Meetings

16th-20th March 2008

Infrared Technology and Applications XXXIV (DS28) Part of the SPIE International Defense and Security Symposium

Venue Orlando World Center Marriott Resort and Convention Center • Orlando, FL USA

Conference Chairs: Bjørn F. Andresen, Elbit Systems Electro-Optics ElOp Ltd. (Israel);
Gabor F. Fulop, Maxtech International, Inc.;
Paul R. Norton, U.S. Army Night Vision & Electronic Sensors Directorate

Information: Bjørn F. Andresen, andresen@netvision.net.il
Gabor F. Fulop, gfulop@maxtech-intl.com
Paul R. Norton; p.norton@verizon.net

20th – 23rd March, 2008

Veterinary Thermal Imaging Seminar
Sponsored by Vetel Diagnostics, San Luis Obispo, CA

For further details see page 35 -38

28th - 30th March 2008

11th National Congress of the Polish Association of Thermology, Zakopane, Poland

REGISTRATION FEE: 200.-Euro

ABSTRACT DEADLINE January 15th 2008.
Please submit to
ajung@wim.mil.pl or a.jung@spencer.com.pl

Abstract form will be published in Thermology International and in Acta Bio-Optica et Informatica Medica

LOCAL ORGANIZING COMMITTEE

Prof. Anna Jung (Chair) Dr Janusz Zuber (deputy Chair)
Dr Boleslaw Kalicki, Dr Alina Goszczyk
mgr inz Piotr Murawski

INTERNATIONAL SCIENTIFIC COMMITTEE

Prof. A. Jung (Poland) Prof. F J. Ring (UK) ,
Prof. J. Mercer (Norway), Prof. I. Benko (Hungary),
Prof. K. Ammer (Austria).,Prof. B.Wiecek (Poland)
Prof. A. Nowakowski (Poland)

Registration fee for non Polish participants will be paid in cash on arrival at the conference.

Registration by e-mail is required before March 1st to ensure hotel reservation. After registration number is issued, delegates are committed to payment of the fee.

Registration includes welcome dinner Saturday 28th - Lunch and accomodation.
Extra night + breakfast Monday + 50.-Euro.

Accompaning person - 150.- Euro.

March in Zakopane is very attractive, being surrounded by the Tatra Mountains covered with snow. The International airport of Krakow is a 2h. journey away. There is good connection from Krakow airport by railway to bus station in direct Zakopane.

Information
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3rd May 2008

NYU Medical Center
550 First Avenue
New York, NY 10016

Title

CRPS/RSD: Diagnostic/Technical Advances in the Understanding of Autonomic Function

Target Audience

Physicians and allied health professionals who have an interest in the diagnosis and management of chronic pain

Course Description

The diagnosis and management of Reflex Sympathetic Dystrophy (RSD)/Complex Regional Pain Syndrome (CRPS), Rheumatological disorders, Vasomotor disorders, Thoracic Outlet Syndrome, Sports Injuries and Migraine headaches will be presented with an emphasis on the role of Computerized Infrared Imaging (CII) /Thermography.

Correlation with other modalities (MRI/EMG etc) will be presented as well as a discussion of how to set up a Thermography laboratory and associated costs. A diverse faculty with an expertise in pain management drawn from the fields of rehabilitation medicine, neurology and veterinary medicine will be presenting.

Statement of Need

Patients with chronic pain are often referred too late for successful treatment. Similarly, patients with RSD/CRPS are often diagnosed too late for successful rehabilitation. There is a need for practitioners to better understand the role of CII/Thermography as a diagnostic tool in the evaluation of chronic pain, and, specifically, to better understand how such technology can be used in making an early diagnosis of RSD/CRPS. The American Academy of Thermology recognizes a current and ongoing need for practitioners to understand that CII is the only non-invasive technology available to image and map disorders of thermoregulation.

Learning Objectives

Utilize Computerized Infrared Imaging (CII) to effectively diagnosis and manage chronic pain in order to improve patient outcomes

Employ CII to make an early diagnosis of RSD/CRPS in patients to allow for prompt rehabilitation

Apply CII to properly diagnose patients with migraine headaches so they can begin appropriate treatment.

Agenda

8:00 am Registration and Continenal Breakfast

8:50 Introduction The Power, Beauty and Vision of Thermography
Mathew H. M. Lee, M.D., M.P.H.

