International conference and young scientists school on Computational Information Technologies for Environmental Sciences:
"CITES-2003"

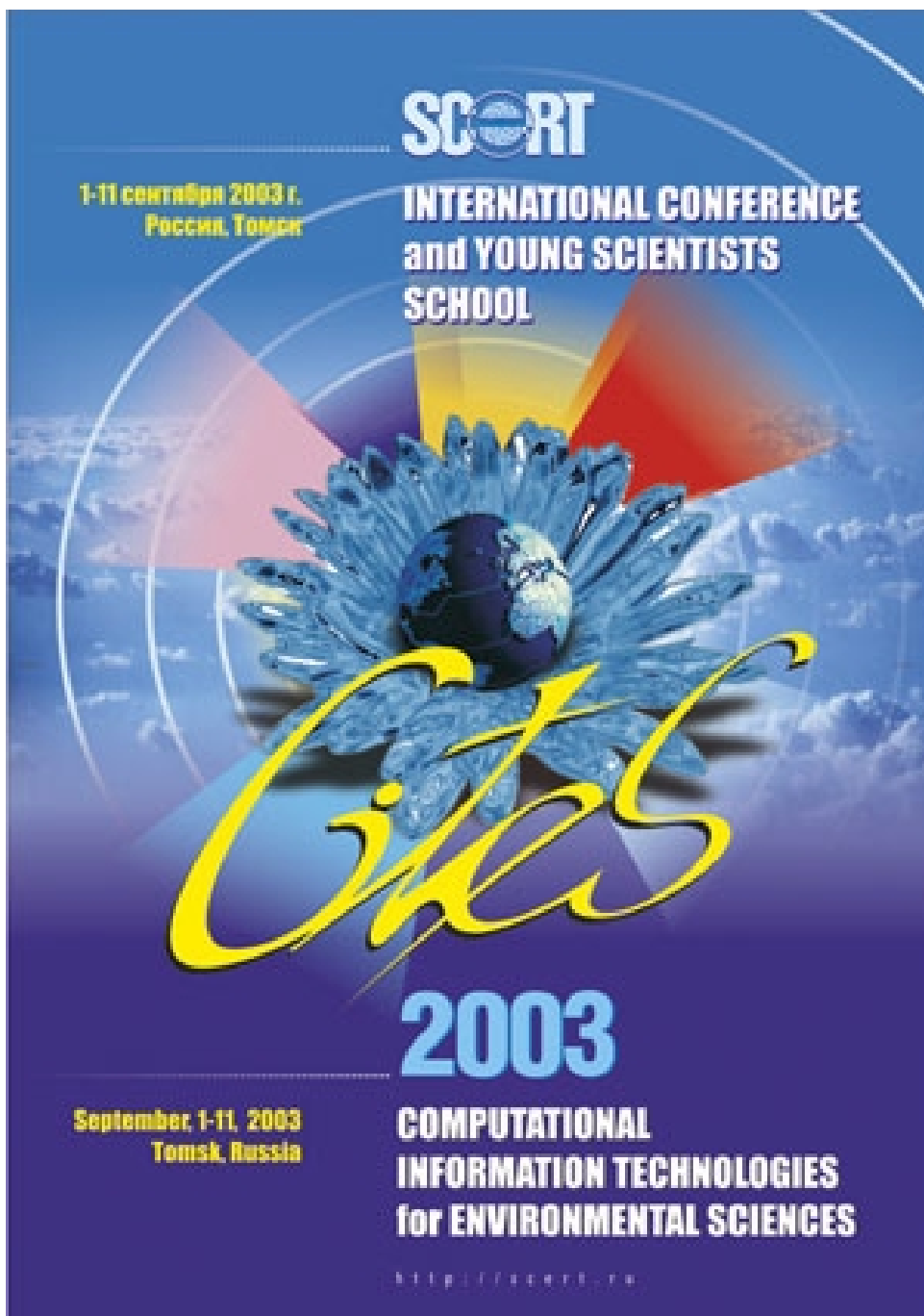*Tomsk, Russia, September 1-10, 2003*

ABSTRACT DEADLINE: June 2, 2003

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Tomsk, Russia, September 1-10, 2003

Second Circular

Siberian Center for Environment Research and Training (SCERT), Institute for Numerical Mathematics RAS (INM), Institute of Optical Monitoring SB RAS (IOM), and Tomsk State University (TSU) with the support of EC INCO Programme and under the auspice of Russian National Committee of International Geosphere-Biosphere Programme hold the International conference and young scientists school on computational information technologies for environmental sciences.

