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## ESF Research Conferences

A Programme of the European Science Foundation

**Final  
Programme**

### ESF-FWF Conference in Partnership with LFUI

#### Reduced Nitrogen in Ecology and the Environment

Universitätszentrum Obergurgl (Oetz Valley, near Innsbruck) • Austria • 14-18 October 2006

**Chair:** Jan Willem Erisman • Energy research Centre of the Netherlands (ECN)

**Vice-Chair:** Mark Sutton • Centre for Ecology & Hydrology (CEH)

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<b>Saturday</b> <b>14</b> <b>October</b>	16.00 onwards	Registration at ESF-RC desk	
	20.00	Dinner	
	21.00	<b>Welcome Drink</b>	
<b>Sunday</b> <b>15</b> <b>October</b>	08.45-09.00	<b>Conference Opening</b>	
	<b>Session 1 • Atmosphere – biosphere interactions</b>		
	Chair: Jan Willem Erisman • Energy research Centre of the Netherlands, Petten, NL		
	09.00-09.35	<b>Jan Willem Erisman</b> • Energy research Centre of the Netherlands, Petten, NL	<i>Reduced Nitrogen in Ecology and the Environment</i>
	09.35-10.10	<b>Mark Sutton</b> • Centre for Ecology & Hydrology, Penicuik, Edinburgh, UK	<i>An historical perspective on ammonia</i>
	10.10-10.45	<b>Ineke Stulen</b> • University of Groningen, Haren, NL	<i>The role of ammonia in plant physiology</i>
	10.45-11.10	Coffee break	
	<b>Short oral presentations</b>		
	11.10-11.35	<b>Johan Neiryck</b> • Research Institute for Nature and Forest, Geraardsbergen, BE	<i>Bidirectional ammonia exchange above a mixed coniferous forest</i>
	11.35-12.00	<b>Eiko Nemitz</b> • Centre for Ecology & Hydrology, Penicuik - Edinburgh, UK	<i>Ammonia - ammonium interactions: effects on surface/atmosphere exchange fluxes and the atmospheric aerosol loading</i>
	12.00-12.25	<b>Albert Bleeker</b> • Energy research Centre of the Netherlands, Petten, NL	<i>Linking ammonia emission reduction and air concentrations and depositions of reduced nitrogen in Europe</i>
	13.00	Lunch	
	<b>Session 2 • Agriculture and emissions of ammonia</b>		
	Chair: Oene Oenema • Wageningen University and Research Center, NL		
	14.30-15.05	<b>Oene Oenema</b> • Wageningen University and Research Center, Wageningen, NL	<i>Agriculture and reduced nitrogen: what goes in must come out</i>
	15.05-15.40	<b>Viney Aneja</b> • North Carolina State University, US	<i>Trends in agricultural ammonia emissions and ammonium concentrations in precipitation over the Southeast and Midwest United States</i>
	15.40-16.15	<b>Ulrich Daemgen</b> • Federal Agricultural Research Centre, Braunschweig, DE	<i>Emissions, atmospheric concentrations and bulk deposition of reduced nitrogen in Hesse, Germany - steps towards a comprehensive treatment of reactive nitrogen in the atmosphere</i>
16.15-16.40	Coffee break		
16.40-17.15	<b>Mark Theobald</b> • Centre for Ecology & Hydrology, Penicuik, Edinburgh, UK	<i>Ammonia emissions from large animal colonies</i>	

Monday 16 October	<b>Short oral presentations</b>		
	17.15-17.40	<b>Sofie Hellsten</b> • Swedish Environmental Research Institute, Gothenburg, SE	<i>Temporal aspects in the UK ammonia emission inventory</i>
	17.40-18.05	<b>Laszlo Horvath</b> • Hungarian Meteorological Service, Budapest, HU	<i>Measurement and modelling of ammonia flux between the atmosphere and terrestrial ecosystems in Hungary</i>
	18.05-18.30	<b>Raia Silvia Massad</b> • Institut National de Recherche Agronomique, Thiverval-Grignon, FR	<i>Plant-atmosphere ammonia exchange: a modelling frame and the testing of different hypothesis to include plant metabolism</i>
	19.30	Dinner	
	20.30	Poster session	
	<b>Session 3 • Plants, soils and reduced nitrogen</b>		
	Chair: Mark Sutton • Centre for Ecology & Hydrology, Penicuik - Edinburgh, UK		
	09.00-09.35	<b>Jan Schjorring</b> • Institut for Jordbrugsvidenskab, Frederiksberg, DK	<i>Ammonia and stomata</i>
	09.35-10.10	<b>Lucy Sheppard</b> • Centre for Ecology & Hydrology, Penicuik, Edinburgh, UK	<i>Comparison of effects of ammonia fumigation and the deposition of reduced and oxidised N on ombrotrophic bog in the Scottish Borders</i>
10.10-10.45	<b>Annika Nordin</b> • Swedish University of Agricultural Sciences, Umeå, SE	<i>Reduced N in precipitation as N source for boreal bryophytes</i>	
10.45-11.10	Coffee break		
11.10-11.45	<b>Simona Castaldi</b> • Seconda Università di Napoli, Caserta, IT	<i>The role of leguminous plants in the nitrogen cycle and N inputs/outputs in Mediterranean shrubland ecosystems</i>	
<b>Short oral presentations</b>			
11.45-12.10	<b>Matthew Aitkenhead</b> • University of Aberdeen, Aberdeen, UK	<i>Ecosse – a globally applicable model of carbon and nitrogen dynamics in soil?</i>	
12.10-12.35	<b>Lars Högbom</b> • The Forestry Research Institute of Sweden, Uppsala, SE	<i>Where does nitrogen goes in nitrogen rich forests?</i>	
12.35-13.00	<b>Alaa El-Sadek</b> • National Water Research Center, Shoubra Elkheima, EG	<i>Using the denitrification process as a water quality management tool to reduce the nitrate leaching</i>	
13.00	Lunch		
<b>Session 4 • Environmental impacts</b>			
Chair: Jan Roelofs • University of Nijmegen, Nijmegen, NL			
14.30-15.05	<b>Jan Roelofs</b> • University Nijmegen, Nijmegen, NL	<i>Effects of reduced versus oxidised nitrogen on wetland and aquatic vegetation</i>	
15.05-15.40	<b>Roland Bobbink</b> • Utrecht University, Utrecht, NL	<i>Differential effects of reduced versus oxidized N in species-rich grasslands and heathlands</i>	
15.40-16.15	<b>Magdalena Wiedermann</b> • Umeå University, Umeå, SE	<i>Enhanced nitrogen supply leads to changed plant chemistry and vegetation shift in boreal mire</i>	
16.15-16.40	Coffee break		
16.40-17.15	<b>Pedro Pinho</b> • University of Lisbon, Lisbon, PT	<i>Impact of the different forms of nitrogen on lichen biodiversity in a Mediterranean climate</i>	

