

Third International Conference on Metrology

Trends and Applications in Calibration and Testing Laboratories

Tel Aviv, Israel
November 14-16,
2006

ORGANIZED BY:

The National Conference of Standards Laboratories (NCSL International)

The Co-Operation on International Traceability in Analytical Chemistry (CITAC)

The Israeli Metrological Society (IMS)

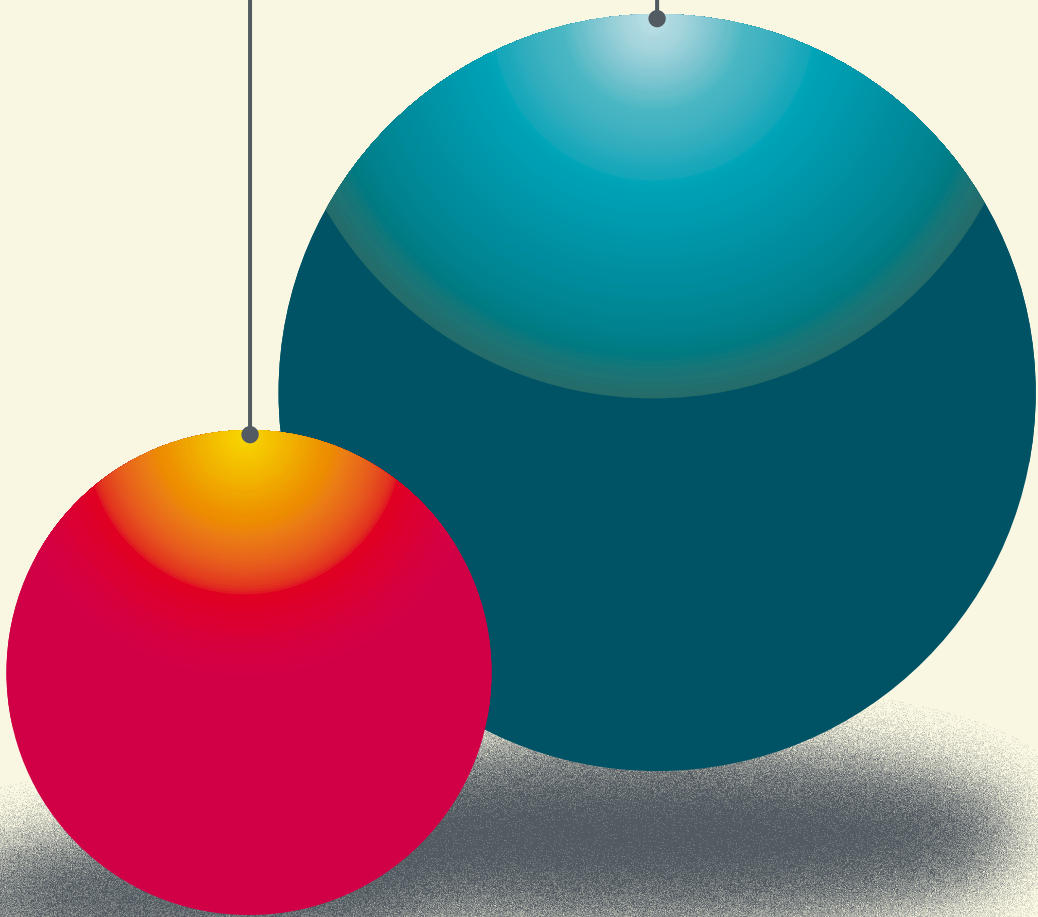
CO-SPONSORED BY:

The International Measurement Confederation (IMEKO)

The Israel Society for Quality (ISQ)

Israel Analytical Chemistry Society (IACS)

The National Physical Laboratory of Israel (INPL)



DEAR COLLEAGUE,

The **3rd International Conference on Metrology - Trends and Applications in Calibration and Testing Laboratories** will take place November 14-16, 2006 in Tel Aviv. It is being organized, as were the previous two (May 2000 in Jerusalem and November 2003 in Eilat), by the National Conference of Standards Laboratories (NCSL International), Co-Operation on International Traceability in Analytical Chemistry (CITAC) and the Israeli Metrological Society (IMS).

The International Measurement Confederation (IMEKO), the Israel Society for Quality (ISQ), the Israel Analytical Chemistry Society (IACS) and the National Physical Laboratory of Israel (INPL) are the conference co-sponsors.