9:00 Thermography-Introduction, Hisory and Representative Cases
Jeffrey M. Cohen, MD Course Director

9:15 AAT Guidelines for Neuro-musculoskeletal Thermography
Robert Schwartz, MD

10:00 Infrared Thermographic Vasomotor Mapping and Differential Diagnosis
Robert G. Schwartz, MD

10:45 Coffee Break

11:05 Thermograpgy in Migraine Headaches and Trigeminal Neuralgia
Srini Govindan, MD

11:35 Thermography and Chronic Regional Pain Syndrome
Bryan O'Young, MD

12:05 Q & A Round Table

12:20 Lunch

1:20 Stress Thermography-Functional Cold H20 Autonomic Challenge Testing
Timothy Conwell, DC

2:05 Recent Advances in Veterinary Thermography
Ram Purohit, DVM, PhD, DACT

2:50 Coffee Break

3:05 How to set up a Thermographic Laboratory and Associated Costs
Philip P. Hoekstra, III, PhD

3:35 Advancements in medical IR high sensitivity applications:fusion IR imaging and 3D IR/MRI softwares
Marcos Brioschi, MD

4:10 Q & A Round Table

4:30 pm Adjournment

Faculty

NYU Faculty

Jeffrey M. Cohen, MD
Clinical Associate Professor of Rehabilitation Medicine
Department of Rehabilitation Medicine
New York University School of Medicine
Medical Director
Kathryn Walter Stein Chronic Pain Laboratory
Rusk Institute of Rehabilitation Medicine

Mathew H. M. Lee, MD
Howard A. Rusk Professor of Rehabilitation Medicine
Chairman, Department of Rehabilitation Medicine
New York University School of Medicine

Bryan O'Young, MD
Clinical Associate Professor of Rehabilitation Medicine
Department of Rehabilitation Medicine
New York University School of Medicine

Guest Faculty

Marcos Brioschi, MD
Pain Center
Department of Neurology
University of Sao Paolo Medical School
Sao Paolo, Brazil

Timothy Conwell, DC
Director, Colorado Infrared Imaging Center
Denver Colorado

Srini Govindan, MD
Neurologist, Neuropathologist and Nuclear Medicine

Department of Neurology, West Virginia University School of Medicine
Wheeling, West Virginia

Philip P. Hoekstra, III, PhD
Therma-Scan, Inc.
Birmingham, Michigan

Ram Purohit, DVM, PhD, DACT
Professor Emeritus
Department of Clinical Sciences
College of Veterinarian Medicine
Auburn University
Auburn, Alabama

Robert G. Schwartz, MD
Medical Director,
Physical Medicine & Rehabilitation
St. Francis Community Hospital
Director, Piedmont Physical Medicine and Rehabilitation
Greenville, South Carolina

30. und 31.Mai 2008

8. gemeinsamer Kongess -
der Deutschen Gesellschaft für Thermographie und Regulationsmedizin
der Gesellschaft für Ozon- und Sauerstoff-Anwendungen in Medizin und Technik (GOS)
der Internationalen Ärztegesellschaft für funktionelle Proteomik (CEIA)

im Steigenberger Hotel: Mannheimer Hof in Mannheim

Anmeldung bei der Geschäftsstelle der DGTR:
Rheinstr. 7
76337 Waldbronn

Tel. 0 72 43 / 6 60 22
Fax 0 72 43 / 6 59 49
mail: sauer@hsauer.de

30th June – 2nd July 2008

6th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2008)
University of Pretoria, Pretoria, South Africa

Detailed information is available on the following website: http://www.africaspecials.com/hefat2008/

ABSTRACTS- Deadline: 28 November 2007.
E-mail abstracts to: hefat2008@mweb.co.za

FINAL PAPERS

Deadline: 30 January 2008 (with registration fee)

2nd -5th July 2008

QIRT 2008 - 9th International Conference on Quantitative InfraRed Thermography at the AGH University of Science and Technology, Krakow, Poland

Conference Organiser:Institute of Electronics
Faculty of Electrical, Electronic, Computer and Control Engineering of the Technical University of Lodz, Poland
and
Faculty of Mining Surveying and Environmental Engineering
AGH University of Science and Technology, Krakow, Poland

The Quantitative Infrared Thermography (QIRT) conference is an international forum, which brings together specialists from industry and academia, who share an active interest in the latest developments of science, experimental practices and instrumentation, related to infrared thermography.

