)
8. Danish representative in European Polar Infrastructure Committee (EPICOM)(externally funded since 2005)
9. Advisor for the Danish Environmental Protection Agency in relation to climate change effects in Greenland (externally funded since 2004)
10. Danish representative in Forum of Arctic Research Operators (FARO)(since 2003)
11. Member of the international planning committee for the Arctic Science Summit Week (since 2005)
12. Advisor for Abisko Scientific Research Station in relation to the stations EU grant under the FP6 Transnational Access Programme (since 2006)
13. Member of the international advisory group for the IPY programme: Collaborative Research on Carbon, Water, and Energy Balance of the Arctic Landscape at Flagship Observatories and in a PanArctic Network (externally funded since 2007)

14. Observer in Ny Aalesund Science Managers Committee (NYSMAC)(since 2004)
15. Member of the Danish AMAP (Arctic Monitoring and Assessment Programme) coordination committee (externally funded since 2005)
16. Member of the initiative group for the establishment of CEON (Circumarctic Environmental Observatories Network)(since 2002)
17. Member of the initiative group for the establishment of SAON (Sustained Artic Observing Network)(since 2007)
18. Member of the Scandinavian/North European Network of Terrestrial Field Bases (SCANNET)(since 2000)
19. Member of the European Network for Arctic-Alpine Environmental Research (ENVINET)(since 1999)

## Publications - International research papers (peer reviewed)

- MELTOFTE, H., CHRISTENSEN, T.R., ELBERLING, B., FORCHHAMMER, M.C. & **RASCH, M.** 2008: Introduction. *In: MELTOFTE, H., CHRISTENSEN, T.R., ELBERLING, B., FORCHHAMMER, M.C. & RASCH, M. (eds.): High-Arctic Ecosystem Dynamics in a Changing Climate. - Advances in Ecological Research, 40*, Elsevier, New York, 1-12.
- MELTOFTE, H. & **RASCH, M.** 2008: The study area at Zackenberg. *In: MELTOFTE, H., CHRISTENSEN, T.R., ELBERLING, B., FORCHHAMMER, M.C. & RASCH, M. (eds.): High-Arctic Ecosystem Dynamics in a Changing Climate. - Advances in Ecological Research, 40*, Elsevier, New York, 101-110.
- HANSEN, B.U., SIGSGAARD, C., RASMUSSEN, L., CAPPELEN, J., HINKLER, J., MERNILD, S.H., PETERSEN, D., TAMSTORF, M.P., **RASCH, M.** & HASHOLT, B. 2008: Present day climate at Zackenberg. *In: MELTOFTE, H., CHRISTENSEN, T.R., ELBERLING, B., FORCHHAMMER, M.C. & RASCH, M. (eds.): High-Arctic Ecosystem Dynamics in a Changing Climate. - Advances in Ecological Research, 40*, Elsevier, New York, 111-149.
- CHRISTIANSEN, H.H, SIGSGAARD, C., HUMLUM, O., **RASCH, M.** & HANSEN, B.U. 2008: Permafrost and periglacial geomorphology at Zackenberg. *In: MELTOFTE, H., CHRISTENSEN, T.R., ELBERLING, B., FORCHHAMMER, M.C. & RASCH, M. (eds.): High-Arctic Ecosystem Dynamics in a Changing Climate. - Advances in Ecological Research, 40*, Elsevier, New York, 151-174.
- FORCHHAMMER, M., CHRISTENSEN, T.R., HANSEN, B.U., TAMSTORF, M.P., HINKLER, J., SCHMIDT, N.M., HØYE, T.T., **RASCH, M.** MELTOFTE, H., ELBERLING, B. & POST, E. 2008: Zackenberg in a circumpolar context. *In: MELTOFTE, H., CHRISTENSEN, T.R., ELBERLING, B., FORCHHAMMER, M.C. & RASCH, M. (eds.): High-Arctic Ecosystem Dynamics in a Changing Climate. - Advances in Ecological Research, 40*, Elsevier, New York, 499-544.
- MERNILD, S.H., SIGSGAARD, C., **RASCH, M.**, HASHOLT, B., HANSEN, B.U., STJERNHOLM, M. & PETERSEN, D. 2007: Climate, river discharge and suspended sediment transport in the Zackenberg River drainage basin and Young Sund/Tyrolerfjord, Northeast Greenland, 1995-2003. *Meddelelser om Grønland, Biocience, 58*, 24-43.
- CALLAGHAN, T.V., JOHANSSON, M., HEAL, O.W., SÆLTHUN, N.R., BARKVED, L.J., BAYFIELD, N., BRANDT, O., BROOKER, R. CHRISTIANSEN, H.H., FORCHHAMMER, M., HØYE, T.T., HUMLUM, O., JÄRVINEN, A., JONASSON, C., KOHLER, J., MAGNUSSON, B., MELTOFTE, H., MORTENSEN, L., NEUVONEN, S., PEARCE, I., **RASCH, M.**, TURNER, B., HASHOLT, B., HUHTA, E., LESKINEN, E., NIELSEN, N. & SIIKAMÄKI, P. 2004: Environmental changes in the north atlantic region: SCANNET a collaborative approach for documenting, understanding and predicting changes. *Ambio Special Report, 13*, 39-50.
- MOSBECH, A., BOERTMANN, D., GRØNDAHL, L., VON PLATEN, F., NIELSEN, S.S., NIELSEN, N., **RASCH, M.** & KAPEL, H. 2004: Developing an environmental oil spill sensitivity atlas for the West Greenland coastal zone. Chapter 20 *in: BARTLETT, D. and SMITH, J. (eds.): GIS for coastal zone management. CRC Press, Boca Raton, 269-280.*