The conference will be held in conjunction with the 16th International Conference of the Israel Society for Quality. Since the Society's biannual international conferences are very popular and generally attract 1500-2000 participants, both specialists in metrology (measurement, calibration and testing, including chemical analysis) and quality professionals will have a unique opportunity to network with each other, interact with senior management and learn how to bring the "message" to as many people as possible.

In addition, a combined commercial exhibition within the framework of the two conferences on Metrology and Quality will be attractive for numerous participants and for producers of measuring instruments and quality products.

This 3rd International Conference is aimed at helping participants learn and develop new tools and techniques that will improve accuracy/quality of measurement, calibration and testing/analytical results. Thus the conference will have a strong practical focus.

It is my pleasure and privilege to invite you to take part in the 3rd International Conference on Metrology in Israel, to be an active partner in a challenging and fruitful endeavor and to contribute to its success.

Joining us at the conference will also enable you to enjoy exploring the Land of Israel, birthplace of the three great monotheistic religions.

We look forward to a peaceful 2006 and to welcoming you and your colleagues to Tel Aviv.

Dr. Ilya Kuselman
Conference Chair

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PRELIMINARY PROGRAM

Tuesday - November 14, 2006

09:00-11:00	Opening and Plenary Session (together with the Quality Conference)			
11:00-11:30	Coffee Break			
11:30-13:00	Session 1. Calibration		Session 2. Quality Criteria in a Testing Laboratory	
11:30-12:00	Good Measurement Practice - Calibration Control	<u>L.Cronin</u> , S.Goodwin, R.Hewett, UK	11:00-11:40 The Evolution of Drinking Water Criteria	O.Lev, Israel
12:00-12:30	Calibration of Starting/Synchronization Time of a System for End-to-End Testing of Transmission Line Protection	<u>N.Goldovsky</u> , B.Katz, Israel	11:40-12:05 Do Compliant Methods of Analysis of Waters and Wastes Using ICP-AES and ICP-MS Meet the QA/QC Requirements of ISO 17025? What are the Challenges and the Rewards?	<u>J.Brenner</u> , R.Lerner, A.Auverbuch, D.Solomon, Israel
12:30-13:00	Calibration of Rogowski Coils in the Audio-frequency Range	<u>J.Bohacek</u> , J.Kucera, Czech Republic	12:05-12:30 Interpretation of Test Results	<u>M.Suchanek</u> , Czech Republic, P.Robouch, Belgium
13:00-14:00	Lunch			
14:00-15:30	Session 3. Calibration		Session 4. Concepts of a Measurement/Test Result	
14:00-14:30	New Capabilities of the National Institute of Metrology from Romania in Calibrating the Power Analyzers	<u>I.Odor</u> , D. Flaminzeanu P. Liviu, C. Baltateanu, Romania	14:00-14:25 Population Studies and Uncertainty Conception	V.Dvorkin, Russia
14:30-15:00	National Standard of Sound Pressure in Air at Romanian Institute of Metrology	A.Popescu, C.Niculescu, Romania	14:25-14:50 Accuracy of Single Measurements	S.G.Rabinovich, USA
15:00-15:30	Generator for Humidity Gases Used for Calibration of the Hygrometers which Measure the Dew Point between (-50,0...+20,0) °C	<u>V.Paun</u> , C.Ghita, Romania	14:50-15:10 Measurements with Large Round-off Errors	I.Gertsbakh, Israel
			15:10-15:30 Statistical Thinking and Metrology: Enemies or Friends?!	<u>Yu. Adler</u> , V.Shper, Russia
15:30-15:50	Coffee Break			
15:50-16:50	Poster Session and Exhibition			
16:50-17:50	General Session 5			
16:50-17:20	Newest Trends in Measurement and Instrumentation and the 2006 IMEKO World Congress. T.Kemeny, Hungary			
17:20-17:50	The Ongoing Re-determination of the Avogadro Constant (and a Possible Redefinition of the SI Kg) via the Silicon Route. P. De Bièvre, Belgium			