At first day of weekly school the leading Russian specialists working in this area will deliver lectures on the state and basic and practical problems of this branch of science to post-graduates and young scientists.

The following introductory hour and a half lectures are planned:

1. The problem of climate modeling and change. Mathematical theory of climate. Ac. Valentin Dymnikov (Institute of Numerical Mathematics RAS, Moscow)

2. Parallel computations. Ac. V.V. Voevodin (Institute of Numerical Mathematics RAS, Moscow)

3. Modern informational systems and programming theory. RAS Corresponding Member V.P. Ivannikov (Institute of system programming RAS, Moscow)

4. Internet and education. Ac. V.V. Voevodin (Institute of Numerical Mathematics RAS, Moscow)

Three special courses will be delivered to school attendants:

1. **Mathematical climate modeling.** RAS Corresponding Member Vasily Lykossov (Institute of Computational Mathematics RAS, Moscow) – 4 lectures for hour and a half each.

2. **Numerical modeling of pollutant transport processes on the urban and regional scale.** A.V. Starchenko (Tomsk State University) – 4 lectures for hour and a half each.

3. **Information technologies for environmental sciences.** E.P. Gordov (Siberian Center for Environment Research and Training), A.Z. Fazliev (Institute of Atmospheric Optics SB RAS)– 2 lectures for hour and a half each.

These courses will be supported by practical assignments. The groups of 3-4 persons will be able to perform the tasks on modeling of concrete situations of environmental state of atmosphere in Tomsk city on the basis of information and computation resources of Siberian Center for Environment Research and Training. At the last school day each group will deliver a 15-minutes report on the results of their work to all school attendants. On finishing the school the participants will take part in the international Conference where they will be able to present their results and get new knowledge in the spheres of their interest. At the Conference several invited hour lectures of leading Russian and foreign specialists on modern problems of computational information technologies development and their application in environmental sciences are planned.

On finishing the event the school attendants are planned to receive certificates with the list of the courses taken and the results of the task performed.

The anticipated support from RFFR, INTAS and EC should allow us to cover completely/partially expenses for a number of young and experienced researchers from NIS countries.

The participants' selection and determination of the support type will be based on the Requests for Participation sent to the Organizing Committee.

Four-days Conference on computational information technologies for environmental sciences will be devoted to the-state-of-the-art and usage of modern modeling tools and information technologies for Atmospherics Physics and Chemistry, applying to environmental research. It is aimed at filling a gap between basic science achievements and their practical applications in the domain of computational information technologies for environmental sciences as well as at dessimination of new knowledge and results among specialists and, in first place, among young scientists.

The Conference is planned as a set of consequent sessions with invited lectures, invited oral and contributed poster paper presentations.

One session will be devoted to monitoring of international environmental projects realized in NIS countries and sponsored by INTAS, EC and other donor organizations.

The official languages of Conference are Russian and English. The simultaneous translation is planned.

The Abstracts and the Conference Program will be published in the hard copy version and on the Conference site. Invited and recommended by the Program Committee contributed papers will be published at the Conference site and in peer reviewed Journal "Information Technologies" (http://www.ict.nsc.ru/mathpub/comp-tech/). Other papers will be published on the Conference site and as a hard copy of the Conference Proceedings. Selection procedure will be done in course of the event.

Planned sessions:

1. Atmospheric observations databases. Organizer: **Alexander Fazliev** (faz@iao.ru)
2. Physics of climate system. Organizer: **Vasily Lykosov** (lykossov@inm.ras.ru)
3. Basic and applied Information-computational Systems. Organiser: **Evgueni Gordov** (gordov@iao.ru)
4. Urban and regional atmosphere: from modeling to monitoring and risk estimation. Organizer: **Alexander Starchenko** (starch@ctc.tsu.ru)
5. Monitoring of international environmental projects. Organizer: **Evgueni Gordov** (gordov@iao.ru)

Also the following questions will be discussed in framework of this domain: GIS: modeling and web- access; Modeling atmospheric & ocean optics; Local Area Network and web systems and portals for Atmospheric Sciences; Integrated information systems for environment assessment&management.

Those, who wish to suggest invited topics, please contact relevant session organizers.