- **RASCH, M.**, NIELSEN, N., CHRISTIANSEN, C., BALSTRØM, T., GILBERT, R. & DESLOGES, J. 2003: Role of landscape parameters in riverine run-off, and sediment and organic matter yield on Disko Island, West Greenland. *Danish Journal of Geography*, **103(2)**, 1-11.
- LONG, A., ROBERTS, D. & **RASCH, M.** 2003: The deglacial and relative sea-level history of Innaarsuit, Disko Bugt, West Greenland. *Quaternary Research*, **60**, 162-171.
- GILBERT, R., NIELSEN, N., MØLLER, H., DESLOGES, J. & **RASCH, M.** 2002: Glacimarine sedimentation in Kangerluk (Disko Fjord), West Greenland, in response to a surging glacier. *Quaternary Science Reviews*, **191(1-2)**, 1-18.
- HINKLER, J., PEDERSEN, S.B., **RASCH, M.** & HANSEN, B.U. 2001: Automatic snow cover monitoring at high temporal and spatial resolution, using images taken by a standard digital camera. *International Journal of Remote Sensing*, **23(21)**, 4669-4882.
- PETERSEN, H., MELTOFTE, H., RYSGAARD, S., **RASCH, M.**, JONASSON, S., CHRISTENSEN, T.R., FRIBORG, T., SØGAARD, H. & PEDERSEN, S.A. 2001: The Arctic. Chapter 20 in: JØRGENSEN, A.M.K., FENGER, J., HALSNÆS, K. (eds.): *Climate Change Research - Danish Contributions*. Danish Climate Center, Copenhagen, 303-330.
- DESLOGES, J., GILBERT, R., NIELSEN, N., CHRISTIANSEN, C., **RASCH, M.** & ØHLENSCHLÆGER, R. 2002: Holocene glacimarine sedimentary environments in fjords of Disko Bugt, West Greenland. *Quaternary Science Reviews*, **21**, 947-963.
- MØLLER, H.S., CHRISTIANSEN, C., NIELSEN, N. & **RASCH, M.** 2001: Investigation of the modern glacimarine environment in Kuannersuit Sulluat, a fjord on Disko, West Greenland. *Danish Journal of Geography*, **101**, 1-10.
- **RASCH, M.**, ELBERLING, B., JAKOBSEN, B.H. & HASHOLT, B. 2000: High resolution measurements of water discharge, sediment and solute transport in the river Zackenbergelven, Northeast Greenland. *Arctic, Antarctic, and Alpine Research*, **32(3)**, 336-345.
- **RASCH, M.** 2000: Holocene relative sea level changes in Disko Bugt, West Greenland. *Journal of Coastal Research*, **16(2)**, 306-315.
- GILBERT, R., NIELSEN, N., DESLOGES, J. & **RASCH, M.** 1998: Contrasting glacimarine environments of two arctic fiords on Disko, West Greenland. *Marine Geology*, **147 (1-4)**, 63-83.
- **RASCH, M.** & JENSEN, J.F. 1997: Ancient Eskimo dwelling sites and Holocene relative sea level changes in southern Disko Bugt, central West Greenland. *Polar Research*, **16(2)**, 101-115.
- **RASCH, M.**, JAKOBSEN, B.H. & NIELSEN, N. 1997: Geomorphology and sedimentary record of three cusped forelands as indicators of late Holocene relative sea-level changes, Disko, West Greenland. *Danish Journal of Geography*, **97**, 33-46.
- **RASCH, M.**, CHRISTIANSEN, H.H., HANSEN, B.U., HASHOLT, B., HUMLUM, O., JAKOBSEN, B.H., & NIELSEN, N. 1996: Greenland landscape elements as indicators of rapid

