

PROGRAMME

26th NATO/CCMS INTERNATIONAL TECHNICAL MEETING ON AIR POLLUTION MODELLING AND ITS APPLICATION

26-30 May 2003, Istanbul-Turkey

Saturday 24

14.00-18.00 Registration at Surmeli Hotel

Sunday 25

10.00-18.00 Registration at Surmeli Hotel

Monday 26

10.00 **OPENING CEREMONY (*Building and Earthquake Application
and Research Center, Istanbul Technical University*)**

11.00 **TOPIC 1: Role of Atmospheric Models in Air Pollution Policy
and Abatement Strategies**
Chairman: Domenico Anfossi Rapporteur: Christian Hogrefe

11.00 1.1 ***Invited Key Lecture***
Statistical Approach to Deterministic Modelling of Air Pollution and Its
Applications in Russia
Eugene L. Genikhovich

11.40 1.2 Risk Assessment of Airborne Sulphur Species in Poland
Katarzyna Juda-Rezler

12.00 1.3 Application of Models-3/CMAQ in Air Pollution Policy Strategies during
High Particulate Episodes over Eastern North America
*J. Sloan, R. Bloxam, A. Chtcherbakov, S. Wong, P. K. Misra, M.
Pagowski, X. Lin*

12.30 **Lunch**

14.00 **TOPIC 5: New Developments**
Chairman: Guy Schayes Rapporteur: Johannes Flemming

14.00 5.1 ***Invited Key Lecture***
Once More on the Advection Schemes: Description on *Trap*-Schemes
D. Syrakov

14.40 5.3 Scaling Analysis of Ozone Precursor Relationships
Bruce Ainslie, D. G. Steyn

15.00 5.4 Some Aspects of Turbulence and Dispersion in Low Wind Speed Conditions
Domenico Anfossi, Dietmar Oettl, Gervasio A. Degrazia

15.20 5.5 Coupling an Aerosol Module to a Deterministic Long Term Ozone Exposure Model
A Arvanitis, N. Moussiopoulos

15.40 Coffee Break

Chairman: Carlos Borrego Rapporteur: Douw Steyn

16.00 5.10 Data Assimilation for CTM based on Optimum Interpolation and Kalman Filter
Johannes Flemming, Maarten van Loon, Rainer Stern

16.20 5.11 Mass-Conservation Issues in Modelling Regional Aerosols
Wanmin Gong, Paul A. Makar, Michael D. Moran

16.40 5.12 Kalman Filter Analysis of Boundary Layer Ozone in Europe with a Chemistry Transport Model
Remus G. Hanea, Guus J. M. Velders, Arnold W. Heemink

17.00 5.14 Neuro-Fuzzy Network Modeling for Forecasting of Failure Consequences at the Chemical Dangerous Objects
Yuliya Podobna, Pavlo Molchanov, Tetyana Holyeva

17.20 end of afternoon session

19.00 Welcome Reception at Feriye Restaurant, Bosphorus

Tuesday 27 (Surmeli Hotel)

09.00 Topic 5 (Continued)

Chairman: Philippe Thunis Rapporteur: Eberhard Renner

Invited Key Lecture

09.00 5.2 Modeling of Diffuse Solar Radiation in the City of São Paulo Using Neural-Network Technique
Marija Zlata Boznar, Primož Mlakar, Amauri P. Oliveira, Jacyra Soares

09.40 5.6 GLOREAM-Global and Regional Atmospheric Modelling
Peter Builtjes, Adolf Ebel, Hans Feichter, Annette Muenzenberg

10.00 5.8 The Combined Effect of Mechanical and Thermal Forcing on the Dispersion of a Plume: Fine-Scale Modeling and Parameterization
Alessandro Dosio, Jordi Vila-Guerau de Arellano, Albert A. M. Holtslag, Peter J. H. Builtjes

10.20 5.13 An Eddy Diffusivity Derivation for the Non-Isotropic Convective Decaying Turbulence in the Residual Layer

Antonio G. Goulart, Gervasio A. Degrazia, Marco T. Vilhena, Domenico Anfossi, Davidson M. Moreira, Jonas C. Carvalho, Joecir Palandi