Wednesday - November 15, 2006

08:30-10:00	Plenary Session (together with the Quality Conference)			
10:00-10:30	Coffee Break			
10:30-12:00	Session 6. Improvement and Validation of Measurement Methods		Session 7. Proficiency Testing and Interlaboratory Comparison	
10:30-11:00	Validation of Activity Content of Anthropometric Phantoms Used to Calibrate Direct In Vivo Measurements of Low Energy, Photon-Emitting Radionuclides Deposited in the Lungs	H.Spitz, S.Glover, USA	The Comparisons and Research of the CCQM Gas Analysis Working Group	Ed W.B.de Leer, The Netherlands
11:00-11:30	Role of Statistical Process Control in Maintaining the Reference Standard of DC Voltage	S.K.Sharma, V.N.Ojha, India	The Way of Establishing Quality of Measurements in Gas Analysis - National and International Aspects	M.Rozhnov, O.Levbarg, Ukraine
11:30-12:00	The Line-Spread-Function of Measurement Systems: Theory and Experimental Characterization	L.Teper, P.Dickstein, D.Ingman, Israel	Fractionation and Characterization of Micro- and Nano-particles for Their Use as Reference Particulate Materials	V.M.Shkinev, B.Ya.Spivakov, Russia
12:00-13:00	Lunch			
13:00-14:30	Session 8. Improvement and Validation of Measurement Methods		Session 9. Proficiency Testing and Interlaboratory Comparison	
13:00-13:25	An Investigation of Long-Term Stability of a Precision Platinum Resistance Thermometer up to 660°C	B.Morris, USA	Proficiency Testing - Challenges for the Accreditation Body & the Accredited Laboratory	O.Dreazen, I.Broide, Z.Nizri, A.Lepek, Israel
13:25-13:50	Striving for Advanced Gear Metrology at Workshop Level	L.G.Bochese, Estonia, Czech Republic	Use of Multiple Correspondence Analysis for the Evaluation of Inter-Laboratory Comparison	M.Suchánek, Czech Republic, P.Robouch, Y.Aregbe, Belgium
13:50-14:10	Long-Term Experience with a Time-Flexible Confirmation Program for Test Equipment in Three Disciplines	B.Belfer, A.Katz, A.Binyamini, M.Judkovski, Israel	Proficiency Testing Schemes for Limited Number of Participants	M.Belli, Italy, S.Ellison, UK, A.Fajgelj, Austria, I.Kuselman, Israel, U.Sansone, W.Wegscheider, Austria
14:10-14:30	Common Problems in Achieving Maximum Performance from Dry-Well Thermometer Calibrators	B.Morris, USA	Reproducibility of the Laboratory Assay of Crude Oil	R.McMurry, N.Brodsky, K.Pashinsky, Israel
14:30-14:40	Break			
14:40-15:40	General Session 10			
14:40-15:10	Meeting the Need for Intercontinentally Understood Concepts and Intercontinentally Agreed Terms for Metrology (the 2006 Edition of VIM) – “To prevent war, be very precise in your speaking” [Kongfutze, 551-479 B.C.]. P. De Bièvre, Belgium			
15:10-15:40	Ethics in Laboratories, Business and Life – Is There a Difference? S. Sidney, South Africa			
15:40-16:10	Coffee Break			
16:10-17:10	General Assembly of the Israeli Metrological Society (IMS)			