environmental change. *In: BERGER, A.R. & IAMS, W. (eds.): Geoindicators. Assessing rapid environmental changes in earth systems.* A.A. Balkema, Rotterdam, 69-92.

- **RASCH, M.** & NIELSEN, N. 1995: Coastal Morphostratigraphy and Holocene relative sea level changes at Tuapaat, southeastern Disko Island, central West Greenland. *Polar Research*, **14(3)**, 277-289.

- HUMLUM, O., CHRISTIANSEN, H.H., HANSEN, B.U., HASHOLT, B., JAKOBSEN, B.H., NIELSEN, N. & **RASCH, M.** 1995: Holocene landscape evolution in the Mellemfjord Area, Disko Island, central West Greenland: Area presentation and preliminary results. *Danish Journal of Geography*, **95**, 28-41.

- **RASCH, M.** & NIELSEN, N. 1994: Holocene relative sea-level changes indicated by morphostratigraphic sequences; Sinigfik, Disko Island, West Greenland. *Danish Journal of Geography*, **94**, 37-45.

- **RASCH, M.**, NIELSEN, J. & NIELSEN, N. 1993: Variation of spacings between beach cusps discussed in relation to edge wave theory. *Geografisk Tidsskrift*, **93**, 49-55.

## **Publications - Research notes**

- FORCHHAMMER, M.C. **RASCH, M.** & RYSGAARD, S. 2008: Nuuk Basic. A conceptual framework for monitoring climate change effects and feedback in arctic ecosystems. *In: MAGELUND, L. & RASCH, M. (eds.) 2003: Nuuk Ecological Research Operations, 1<sup>st</sup> Annual Report 2000.* Danish Polar Centre, Danish Agency for Science Technology and Innovation, Ministry of Science, Technology and Information, Copenhagen, 90-99.

- **RASCH, M.**, RYSGAARD, S., MELTOFTE, H. & HANSEN, J.B. 2003: Zackenberg Basic. Climate change effects in a High Arctic ecosystem at Zackenberg, Northeast Greenland. The concept. *In: RASCH, M. & CANNING, K. (eds.) 2003: Zackenberg Ecological Research Operations, 8<sup>th</sup> Annual Report 2000.* Danish Polar Center, Ministry of Science, Technology and Information, Copenhagen, 70-78.

- **RASCH, M.** (ed.) 2003: Zackenberg Basic. The GeoBasis and Climate Basis Programmes. *In: RASCH, M. & CANNING, K. (eds.) 2003: Zackenberg Ecological Research Operations, 8<sup>th</sup> Annual Report 2000.* Danish Polar Center, Ministry of Science, Technology and Information, Copenhagen, 10-20.

- **RASCH, M.** (ed.) 2003: Zackenberg Basic. The GeoBasis and Climate Basis Programmes. *In: CANNING, K. & RASCH, M. (eds.) 2003: Zackenberg Ecological Research Operations, 7<sup>th</sup> Annual Report 2000.* Danish Polar Center, Ministry of Science, Technology and Information, Copenhagen, 10-21.

- **RASCH, M.**, SIGSGAARD, C., HINKLER, J., PEDERSEN, S.B. & MELTOFTE, H. 2001: Zackenberg Basic. The GeoBasis and Climate Basis Programmes. *In: CANNING, K. & RASCH, M. (eds.) 2001: Zackenberg Ecological Research Operations, 6<sup>th</sup> Annual Report 2000.* Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 10-15.