Following conferences in Paris (1992), Sorrento (1994), Stuttgart (1996), Lodz (1998), Reims (2000), Dubrovnik (2002), Brussels (2004), and Padova (2006),

the 9th Quantitative InfraRed Thermography conference, QIRT2008, will take place on July 2-5, 2008 at the AGH University of Science and Technology, Krakow, Poland

CONFERENCE FEE

Regular participants:
The conference fee is € 300 (before May 15, 2008) and € 400 (after May 15, 2008).

The fee covers Conference Procedings, welcome reception and conference dinner, lunches and coffee break facilities, but not the accomodation.

Students:
The conference fee is € 150 (before May 15, 2008) and € 200 (after May 15, 2008). Without Conference Procedings, welcome reception and conference dinner, but including lunches and coffee break facilities.

Accompanying persons: The conference fee is € 100. The price includes welcome reception and conference dinner.

Pre-conference course

On Wednesday, July 2, 2008, preceding the conference, the following courses will be organised:

A) Basic Thermography (4 hours)

by Prof. X. Maldague, Université Laval, Canada
by Prof. V. Vavilov, Tomsk Polytechnic University, Russia

Introduction

Mechanisms of heat transfer
conduction, convection, radiation

Basics of InfraRed
- Radiation laws (emissivity, absorptivity, reflectivity)
- Radiometry and temperature measurement
- Noise considerations

Solving thermal problems by mathematical modelling
- Transient 1D analytical modelling
- Numerical modelling for 1D, 2D, 3D geometry in solids materials

On thermal stimulation in the active approach
- Pulse thermography
- Step heating (long pulse)
- Lockin thermography
- Vibrothermography

Experimental techniques
IR Detectors
Experimental set-up

Deployment, data processing and applications
Data processing
Applications

(B) Applications of Thermography to Thermo-Fluid-Dynamics (3 hours)

by Prof. G. M. Carlomagno, Universita di Napoli Federico II, Italy

Basics of infrared thermography

The fundamental laws

Performance of an infrared scanning radiometer

Restoration of the thermal image

Heat flux sensors for convective heat transfer measurements

Operating modes

Detailed applications of the:
heated-thin-foil steady state technique
thin-film sensor unsteady technique

Other application examples, in brief

Conclusions

(C)Application of thermography to buildings (3hours)

by Prof. E. Grinzato, CNR-ITC, Padova, Italy

Introduction

From the energy to the surface temperature

Thermal model of buildings in steady and transient regime

IR Thermography indoor and outdoor

Boundary conditions monitoring

Evaluation of thermal properties of building materials:
Thermal diffusivity
Thermal effusivity
Thermal conductivity
Heat Capacity

The energy saving problem

NDE of structure strengthening

Moisture detection on buildings

Envelope and Heating Ventilating Air-Conditioning (HVAC) plant performances

Case study: floor and ceiling radiant heating systems

Heritage Buildings:
Decay of the structure and finishing
Hidden structures location and identification (NDT)
Painted surfaces Non Destructive Evaluation (NDE)

Conclusions

(D) Medical Thermography (1 day)

by Prof. E. F. J. Ring, Dr P. Plassmann, Prof. K. Ammer, Dr R. Thomas; Medical Imaging Research Group, Faculty of Advanced Technology, University of Glamorgan, UK

Historical Introduction, *F. Ring*

IR Detectors and cameras, *R. Thomas*

Quality Assurance in Thermography, *P. Plassmann*

Principles of thermal physiology, *K. Ammer*

Film, Hot and cold "Living Body", *F. Ring*

Standard protocols for thermography, *F. Ring*

Causes of human temp. increase & decrease, *K. Ammer*

Provocation tests, *F. Ring*

Image processing principles, *P. Plassmann*

Educational resources, *K. Ammer*

(E) Application of dynamic thermography to Nondestructive Testing (3 hours)

by Prof. G. Busse, University Stuttgart, Germany

Introduction: Constant temperature fields
Thermography with no heating
Thermography with constant external heating
Thermography with constant internal heating:
Vibrothermography
Activation of internal heat sources by selective spectral heating
Resistive heating

Dynamic thermography: response of solids and sub-surface defects
Oscillating temperature fields (Thermal waves, Lockin-Thermography)
Transient thermography (Step function response)
Burst thermography (Principle and applications)
Pulse thermography (Principle and applications)