Thursday - November 16, 2006

08:30-10:00	Plenary Session (together with the Quality Conference) including Metrology: Essential to Trade, Industry and Society. R.Kaarls, The Netherlands			
10:00-10:30	Coffee Break			
10:30-12:00	Session 11. Measurement Uncertainties		Session 12. Proficiency Testing and Interlaboratory Comparison	
10:30-11:00	Measurement Uncertainty in Conoscopic Systems	G. Agronik, G. Sirat, K. Wilner, Israel	Statistical Evaluation of the Results of an Inter-Laboratory Test for the Determination of Composition of a New Certified Reference Material	T.L.Pap , A.Beregi, Hungary
11:00-11:30	Measurement Uncertainty of Active Electric Energy in the Power System	C.I.Golovanov , D.L.Cazacu, A.Popescu, I.I.Odor, D.C.Oancea, Romania, A.Chiciuc, Moldavia	Process Capability of a Laboratory Test, a Tool for Completion of Validation Using S.P.C.	E.Sharon, Israel
11:30-12:00	Estimation of Extrapolation Uncertainties of the Temperature Downward from the Triple Point of Mercury to the Triple Point of Argon	C.Niculescu, Romania	Participation of QCC Hazorea in the Force Interlaboratory Comparison – Results and Conclusions	B.Katz, I.Landesman, Israel
12:00-13:00	Lunch			
13:00-14:30	Session 13. Measurement Uncertainties and Software		Session 14. Quality Standards in Testing Laboratories	
13:00-13:30	Uncertainty Analysis by Rogowski Coils Calibration	K.Draxler, R.Styblíkova, Czech Republic	Unification of the Quality Assurance Systems of Public Health Laboratories Conformed to ISO 17025; ISO 15189 and ISO 9000: A Major Organizational Change	H. Hacham, N.Tetro, S.Kochavi-Azolai, N.Stern, D.Mizrahi, A.Lisenker, E.Gazit, Israel
13:30-14:00	MetroVal – A Calibration Software with Advanced Uncertainty and Prediction Capabilities Including Complex Numbers	A.Lepek, Israel	Radio-bioassay Laboratory Accreditation Program in USA	A.Bhatt, USA
14:00-14:30	Case Study of MetroVal Software Validation	A.Moscovich, Israel	Recent National Standards of Precious Metals (PM) Analysis in Russia	Yu.A.Karpov , N.A.Arakelyan, L.P.Zhitenko, V.P.Obrezumov, V.B.Baranovskaya, Russia
14:30-14:40	Break			
14:40-16:10	General Session 15			
	Chair – R. Kaarls, The Netherlands			
14:40-15:10	Recognition Problem of Calibration Certificates on Highest Accuracy Levels Issued by Organizations that are not NMI. G.Deitch, D.Kisets, G.Tsirulnikova, Israel			
15:10-16:10	Panel: New Challenges in Metrology			
16:10-16:30	Coffee Break			

POSTERS

1. **Calibration of Conductivity Meters and Conductivity Cells at the National Physical Laboratory of Israel.**
E. Kardash, I.Kuselman. Israel.
2. **New Procedure of the Resistance Standards Calibration.**
Z.I.Zelikovskiy. Moldova.
3. **Quality and Stability Evaluation of Disposable Medical Equipment.**
I. Schumacher, E.Tsiperman, A.Tarnopolsky, A. Raskin, E. Sigler, A. Domb. Israel.
4. **Validation of Energy Dispersive X-ray Microanalyses Method in Scanning Electron Microscopy.**
V. Gutkin, I. Kuselman. Israel.
5. **On-line DC Magnetometers Calibration.**
V. Korepanov, A. Marusenkov. Ukraine.
6. **Virtual Instrumentation and Interactive Software for Mechanical Quantities Measurement.**
D.M.Stefanescu. Romania.
7. **Some Problems of Intercomparison Estimation Adequacy.**
D. Kisets, C. Apfeldorfer. Israel.
8. **Fitness-for-Purpose and Traceability of Results of Microelement Determination for Rock Reference Materials by Atomic-Emission Spectrometry.**
E.A.Anchutina, A.I.Kuznetsova, O.V.Zarubina. Russia.
9. **Signal Sourcing Requirements for Spectrum Analyzer Calibration.**
A. Rosenzweig. Israel.
10. **A Power Engineer's Guide to Navigating the EMC Directive.**
A. Rosenzweig. Israel.
11. **Development of the Specialized OLAP-Means for the Control of Metrological Characteristics of the Analytical Techniques.**
E.V.Kovyazina, E.I.Molchanova, A.N.Smagunova. Russia.
12. **Algorithms for the Determination of Metrological Characteristics of the Technique for Analyzing a Composition of Industrial Atmospheric Emissions.**
A.N.Smagunova, L.I.Belykh, Yu.M.Malykh, A.V.Oguretskaya, V.A.Kozlov. Russia.
13. **Algorithms for a Statistical Quality Control of an Analytical Laboratory Performance.**
Yu.A.Karpov, A.N.Smagunova, V.I.Paneva. Russia.
14. **Calibration of Clamp Transformers and Ammeters.**
R. Styblíkova, K.Draxler. Czech Republic.
15. **Systematic Approach to the Quality of Metrological Estimations.**
D. Kisets. Israel.
16. **Development of Reference Aerosols Samples Loaded on a Filter.**
E.N.Korzhova, O.V.Kuznethsova, A.N.Smagunova, V.A.Kozlov. Russia.
17. **About the Calibration of Power and Energy Standards in the National Institute of Metrology from Romania.**
I.Odor, L.Popescu, D.Flaminzeanu, C.Baltateanu. Romania.
18. **Management Systems of the Argentinean National Laboratories of Ionising Radiation Metrology.**
F.A.Iglicki, M.C.Saraví, A.N.Zaretzky, M.Milá. Argentina.
19. **Validation in High Resolution Gamma Spectrometry.**
G.L.Cerutti, X.L.Araya. Argentina.
20. **Electrochemical Sensors of the Humidity Gases.**
V. Paun, C.Ghita. Romania.
21. **The Calibration by Statement of Compliance with a Specification, in Accordance with ISO/IEC 17025.**
C. Niculescu, A.Popescu. Romania.
22. **An Innovative System for Monitoring Environmental Conditions.**
E. Shiphman, E.Vohl, D.Kruh. Israel.
23. **Method of Expansion of the Impedance Standard Range.**
S. Tapuchi, S.Makarenko, U.Suissa. Israel.
24. **Practical Realizations of the Makyoh (Magic Mirror) Arrangement for the Investigation of Large Area Mirror-like Surfaces.**
J.P.Makai, F.Riesz, I.E.Lukács. Hungary.
25. **Quality Assurance of Analysis in the Analytical Centre of M.V. Lomonosov Moscow State University.**
I.P.Viter, I.A.Ananieva, M.V.Popik, O.A.Shpigun. Russia.
26. **Calibration of 8.5 Digits DMM by Comparison with the Laboratory Primary Standards per ISO 17025.**
A. Evron. Israel.
27. **The Control Correctness of Definition COD_{Cr}**
S.J.Keljina, Ukraine, J.M.Dedkov, Russia.