Currently confirmed invited lectures and papers:

1. **Climate and environment monitoring of Siberia.** Michael Kabanov (Institute of Optical Monitoring SB RAS, Tomsk)
2. **Atmospheric radiation.** Stanislav Tvorogov (Institute of Atmospheric Optics SB RAS, Tomsk)
3. **Forest and steppe fire modeling.** A. Grishin (Tomsk State University, Tomsk)

4. **Monitoring and modeling of regional pollutant transport.** Vladimir Penenko (Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk)
5. **Turbulent boundary layers in stably stratified rotating fluids.**Sergey Zilitinkevich (Upsaala Universty, Upsaala, Sweden)
6. **GIS-technologies and Internet.** Vladimir Krutikov (Institute of Optical Monitoring SB RAS, Tomsk)
7. **The MEDIAS Distributed Databases for Environmental Information.** Gerard Begni (MEDIAS, France)
8. **Upper atmosphere physics: from observations to modeling.** V.E. Kunitsyn (Moscow State University, Moscow)
9. **Atmospherics chemistry.** S. Smyshlyaev (Saint-Petersburg Hydrometeorological University, Saint-Petersburg)
10. **Scientific services in Internet.** V.V. Voevodin (Research Computing Center of Moscow State University, Moscow)
11. **Education for sustainable development: from slogans to actions.** Natalia Tarasova (Moscow Chemical Technological Univertsity, Moscow)
12. **TBD.** Antonio Palucci (ENEA, Italy)
13. **Hyper-spectral Remote Sensing.** Ivan Pippi (Institute of Applied Physics, Italy)
14. **Global aerosol distribution data**. Frank Raes (JRC, Italy)
15. **Chemical Weather Forecasting.** Martin Schultz (MPI for Meteorology, Hamburg)
16. **Modeling of climates of the past.** A.V.Kislov (Moscow State University)
17. **The problems of transition from serial to parallel program in solving the mathematical physics problems on complex grids.** A.N. Andrianov (Keldysh Institute of Applied Mathematics, Moscow)
18. **Estimating the Carbon Balance of Siberia by Bottom-up and Top-down Approaches.** Martin Heimann (MPI for bio-geo chemistry, Jena, Germany)
19. **Basic Aspects of Lagrangian Stochastic Dispersion Models.** Domenico Anfossi (C.N.R. Instituto di Scienze dell'Atmosfera e del Clima, Torino, Italy)
20. **Simulation of transport and diffusion in complex terrain by an integrated modelling system.** Domenico Anfossi (C.N.R. Instituto di Scienze dell'Atmosfera e del Clima, Torino, Italy)
21. **Dispersion of Particulate Matter in Coastal Mountain-Girt Seoul Area.** Hyo Choi (Kangnung National University, Korea)
22. **TBD.** Fedor Mesinger (NOAA, USA)
23. **TBD.** Alex Ushakov (UCSB, USA)
24. **From satellite environmental monitoring to digital libraries of remote sensing data for education and Earth observation.** Kudashev E. B. (Space Research Institute, Moscow)
25. **The analysis of the hydrophysical processes of the Aral sea degradation on the basis of the numerlcal modeling.** V.I.Kuzin (Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk)
26. **Reservoir and atmosphere interaction energy.** Pushistov P.Yu. (Ugra Research Institute of Information Technologies, Khanty-Mansyisk)
27. **Modelling and forecasting of urban microclimate and air pollution.** Alexander Baklanov (Danish Meteorological Institute, Denmark)

Organizing Committee:

Chair Prof. **Evgueni Gordov** (Siberian Center for Environment Research and Training)

RAS Corresponding Member **Vasily Lykossov** (Institute of Computational Mathematics RAS, Moscow)
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Academician **Yuri Shokin** (Institute of Computational Technologies SB RAS)
Prof. Hyo Choi (Kangnung National University, Korea)

Registration:

Your Abstract should include:
1. Title
2.Authors (Principal author first)
3.Affiliation and address for each author (mailing address, telephone, fax, e-mail, Internet site)
4.Session chosen
5.Abstract body: no more than 200 words
Russian authors are kindly asked to submit both Russian and English versions.
ABSTRACT DEADLINE: June 2, 2003

Registration fee:

Participant 350 Euro
Accompanying person 100 Euro
Ph.D. student 100 Euro

The fee includes session admission, Program, Abstracts, Proceedings, excursions, welcome reception, conference dinner and coffee breaks.

Accommodation

Single room   about 20 USD

Reservation – 25% of daily cost

Visa

To secure your participation in the Conference and to get a visa to Russia, please submit to the Organizing Committee the following data required for preparation of the official invitation:

1. Full name

2. Affiliation, position, title

3. Passport number, release date, period of validity

4. Date of birth

5. Place of birth : country, city

6. Citizenship

7. Sex

8. Travel rout

9. Planned dates of arrival in and departure from Russia

10. Organs of the Ministry of foreign Affairs of the Russian Federation in your country to which you will apply for visa.

11. Xerocopy of passport first page

Hope to see You among the participants of the Conference!