- **RASCH, M.**, KNUDSEN, M., THOMSEN, L., ELBERLING, B., JAKOBSEN, B.H. &

MELTOFTE, H. 2000: Zackenberg Basic. The GeoBasis and Climate Basis Programmes. *In: CANNING, K. & RASCH, M. (eds.) 2000: Zackenberg Ecological Research Operations, 5<sup>th</sup> Annual Report 1999.* Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 10-23.

- **RASCH, M.**, KNUDSEN, M. & BØCKER, C. 1999: Zackenberg Basic. The GeoBasis and ClimateBasis Programmes. *In: RASCH, M. (ed.) 1999: Zackenberg Ecological Research Operations, 4<sup>th</sup> Annual Report 1998.* Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 9-17.

- **RASCH, M.** 1998: Zackenberg Basic. The GeoBasis Programme. *In: MELTOFTE, H. & RASCH, M. (eds.) 1998: Zackenberg Ecological Research Operations, 3<sup>rd</sup> Annual Report 1997.* Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 8-19.

- **RASCH, M.** 1997: A compilation of radiocarbon dates from Disko Bugt, central West Greenland. *Danish Journal of Geography*, **97**, 143-151.

- **RASCH, M.** & NIELSEN, N. 1997: Zackenberg Basic. The GeoBasis programme. Coastal geomorphology. *In: MELTOFTE, H. & THING, H. (eds.): Zackenberg Ecological Research Operations, 2<sup>nd</sup> Annual Report.* Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 22-23.

- NIELSEN, N. & **RASCH, M.** 1997: Coastal geomorphology and fiord sedimentology. *In: MELTOFTE, H. & THING, H. (eds.): Zackenberg Ecological Research Operations, 2<sup>nd</sup> Annual Report.* Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 55-57.

- HANSEN, B.U., HUMLUM, O., NIELSEN, N., **RASCH, M.**, FUNCH, P. 1997: Meteorological observations in 1996 at the Arctic Station, Qeqertarsuaq (Godhavn), West Greenland. *Danish Journal of Geography*, **97**, 152-153.

- HUMLUM, O., NIELSEN, N., **RASCH, M.**, HANSEN, B.U. 1996: Meteorological observations in 1995 at the Arctic Station, Qeqertarsuaq (Godhavn), central West Greenland. *Danish Journal of Geography*, **96**, 119-122.

- NIELSEN, N., HANSEN, B.U., HUMLUM, O., **RASCH, M.** 1995: Meteorological observations at the Arctic Station, Disko Island, West Greenland. *Danish Journal of Geography*, **95**, 97-104.

## **Publications - Abstracts**

- **RASCH, M.**, HANSEN, B.U., MELTOFTE, H., PETERSEN, D., RYSGAARD, S., TAMSTORF, M.P. 2004: Zackenberg Basic: Monitoring of ecosystem dynamics in high-arctic Northeast Greenland. *The ACIA International Scientific Symposium on Climate Change in the Arctic: Extended Abstracts. Reykjavik, Iceland, 9-12 November 2004. AMAP Report 2004:4.*

- CALLAGHAN, T.V., JOHANSSON, M., HEAL, O.W., SÆLTHUN, N.R., BARKVED, L.J., BAYFIELD, N., BRANDT, O., BROOKER, R., CHRISTIANSEN, H.H., FORCHHAMMER, M.C., HØYE, T.T., HUMLUM, O., JÄRVINEN, A., JONASSON, C., KOHLER, J., MAGNUSSON, B., MELTOFTE, H., MORTENSEN, L., NEUVONEN, S., PEARCE, I., **RASCH, M.**, TURNER, L.,

HASHOLT, B., HUHTA, E. LESKINEN, E., NIELSEN, N. & SIIKAMÄKI, P. 2004: Environmental changes in the North Atlantic region: SCANNET as a collaborative approach for documenting, understanding and predicting changes. *The ACIA International Scientific Symposium on Climate Change in the Arctic: Extended Abstracts. Reykjavik, Iceland, 9-12 November 2004. AMAP Report 2004:4.*

- MØLLER, H.S., NIELSEN, N., GILBERT, R., DESLOGES, J. & **RASCH, M.** 2002: Recente sedimentationsrater i Kuannersuit Sulluat, Disko, Vestgrønland. *Dansk Havforskermeddelelse* 9-11. jan. 2002.