Short oral presentations		
17.15-17.40	<b>Cristina Cruz</b> • University of Lisbon, Lisbon, PT	<i>Mediterranean ecosystems: the co-existence of plant species depends on soil ammonium concentrations</i>
17.40-18.05	<b>Stefano Loppi</b> • University of Siena, Siena, IT	<i>Lichens as biomonitors of the effects of reduced nitrogen in the Mediterranean area</i>
18.05-18.30	<b>Silvana Munzi</b> • University of Siena, Siena, IT	<i>Effects of KNO<sub>3</sub>, NH<sub>4</sub>NO<sub>3</sub> and (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> on the N-sensitive Evernia prunastri and the N-tolerant Xanthoria parietina lichens, and the role of polyamines</i>
18.30	<b>Forward Look &amp; Plenary Discussion</b>	
20.30	<b>Get-together &amp; Conference Dinner</b>	
Session 5 • Ammonia and air pollution		
Chair: David Fowler • Centre for Ecology & Hydrology, Penicuik - Edinburgh, UK		
09.00-09.35	<b>David Fowler</b> • Centre for Ecology & Hydrology, Penicuik - Edinburgh, UK	<i>Ammonia and air pollution</i>
09.35-10.10	<b>John Walker</b> • US Environmental Protection Agency, Durham, US	<i>Inferential modelling of ammonia dry deposition in the vicinity of a swine farm</i>
10.10-10.45	<b>Detlev Moller</b> • University of Giessen, Cottbus, DE	<i>The role of atmospheric ammonia in biogeochemical nitrogen cycling</i>
10.45-11.10	Coffee break	
11.10-11.45	<b>Francis Brian Pyatt</b> • Nottingham Trent University, Nottingham, UK	<i>Ammonia, particulates and nitrogen oxides: sources, monitoring and toxicology</i>
Short oral presentations		
11.45-12.10	<b>Ana Alebic-Juretic</b> • Teaching Institute of Public Health, Rijeka, HR	<i>Airborne ammonia and ammonium in the Northern Adriatic Area (Croatia)</i>
12.10-12.35	<b>Karel Borovec</b> • Technical University of Ostrava, Ostrava, DK	<i>Denitrification process in energy sector and transport as source of increased nitrous oxide emissions</i>
12.35-13.00	<b>Teresa Dias</b> • Centro de Ecologia e Biologia Vegetal, Lisbon, PT	<i>Ammonium in the soil: contribution to biodiversity and function in Mediterranean-type ecosystems?</i>
13.00	Lunch	
Session 6 • Ammonia and coastal areas		
Chair: Peter Liss • University of East Anglia, Norwich, UK		
14.30-15.05	<b>Peter Liss</b> • University of East Anglia, Norwich, UK	<i>Air-Sea Exchange of Reduced Nitrogen Gases</i>
15.05-15.40	<b>Peringe Grennfelt</b> • IVL Svenska Miljöinstitutet AB, Gothenburg, SE	<i>Ammonia in the marine ecosystems</i>
15.40-16.15	<b>Nils Risgaard-Petersen</b> • National Environmental Research Institute, Silkeborg, DK	<i>Alternative pathways for removal of nitrogen from the sea</i>
16.15-16.40	Coffee break	
16.40-17.15	<b>Maren Voss</b> • Baltic Sea Research Institute, Rostock, DE	<i>Reduced nitrogen in coastal waters (preliminary title, will be specified later)</i>

Tuesday  
17  
October

Short oral presentations		
17.15-17.40	<b>Malcom Woodward</b> • Plymouth Marine Laboratory, Plymouth, UK	<i>Ammonia concentrations in nutrient deplete oceanic waters</i>
17.40-18.05	<b>Paul Crutzen</b> • Max Planck Institute for Chemistry, Mainz, DE	<i>will be specified later</i>
18.05-18.30	<b>Szilvia Kugler</b> • Eotvos Lorand University, Budapest, HU	<i>Measurement and modelling of ammonia flux between the atmosphere and aquatic ecosystems in Hungary</i>
19.30	Dinner	
Wednesday 18 October	Breakfast & Departure	

**Abstracts, posters and short talks:**  
 There will be no **short talks** other than those announced on the programme.  
 All abstracts are accepted as **posters**.