10.40 Coffee Break

Chairman: Douw Steyn Rapporteur: Nicolas Moussiopoulos

11.00 5.15 Forward and Inverse Simulations with Finnish Emergency Model SILAM
Mikhail Sofiev, Pilvi Siljamo

11.20 5.17 The Chemistry-Transport Modeling System LM-MUSCAT: Description and Citydelta Applications
Ralf Wolke, Olef Hellmuth, Oswald Knoth, Wolfram Schröder, Birgit Heinrich, Eberhard Renner

11.40 5.18 Simulation at Neighborhood Scale with CMAQ
Sylvain Dupont, Tanya L. Otte, Jason Ching

12.30 Lunch

14.00 TOPIC 3: Global and Long-Range Transport

Chairman: George Kallos Rapporteur: Mete Tayanç

Invited Key Lecture

14.00 3.1 Citydelta: A European Modelling Intercomparison To Predict Air-Quality in 2010
Philippe Thunis, Cornelis Cuvelier

14.40 3.3 A nested Hemispheric Model for Simulations of Atmospheric CO₂
Camilla Geels, Jesper H. Christensen, Jorgen Brandt, Lise M. Frohn, Kaj M. Hansen

15.00 3.4 The Role of Cumulus Parameterisation in Global and Regional Sulphur Transport
Trond Iversen, Oyvind Seland

15.20 3.5 Long-range Transport of a Severe Asian Dust Storm (Yellow Sand) Observed in Korea During 21-23 March in 2002
Soon-Ung Park, Hee-Jin In

15.40 3.6 Studying Pollution Levels in Bulgaria by Using a Fine Resolution Dispersion Model
Zahari Zlatev, Dimiter Syrakov

16.00 Coffee Break

16.20 TOPIC 4: Aerosols as Atmospheric Contaminants

Chairman: Selahattin Incecik Rapporteur: Marija Boznar

Invited Key Lecture

16.20 4.1 Modelling of Atmospheric Mercury Transport, Chemistry and Deposition: Recent Achievements and Current Problems

Alexey Ryaboshapko, Alexey Gusev, Ilia Ilyin, Oleg Travnikov

- 17.00 4.2 *Some Preliminary Results Concerning the Hg Budget Estimates for the State of New York*
A Voudouri, I. Pytharoulis, G. Kallos, C. Walcek
- 17.20 4.3 *Contribution of Desert Dust Transport to Air Quality Degradation of Urban Environments Recent Model Developments*
A Papadopoulos, P. Katsafados, G. Kallos, S. Nickovic, S. Rodriguez, X. Querol

Wednesday 28 (Surmeli Hotel)

09.00 TOPIC 6: Model Assessment and Verification

Chairman: Peter Builtjes Rapporteur: Roberto San Jose

- 09.00 6.1 *Regional Circulations within the Iberian Peninsula East Coast*
Oriol Jorba, Santiago Gasso, Jose M. Baldasano
- 09.20 6.2 *Statistical Evaluation of Results from Five-Domain MM5 Simulations of a Southern California (SCOS97) Ozone Episode*
James Wilkinson, Dimitra Boucouvala, Alice Fondin, Robert Bornstein, Douglas Miller
- 09.40 6.3 *Evaluation of ABLE Mixing Height Algorithms against Observed and Modelled Data for the Po Valley, Italy*
Emilia Georgieva, Elisa Canepa, Giovanni Bonafe, Enrico Minguzzi
- 10.00 6.4 *The Evaluation of Regional-Scale Air Quality Models as part of NOAA's Air Quality Forecasting Pilot Program*
Daiwen Kang, Brian K. Eder, Kenneth L. Schere
- 10.20 Coffee Break**
- Chairman: Robert Bornstein Rapporteur: Clemens Mensink
- 10.40 6.5 *Roof Level Urban Tracer Experiment: Measurement and Modelling*
Sven-Erik Gryning, Ekaterina Batchvarova, Mathias W. Rotach, Andreas Christen, Roland Vogt
- 11.00 6.6 *Comparison of the Space-Time Signatures of Air Quality Data from Different Monitoring Networks*
Edith L. Gego, Christian Hogrefe, P. Steven Porter, John S. Irwin, S. Trivikrama Rao
- 11.20 6.7 *Dry Deposition of Coarse Solid Particles in Patchy Sub-Boreal Landscape*
Marko Kaasik, Tiiu Alliksaar