- MOSBECH, A., BOERTMANN, D., GRØNDAHL, L., VON PLATEN, F., NIELSEN, S.S., NIELSEN, N., **RASCH, M.** & KAPEL, H. 2001: Environmental Oil Spill Sensitivity Atlas for the West Greenland Coastal Zone. Paper. *CoastGIS '01. Managing the Interfaces. The 4th International Symposium on Computer Mapping and GIS for Coastal Zone Management, June 18, 19 and 20, 2001, Saint Mary's University, Halifax, Nova Scotia, Canada. Manuscripts, Volume 2.* Saint Mary's University. 14 p.

- GILBERT, B., NIELSEN, N., **RASCH, M.**, DESLOGES, J. & MØLLER, H. 2001: Glacimarine sedimentation in Disko Fjord, West Greenland, in response to a surging glacier. *Glacier-Influenced Sedimentation on High-Latitude Continental Margins: Modern and Ancient. A Meeting of the Marine Group of the Geological Society.* School of Geographical Sciences, University of Bristol, Bristol, England, 29-30 March 2001.

- GILBERT, R., NIELSEN, N., DESLOGES, J., **RASCH, M.** & DALE, J. 1997: Preliminary observations on glacimarine sedimentary environments of fiords on Disko, central western Greenland. *In: LEWKOWICZ, A.G. & KOKELJ, S.V. (eds.): 27<sup>th</sup> Arctic Workshop.* Department of Geography, University of Ottawa, 87-88.

## Publications - Dissertations

- **RASCH, M.** 1996: *Holocene relative sea level changes in Disko Bugt, West Greenland.* Unpublished Ph.D.-dissertation. Institute of Geography, University of Copenhagen, 160 p.

- **RASCH, M.** 1991: *Den holocæne landskabsudvikling i kystområdet ved Sinigfik, Disko, Grønland - specielt med henblik på havniveau- og klimaændringer.* Unpublished M.Sc.-dissertation. Institute of Geography, University of Copenhagen, 85 p.

- **RASCH, M.** 1990: *Strandtakker.* Unpublished B.Sc.-dissertation. Institute of Geography, University of Copenhagen, 30 p.

## Publications - Books and Reports

- FORCHHAMMER, M.C., MELTOFTE, H. & **RASCH, M.** (eds) 2007 (submitted): *Natur og klima i Højarktis.* Aarhus Universitetsforlag. Aarhus.

- MAGELUND, L. & **RASCH, M. (eds.)** 2008: *Nuuk Ecological Research Operations, 1<sup>st</sup> Annual Report 2007*. Danish Polar Center, Danish Agency for Science, Technology and Innovation, Ministry of Science, Technology and Innovation, Copenhagen. 112 p.
- KLITGAARD, A., & **RASCH, M. (eds.)** 2008: *Zackenbergs Ecological Research Operations, 13<sup>th</sup> Annual Report 2007*. Danish Polar Center, Danish Agency for Science, Technology and Innovation, Ministry of Science, Technology and Innovation, Copenhagen, 99 p.
- MELTOFTE, H., CHRISTENSEN, T.R., ELBERLING, B., FORCHHAMMER, M.C. & **RASCH, M. (eds.)** 2008: *High-Arctic Ecosystem Dynamics in a Changing Climate. - Advances in Ecological Research, 42*, Elsevier, New York, 563 p.
- KLITGAARD, A., **RASCH, M.** & CANNING, K. (eds.) 2007: *Zackenbergs Ecological Research Operations, 12<sup>th</sup> Annual Report 2006*. Danish Polar Center, Danish Agency for Science, Technology and Innovation, Ministry of Science, Technology and Innovation, Copenhagen, 104 p.
- KLITGAARD, A., **RASCH, M.** & CANNING, K. (eds.) 2006: *Zackenbergs Ecological Research Operations, 11<sup>th</sup> Annual Report 2005*. Danish Polar Center, Ministry of Science, Technology and Innovation, Copenhagen, 111 p.
- **RASCH, M.** & CANNING, K. (eds.) 2005: *Zackenbergs Ecological Research Operations, 10<sup>th</sup> Annual Report 2004*. Danish Polar Center, Ministry of Science, Technology and Innovation, Copenhagen, 85 p.
- **RASCH, M.** & CANNING, K. (eds.) 2004: *Zackenbergs Ecological Research Operations, 9<sup>th</sup> Annual Report 2003*. Danish Polar Center, Ministry of Science, Technology and Innovation, Copenhagen, 91 p.
- **RASCH, M.** & CANNING, K. (eds.) 2003: *Zackenbergs Ecological Research Operations, 8<sup>th</sup> Annual Report 2002*. Danish Polar Center, Ministry of Information Technology and Research, Copenhagen, 80 p.
- CANNING, K. & **RASCH, M. (eds.)** 2003: *Zackenbergs Ecological Research Operations, 7<sup>th</sup> Annual Report 2001*. Danish Polar Center, Ministry of Information Technology and Research, Copenhagen, 75 p.
- CANNING, K. & **RASCH, M. (eds.)** 2001: *Zackenbergs Ecological Research Operations, 6<sup>th</sup> Annual Report 2000*. Danish Polar Center, Ministry of Information Technology and Research, Copenhagen, 80 p.
- MOSBECH, A., ANTHONSEN, K.L., BLYTH, A., BOERTMANN, D., BUCH, E., CAKE, D., GRØNDAHL, L., HANSEN, K.Q., KAPEL, H., NIELSEN, N., VON PLATEN, F., POTTER, S. & **RASCH, M.** 2000: *Environmental Oil Spill Sensitivity Atlas for the West Greenland Coastal Zone. CD-Version*. The Danish Energy Agency, Ministry of Environment and Energy & Bureau of Minerals and Petroleum, Government of Greenland, Copenhagen.
- MOSBECH, A., ANTHONSEN, K.L., BLYTH, A., BOERTMANN, D., BUCH, E., CAKE, D., GRØNDAHL, L., HANSEN, K.Q., KAPEL, H., NIELSEN, N., VON PLATEN, F., POTTER, S. & **RASCH, M.** 2000: *Environmental Oil Spill Sensitivity Atlas for the West Greenland Coastal Zone. Internet-Version*. The Danish Energy Agency, Ministry of Environment and Energy &