GENERAL INFORMATION

Venue: The conference will take place at the David Inter-Continental Hotel in Tel Aviv.

Date: November 14-16, 2006

Language: The conference will be conducted in English.

Welcoming Reception: A welcoming reception will be held Monday evening, November 13th at 19:00.

Gala Banquet: A festive evening will be held on Tuesday, November 14th at 20:00. The evening will include entertainment and dinner.

Night Tour of Tel Aviv: On Wednesday, November 15th there will be a night tour of Tel Aviv.

Conference Proceedings: All attending participants will receive a book of the oral and poster contributions. A special issue of the international journal "Accreditation and Quality Assurance" (Springer-Verlag) will contain selected papers presented at the conference.

Exhibition: A commercial exhibition will take place within the framework of the conference. For further information please contact meetings@isas.co.il

Advertising and Sponsorship: Please contact the Secretariat for space in the conference program and/or sponsorship of speakers, sessions and events.

Certificate of Participation: Will be supplied to participants upon request.

Letters of Invitation: Upon request, the Secretariat will send a personal invitation to participate in the conference. It should be understood that such an invitation is only meant to help visitors raise funds or obtain a visa and does not represent commitment on the part of the organizers to provide financial support.

Transportation from Airport: Ben-Gurion International Airport is located 20 minutes from Tel Aviv. Tourbus 222 operates hourly (04:00-24:00) to the David Inter-

Continental Hotel (last stop) for ~\$6. Tourbus telephone numbers are 972-3-9711711 or 972-3-9721447. Taxis are also available and should cost ~\$25.

Registration Fee: The registration fee of \$395 for participants includes participation in all technical sessions, conference kit, program and proceedings, lunches and coffee breaks, welcoming reception and gala banquet and folklore evening.

The registration fee for IMS, NCSL and CITAC members is \$370. The registration fee for a speaker presenting a paper is \$300. Please note that the reduced fee applies only to the presenter (not the co-authors) of the paper. Fees are valid until October 15, 2006, after which there will be an additional surcharge of \$50.

Accompanying Persons Fee (\$160) includes the welcoming reception, opening ceremony, night tour of Tel Aviv, daylong tour of Jaffa and Tel Aviv including the Diaspora Museum and the gala banquet. Fee does not include attendance in program sessions.

Accommodations:

Prices (per room)	Single	Double
David Inter-Continental (conference venue)	\$190	\$200
Metropolitan Hotel (15 minute walk)	\$75	\$90

Price includes a full Israeli breakfast and 15% service charge. Reservations must be made by October 15, 2006 and accompanied by a deposit of one night's charge.