- 11.40 6.8 Thermodynamical and Airflow Conditions within the Lower Troposphere during the Tropopause Fold Event Leading to the Elevated Surface Ozone Concentrations
Zvezdana Bencetic Klaic, Danijel Belusic, Ivana Herceg Bulic
- 12.00 6.10 Modeling of Odorous Emissions: Case Study for the City of Izmir-Turkey
Aysen Muezzinoglu, Tolga Elbir
- 12.30 Poster Session**
- 15.00 Free Time**
- 18.30 Bosphorus Tour and Dinner on boat (approximately 40USD)**
Tickets will be available at the registration desk

Thursday 29 (Surmeli Hotel)

- 09.00 TOPIC 2: Integrated Regional Modelling**
Chairman: Hyo Choi Rapporteur: Marko Kaasik
- Invited Key Lecture***
- 09.00 2.1 Urbanization of Numerical Mesoscale Models: Canopy and PBL Model Linkages
Robert Bornstein, Kenneth J. Craig
- 09.40 2.17 Air Quality Operational Process Analysis by Using MM5-CMAQ over the Iberian Peninsula: A Web Based Application
R. San Jose, J. L. Perez, R. M. Gonzalez
- 10.00 2.3 Measurements and Modeling of Regional Air Quality in Three Southeast United States National Parks
Daiwen Kang, Viney P. Aneja, Rohit Mathur, Jonh D. Ray
- 10.20 2.4 Modeling of Air Pollution and Development of Air Quality Management Plan for Iskenderun Region in Turkey
M. Tahir Chaudhary, Aysel T. Atimtay
- 10.40 Coffee Break**
Chairman: Jose Baldasano Rapporteur: Ekaterina Batchvarova
- 11.00 2.5 Long-Range Transport of Large Particles in Case of a Nuclear Accident or Explosion
Jerzy Bartnicki, Brit Salbu, Jorgen Saltbones, Anstein Foss, Ole Christian Lind
- 11.20 2.6 Observations and RAMS/CAMEX Results from the Middle-East Transboundary Pollutant Transport Study
R. Bornstein, M. Luria, Y. Mahrer, M. Peleg, D. Rammar, E. Weinroth,

*E. Tas, V. Matziev, E. Feitelson, J. Kaplan, U. Dayan, J. Issac,
H. Maoh, M. Ghanayem, J. Safi, Y. El-Nahhal*

11.40 2.7 Chemical Mechanisms in two Photochemical Modelling Systems: A Comparison Procedure
Joana Ferreira, Anabela Carvalho, Ana C. Carvalho, Alexandra Monteiro, Helena Martins, Ana I. Miranda, Carlos Borrego

12.00 2.8 Wintertime and Summertime Evaluation of the Regional PM Air Quality Model AURAMS
V. S. Bouchet, M. D. Moran, L.-P. Crevier, A. P. Dastoor, S. Gong, W. Gong, P. A. Makar, S. Menard, B. Pabla, L. Zhang

12.30 Lunch

Chairman: Nadine Chaumerliac Rapporteur: Alexey Ryaboshapko

14.00 2.9 Influences of Atmospheric Circulation and Boundary Layer on Suspended Particulate Concentration in the Steep Mountainous Coastal City
H. Choi

14.20 2.10 Air Pollution Dispersion Modelling in Surrounding of Industrial Zone of City of Pancevo
Zoran Grsic, Predrag Milutinovic, Milena Jovasevic-Stojanovic, Dragan Dramlic, Marko Popovic

14.40 2.11 Modeling the Impact of Global Climate and Regional Land Use Change on Regional Climate and Air Quality over the Northeastern United States
C. Hogrefe, J.-Y. Ku, K. Civerolo, B. Lynn, D. Werth, R. Avissar, C. Rosenzweig, R. Goldberg, C. Small, W. D. Solecki, S. Gaffin, T. Holloway, J. Rosenthal, K. Knowlton, P. L. Kinney