Bureau of Minerals and Petroleum, Government of Greenland, Copenhagen.

- CANNING, K. & **RASCH, M.** (eds.) 2000: *Zackenberg Ecological Research Operations, 5<sup>th</sup> Annual Report 1999*. Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 86 p.
- **RASCH, M.** (ed.) 1999: *Zackenberg Ecological Research Operations, 4<sup>th</sup> Annual Report 1998*. Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 62 p.
- MELTOFTE, H. & **RASCH, M.** (eds.) 1998: *Zackenberg Ecological Research Operations, 3<sup>d</sup> Annual Report 1997*. Danish Polar Center, Ministry of Research and Information Technology, Copenhagen, 68 p.
- NIELSEN, N., **RASCH, M.** & CHRISTIANSEN, C. 1998: *Notes on bathymetry, drainage basins, hydrography, hydrology and climate in Kangerluk (Disko Fjord), Akulliit (Mellemfjord) and Kangersooq (Nordfjord), Disko, central West Greenland*. Unpublished data report. Institute of Geography, University of Copenhagen, 12 p.
- **RASCH, M.** 1997: *GeoBasis, Zackenberg, 1997*. An unpublished manual for the GeoBasis monitoring at Zackenberg Station 1997. Danish Polar Center, Copenhagen, 35 p.
- NIELSEN, N. & **RASCH, M.** 1996: *Notes on bathymetry, drainage basins, hydrography and climate in Akulliit (Mellemfjord) and Kangerluk (Disko Fjord), Disko, central West Greenland*. Unpublished data report. Institute of Geography, University of Copenhagen, 23 p.
- **RASCH, M.** 1991: Kystmorfologiske forhold i undersøgelsesområdet. In: JØRCK, M. & NIELSEN, B. (eds.): *Havbundsundersøgelser, Råstoffer og fredningsinteresser, Samsø SØ*. Skov- og Naturstyrelsen, Miljøministeriet, Hørsholm, 43-54.
- **RASCH, M.** 1989: Kystmorfologiske forhold i undersøgelsesområdet. In: CHRISTENSEN, H. & NIELSEN, B. (eds.): *Havbundsundersøgelser, Råstoffer og fredningsinteresser, Hornbæk*. Skov- og Naturstyrelsen, Miljøministeriet, Hørsholm, 27-34.
- **RASCH, M.** 1989: Kystmorfologiske forhold i undersøgelsesområdet. In: CHRISTENSEN, H. & NIELSEN, B. (eds.): *Havbundsundersøgelser, Råstoffer og fredningsinteresser, Sejerø Bugt*. Skov- og Naturstyrelsen, Miljøministeriet, Hørsholm, 31-44.