Cancellation Policy: Cancellations received by October 15, 2006 will be fully refunded less a \$60 processing charge. There will be a 50% refund for cancellations received after October 15, 2006.

Conference Secretariat:

ISAS International Seminars
POB 34001, Jerusalem 91340, Israel
Tel: 972-2-6520574, Fax: 972-2-6520558
email: congress@isas.co.il
webpage: www.isas.co.il/metrology2006

Tour #1: Jerusalem & Surrounding Hills

Sunday, November 12 - Full Day (07:30-17:30)
 Drive to Mt. Scopus and Mt. of Olives for a panoramic view. Continue to the Garden of Gethsemane to visit the Church of All Nations. Drive along the Kidron Valley to view Absalom's Pillar and the City of David. Walking tour of the Old City commencing at the Dung Gate. Visit the Western Wall, view the Dome of the Rock, walk along part of the Via Dolorosa to the Church of the Holy Sepulcher. A colorful bazaar decorates the approach to the Cardo and Jewish Quarter. Drive through the New City to view the Knesset, government buildings, the Supreme Court and the Shrine of the Book. Visit Yad Vashem memorial to the Holocaust and Mt. Zion and continue to Kibbutz Ramat Rachel for a panoramic view of Bethlehem and the surrounding hills. Return to Tel Aviv.

Price \$60**Tour #2: Nazareth, Tiberias, Capernaum**

Monday, November 13 - Full Day (07:30-19:00)
 Highlights: Nazareth (Church of the Annunciation and the Church of St. Joseph), the ruins at Capernaum, Tabgha and the Church of the Multiplication of the Loaves and the Fishes, Tiberias and the Baptismal site on the Jordan River (Yardenit).

Price \$65**Tour #3: Massada & Dead Sea**

Thursday, November 16 - Full Day (07:30-19:00)
 Descend through the beautiful scenery of the Judean Desert to the lowest point on Earth - the Dead Sea. Drive along the sea, pass by Qumran where the Dead Sea Scrolls were found and continue to Massada - the ancient fortress built by Herod the Great in the 1st Century B.C.E. which was the last Jewish stronghold during the revolt against the Romans in the 1st Century C.E.

Please bring water, hat, walking shoes, bathing suit & towel - there will be time for a dip in the Dead Sea.

Price \$78**Tour #4: Caesarea, Haifa & Acre**

Friday, November 17 - Full Day (07:30-16:30)
 Travel north on coastal road to ancient Roman port of Caesarea. Visit the Roman and Crusader ruins, the amphitheater and hippodrome, bath house with original mosaic and marble floors. Visit the new virtual museum with hands-on applications. Continue north to Haifa and visit the Bahai Temple and beautiful grounds. After a light (optional) lunch continue to the UNESCO Heritage Site of Old Acre with its beautiful underground city, ancient Turkish bath houses and port. Return to Tel Aviv at 16:30.

Price \$78

Note: All tours require a minimum of 15 participants, modest attire and walking shoes. Lunches are not included.

Pickup in lobby of conference venue hotel.

To register on-line, please see www.isas.co.il/metrology2006
 Please type or print in block letters and return to ISAS International Seminars, POB 34001, Jerusalem 91340, Israel. Fax: 972-2-6520558, email: register@isas.co.il

Surname:

First Name:

Title:

Place of Work:

Mailing Address: (please check: work home)

City, State:

Postal Code: Country:

Telephone:

Fax:

E-mail:

Please reserve seats on the following tours:

- Tour 1 (Jerusalem) seat(s)
 Tour 2 (Nazareth, Tiberias, Capernaum) seat(s)
 Tour 3 (Massada, Dead Sea) seat(s)
 Tour 4 (Caesarea, Haifa, Acre) seat(s)

Please book a single room double room* at the
 David Inter-Continental Metropolitan Hotel
 check-in date check-out date number of nights

I will share my room with*

*It is the sole responsibility of the participant to find a roommate.

In the absence of a roommate single occupancy price will be charged.

Please itemize payments

Registration Fee	\$.....
Accompanying Person(s)	\$.....
Tours	\$.....
Accommodations	\$.....
Total	\$.....

- I enclose a check or money order payable to ISAS International Seminars.
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Number

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3-4 Digit Security Code

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Date