15.00 2.14 AURAMS runs during the Pacific2001 Time Period- A Model / Measurement Comparison
P. A. Makar, V. S. Bouchet, L.-P. Crevier, A. P. Dastoor, AS. Gong, W. Gong, S. Menard, M. D. Moran, B. Pabla, S. Venkatesh, L. Zhang

15.20 Coffee Break

Chairman: Sven-Eric Gryning Rapporteur: Peter Suppan

15.40 2.15 Estimates of Future PM_{2.5} Levels in Southeastern United States
M. Talat Odman

16.00 2.2 Modelling of Particulate Air Pollution in Northern Italy
S. Andreani-Aksoyoglu, J. Keller, A. S. H. Prevot, J. Dommen, U. Baltensperger, J. P. Putaud

16.20 2.18 Local and Urban Effects of Air Pollution in Southern Germany

Peter Suppan

17.00 2.12 Simulation of Meteorological Conditions and Surface Ozone Concentrations with MM5 and CAMx in Istanbul
Ü. Antepioglu, S. Incecik, S. Topcu

17.20 1.4 Apportionment of Pollutant Sources Using Stable Isotopes
A.L. Norman

17.40 end of afternoon session

19.30 Conference Banquet at Cemile Sultan Restaurant, Bosphorus

Friday 30 (Surmeli Hotel)

09.00 Topic 6 (Continued)

Chairman: Dimiter Syrakov Rapporteur: Ana Isabel Miranda

09.00 6.9 Evaluation of AURORA Simulated Benzene Concentrations for the Urban Area of Antwerp
Filip Lefebvre, Koen De Ridder, Nicolas Lewyckyj, Liliane Janssen, Jozef Cornelis, Françoise Geyskens, Clemens Mensink

09.20 6.11 Data from an Urban Street Monitoring Station and its Application in Model Validation
Michael Schatzmann, D. Grawe, B. Leidl, W. J. Müller

09.40 6.12 Sensitivity of Air Trajectories in Sea Breeze Environment to Turbulence and Surface Formulations
Aurore Porson, Guy Schayes

10.00 6.13 Dispersion Modeling Within The European Community's Air Quality Directives: Long Term Modeling of O₃, PM₁₀ and NO₂
R. Stern, R. Yamartino, A. Graff

10.20 Coffee Break

Chairman: Eugene Genikhovich Rapporteur: Michael Schatzmann

10.40 6.14 Short-Term Prediction of NO_x Levels in Istanbul Using Artificial Neural Network Approach
R. Tansel Coskuner, Gülen Güllü, Gürdal Tuncel

11.00 6.15 Prediction of Sulfur Dioxide Daily Levels in City of Zonguldak Using Adaptive Neuro-Fuzzy Based Method
Yilmaz Yildirim, Mahmut Bayramoglu, Lokman H. Tecer, Gültekin Yalçın

11.20 6.16 Transition Metal Ions In Cloud Chemistry

L. Deguillaume, M. Leriche, A. Marinoni, N. Chaumerliac

11.40 6.17 Investigation of vertical and horizontal transport processes and their influence on the concentrations of aerosols and ozone over the greater area of Berlin (HOVERT).

E. Reimer, A. Kerschbaumer, F. Neißner

12.15 Final Word

12.30 Closure of Conference

POSTER SESSION

Wednesday 28, 12.30-15.00

- P1 Integration of Modelling Tools in Assessments of Assessment Strategies Related to the 3rd EU Daughter Directive
Clemens Mensink, Ann Colles, Ina De Vlieger, Frans Fierens, Gerwin Dumont
- P2 Modelling Plume Rise and Dispersion of Power Plant Flue Gases Discharged through Cooling Towers
Öznur Oguz, Coskun Yurteri, Gürdal Tuncel
- P3 Bulgarian Emergency Response System: Structure, description, performance
Dimitar Syrakov, Maria Prodanova, Kiril Slavov
- P4 Air Quality Impacts of Industrial Plants (TEAP)
Vidmantas Ulevicius, Kestutis Senuta, Kristina Plauskaite
- P5 Numerical Simulation of Photochemical Episodes in Alpine Valleys
Guillaume Brulfert, Jean-Pierre Chollet, Charles Chemel, Marie-Aurelie Kerbirou
- P6 Nocturnal Increase of Ozone Concentrations under Downslope Windstorm in the Mountainous Coastal City
H. Choi
- P7 Air Flows and Pollution Transport in the Sofia Valley under Some Typical Background Conditions
K. Ganev, R. Dimitrova, N. Miloshev
- P8 An Application of Schwarz-Christoffel Transformation to Grid Generation in 2-D Atmospheric Flow Modeling
H. Erdun, S. Incecik, M. O. Kaya, I. Özkol