## **Publications - Public information and debat**

- FORCHHAMMER, M.C., MELTOFTE, H. & **RASCH, M.** 2009 (submitted): Indledning. Chapter 1 in: FORCHHAMMER, M.C., MELTOFTE, H. & **RASCH, M.** (eds): *Natur og klima i Højarktis*. Aarhus Universitetsforlag. Aarhus.
- **RASCH, M.** & MELTOFTE, H. 2009 (submitted): Historie, etablering og drift. Chapter 2 in: FORCHHAMMER, M.C., MELTOFTE, H. & **RASCH, M.** (eds): *Natur og klima i Højarktis*. Aarhus Universitetsforlag. Aarhus.
- FORCHHAMMER, M.C., CHRISTENSEN, T.R., MELTOFTE, H. & **RASCH, M.** 2009 (submitted): Hvorfor studere et helt økosystem? Chapter 3 in: FORCHHAMMER, M.C.,

MELTOFTE, H. & **RASCH, M.** (eds): *Natur og klima i Højarktis*. Aarhus Universitetsforlag. Aarhus.

- MELTOFTE, H., FORCHHAMMER, M.C., CHRISTENSEN, T.R., RYSGAARD, S. & **RASCH, M.** 2009 (submitted): Fremtidens højarktiske økosystemer. Chapter 11 in: FORCHHAMMER, M.C., MELTOFTE, H. & **RASCH, M.** (eds): *Natur og klima i Højarktis*. Aarhus Universitetsforlag. Aarhus.

- MELTOFTE, H. & **RASCH, M.** 2008 (submitted): Forskningsstation Zackenberg i Nordøstgrønland: Historien, 1991-2008. Tidsskriftet Grønland.

- **RASCH, M.** 2008: Ny feltstation I Grønland, *Polarfronten*, **4(2008)**, 3.

- **RASCH, M.** 2008: Metan frosset ud, *Polarfronten*, **4(2008)**, 4-5.

- **RASCH, M.** 2008: Jøkelløb ved vintertide, *Polarfronten*, **4(2008)**, 12.

- MELTOFTE, H. & **RASCH, M.** 2008: Klimaændringerne vil medføre store forandringer i Nordøstgrønlands Natur. DMU nyt 9. <http://www.dmu.dk/Udgivelser/DMUNyt/2008/9/zack1.htm>.

- **RASCH, M.** 2008: Forskningsstation Zackenberg - Siriuspatruljens mindre kendte nabo. DMU nyt 9. <http://www.dmu.dk/Udgivelser/DMUNyt/2008/9/zack3.htm>

- MELTOFTE, H., **RASCH, M.** & STENDEL, M. 2008: Dramatiske forandringer. *Suluk – Air Greenland*, **4(2008)**, 52-54.

- MELTOFTE, H., **RASCH, M.** & STENDEL, M. 2008: Dramatic transformation. *Suluk – Air Greenland*, **4(2008)**, 55-57.

- **RASCH, M.** & MELTOFTE, H. 2008: Zackenberg - Et langtidsmonitoringsprogram. *Naturens Verden*, **4(2008)**, 24-31.

- FORCHHAMMER, M., CHRISTENSEN, T.R., MELTOFTE, H. & **RASCH, M.** 2008: Zackenberg – Et holistisk studie af klimaeffekter. *Naturens Verden*, **5(2008)**, 12-19.

- **RASCH, M.** 2008: En billedbog fra Zackenberg. *Polarfronten*, **4(2007)**, 18-19.

- **RASCH, M.** 2008: News from the sites - Zackenberg Research Station. SCANNET Newsletter, **12**, 12-13.

- **RASCH, M.** 2007: Zackenberg – nu med vinterlogi. *Polarfronten*, **3(2006)**, 19.

- **RASCH, M.** & KLITGAARD, A. 2007: News from the sites - Zackenberg Research Station. SCANNET Newsletter, **11**, 13-14.

- **RASCH, M.** 2006: Ændringer af havniveau siden sidste istid. Chapter 3.06 in: BRUUN, L., KRISTENSEN, R.M., NIELSEN, N., PEDERSEN, G.K. & PEDERSEN, P.M. (eds.): *Arktisk Station, 1906-2006*. Forlaget Rhodos, København, 226-231.