- P9 A Modeling Study to Estimate the Sources of Atmospheric Nitrogen Deposition in the Lake Tahoe Basin
Jülide K. Koracin, Leland W. Tarnay, Alan W. Gertler
- P10 Urban Effects on Air Pollutant Dispersion in Very Complex Terrain: The Athens case
Alberto Martilli, Yves-Alain Roulet, Martin Junier, Frank Kirchner, Mathias W. Rotach, Alain Clappier
- P11 Nesting the EMEP Regional Model
Peter Wind
- P12 Modelling the UK NH_x, S, No_x Budgets for 2010 with an Atmospheric Transport Model
N. Fournier, A. J. Dore, M. A. Sutton
- P13 Atmospheric Wet Deposition of Soluble Macro-Nutrients in the Cilician Basin
Türkan Özsoy
- P14 New Version of the Model for Long Range Transport of Pollutant Substances in the Atmosphere of IGCE and HMC of Russia
A Degtiarev, N. Shtyreva
- P15 Pollutant Concentrations in the Inland Basin and Steep Mountainous Coastal Area during Yellow Sand Event
H. Choi
- P16 Investigation of the Variability of SO₂ and PM in the Large Cities Of Turkey
Mete Tayanç, Nuriye Garipagaoglu, Bülent O. Akkoyunlu
- P17 A Methodology for Environmental Urban Planning in Bursa (Turkey)
Tugba Albayrak, F. Çeliktas, Mihnet Tekinay, M. Peronaci, N. Colonna, S. Racalbutto, P. Picini, M. De Cassan
- P18 Modelling Aerosol Evolution in an Industrial Plume-1 Model Development
Sun Hee Cho, Diane V. Michelangeli
- P19 Development and Validation of a Predictive Model to Assess the Impact of Coastal Operations on Urban Scale Air quality
Alan W. Gertler, Darko R. Koracin, Jülide Koracin, John M. Lewis, Menachem Luria, John C. Sagebiel, William R. Stockwell
- P20 Variations of First Guess and Assimilation Data in MM5 Simulations for Air Quality Modeling in Switzerland
Johannes Keller, Sebnem Andreani-Aksoyoglu, Andre S. H. Prevot

- P21 Parameterization of PBL Using Surface Data for Application in Dispersion Modelling
Dimiter Yordanov, Dimiter Syrakov, Maria Kolarova
- P22 Dispersion of Pollutants from an Elevated Source in the Residual Layer: The Influence of the Convective Decaying Turbulence in the Ground-Level Concentration
Davidson Morreira, Marco T. Vilhena, Antonio Goulart, Gervasio Degrazia, Domenico Anfossi, Jonas Carvalho, Paulo Ferreira Neto
- P23 Applications of RAMS and AERMOD Models to Evaluate Pollutant Dispersion in a Coastal Valley
R. Cocci Grifoni, G. Passerini, S. Tascini
- P24 Modelling Activity in the Framework of the National Project "Transformation Of Air-Pollution, Modelling Its Transport And Dispersion"
Tomas Halenka, Josef Brechler, Jan Bednar
- P25 A Method of Estimating Uncertainty in Simulated Transport and Dispersion of Pollutants in Complex Terrain
Darko Koracin, Anna Panorska
- P26 Evaluation of the Adaptive Grid Air Pollution Model
M. Talat Odman
- P27 Statistical Modeling of Winter Air-Pollution Study in Urban Area of Sivas, Turkey
Lokman H. Tecer, Ali Yilmaz, Yilmaz Yildirim
- P28 Numerical Study Of Air Pollution In Annular Regions With Point Source
V. P. Saxena, A. Juneja