- **RASCH, M.** 2005: Klimaforskning ved Forskningsstation Zackenberg. *Geografisk Orientering*,

4(2005), 158-160.

- **RASCH, M.** 2005: News from the sites - Zackenberg Research Station. SCANNET Newsletter, **9**, 13-14.
- **RASCH, M.** 2004: Zackenberg i frontlinien. *Polarfronten*, **4(2004)**, 14-15.
- **RASCH, M.** 2004: Jordskælv giver viden om Nordgrønlands undergrund. *Polarfronten*, **1(2004)**, 11.
- **RASCH, M.** 2004: Verdens mest besværlige lodskud. *Polarfronten*, **1(2004)**, 8-9.
- **RASCH, M.** 2003: Kommentar: Zackenberg – et dansk bidrag til international klimaforskning. *Polarfronten*, **2(2003)**, 15.
- **RASCH, M.** 2003: News from the sites - Zackenberg Station – Extension of Zackenberg Basic. SCANNET Newsletter, **5**, 8-9.
- **RASCH, M.** 2002: News from the sites - Network of Automatic Digital Cameras. SCANNET Newsletter, **2**, 5.
- **RASCH, M.** 2000: Flodbølge og brændende fjelde. *Polarfronten*, **4(2000)**, 8.
- **RASCH, M.** 2000: Forskerspirer i felten. *Polarfronten*, **4(2000)**, 9.
- **RASCH, M.** 2000: Zackenberg Station - fra en plet på landkort til en højteknologisk forskningsfacilitet. *Kaskelot*, **127**, 2-7.
- **RASCH, M.** 2000: ZERO (Zackenberg Ecological Research Operations) - et koncept, som samler forskning, monitoring og logistik. *Kaskelot*, **127**, 8-11.
- **RASCH, M.** 2000: KlimaBasis og GeoBasis - overvågning af den fysiske natur ved Zackenberg. *Kaskelot*, **127**, 12-14.
- **RASCH, M.** (ed.) 2000: Zackenberg Station - en platform for højarktisk økologisk forskning i Nordøstgrønland. *Kaskelot*, **127**, 32 p.
- **RASCH, M.** 2000: Bedre styr på Zackenbergs sne. *Polarfronten*, **2(2000)**, 16-17.
- **RASCH, M.** 2000: Vigtige klimastationer i ødemarken. *KlimaNyt, Nyhedsbrev fra Danmarks Klimacenter*, **9**, 3.
- **RASCH, M.** 2000: Vandstandsændringer i Disko Bugt siden sidste istid. In: JAKOBSEN, B.H., BÖCHER, J., NIELSEN, N., GUTTESEN, R., HUMLUM, O. & JENSEN, E. (eds.): *Topografisk Atlas Grønland*. Det Kongelige Geografiske Selskab & Kort & Matrikelstyrelsen, C.A. Reitzels Forlag, København, 130-131.
- **THING, H. & RASCH, M.** 2000: Forskningsstation Zackenberg. In: JAKOBSEN, B.H., BÖCHER, J., NIELSEN, N., GUTTESEN, R., HUMLUM, O. & JENSEN, E. (eds.): *Topografisk Atlas Grønland*. Det Kongelige Geografiske Selskab & Kort & Matrikelstyrelsen, C.A. Reitzels

Forlag, København, 186-189.

## **Publications - Folders**

- **RASCH, M.** & MUNCH, C. (eds.) 2004: *Zackenberg Ecological Research Operations*. Danish Polar Center. 6 p.
- **RASCH, M.** & KOUDAHL, N. (eds.) 2002: *Research facilities in Greenland*. Danish Polar Center. 24 p.
- **RASCH, M.** & PØRKSEN, K. (eds.) 1999: *Zackenberg Station: A research facility in Northeast Greenland*. Danish Polar Center. 6 p.

## **Publications – Homepages**

- **RASCH, M.** & WILKEN, U.: [www.zackenberg.dk](http://www.zackenberg.dk)
- **RASCH, M.** & MAGELUND, L.: [www.nuuk-basic.dk](http://www.nuuk-basic.dk)
- **RASCH, M.** & WILKEN, U.: [www.g-e-m.dk](http://www.g-e-m.dk)