Methods of Lockin-Thermography and their application
Thermal waves and photothermal detection
Lockin-thermography = phase sensitive thermography= multiplex photothermal imaging
3.1 Lockin thermography with optical excitation (OLT)
Coatings (paint, veneered wood, ceramics on metal.)
Laminates
Electronics

3.2 Lockin thermography with sound or ultrasound excitation (ULT)
(Heating with loss angle or friction: defect-selective NDE)
Cracks
Delamination
Impact
Corrosion

3.3 Induction Lockin thermography (ILT)
Crack tips in metal
Impact damage in CFRP
Disbond in C-SiC-Ceramics

Conclusion
Advantages/Disadvantages as compared to other NDE-methods
Emerging developments

The Courses are scheduled on Wednesday, July 2, 2008.

The tuition is € 100 for one or more courses.

Concerning the QIRT, please consult the QIRT website.

QIRT Journal page: http://qirt.revuesonline.com.

QIRT 2006 page: http://qirt2006.pd.cnr.it.

CONTACT: Please address inquiries to qirt@p.lodz.pl.

Secretary of QIRT2008
Technical Univesity of Lodz (TUL),
Institute of Electronics, Wolczanska 211/215,
PL 90-924 Lodz, Poland

Phone (+48) 42 631 2656, 2657, 2637
Fax (+48) 42 636 2238.

15th November 2008

21st Symposium of the Austrian Society of Thermology,
SAS Hotel Vienna, Austria

Topic: Recent advances in thermology

Deadline for Abstracts: 10thOctober 2008

Electronic submission is preferred and strongly suggested
(Email: KAmmer 1950@aol.com)

Information
Prof K. Ammer, MD, PhD
Austrian Society of Thermology
Hernalser Hauptstr 209/14
Email: KAmmer 1950@aol.com

2009

1st-3rd July, 2009

16th International Conference on Thermal Engineering
and Thermogrammetry (THERMO), Budapest, Hungary

Information
Application Forms and abstracts/papers should be sent to:
Dr. Imre BENKÖ,
MATE Secretariat, House of Technology, III. 318.
H-1372 Budapest, POB. 451., Hungary
Fax: +361-353-1406, Phone: +361-332-9571.,
E-mail: mate@mtesz.hu

/eng/Pages/2009/Thermo2009/index.php and for
previous 15th THERMO :
/eng/Pages/2007/Thermo2007/index.php

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Veterinary Thermal Imaging Seminar
Sponsored by Vetel Diagnostics, San Luis Obispo, CA
March 20 – 23, 2008

Speakers: Tracy Turner, DVM, MS, DACVS, Jim Waldsmith, DVM, Natanya Nieman, DVM, John J. Craig PhD, Gary Orlove, PE, ASNT NDT Level3 TIR. Mike Corcoran, Master Saddler.

(Specific topics subject to change)

Tuition: $650.00 per participant.
26 hours CE Credit Offered.
Course curriculum qualifies for academic portion of Veterinary Thermal Imager certification requirements by the AAT.

Lodging Locations:

***Quality Suites 1631 Monterey Street, San Luis Obispo, CA 93401**
805.541.5001 ** Contact for room rates after 2/1/08

***Sands Suites Motel 1930 Monterey St. SLO, CA. 93401,**
1-800.441.4657, 805.544.0500 www.sandssuites.com ** $109-149/night

***Holiday Inn Express, 1800 Monterey Street, SLO, CA 93401**
805.544.8600. ** Contact for room rates after 2/1/08

Conference Location:
Sands Suites Motel 1930 Monterey St. SLO, CA. 93401, 1-800.441.4657 805.544.0500
www.sandssuites.com.

Course in Veterinary Thermal Imaging

Lectures to take place in Conference Rooms 1 and 2 of the Sands Suites Motel

Thursday March 20, 2008

Time	**Morning Session**
8:00 AM-8:30	Welcome
8:30 AM – 10:45	Thermal Imaging in Veterinary Medicine Today. **Waldsmith**
10:45 AM – 11:00	Break
11:15 AM – 12:00	How to obtain thermal images for studies on equine patients. **Nieman**
12:00 PM – 1:00	LUNCH – Video presentation on Discovery of Infrared.

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1:15 PM – 2:00 Safety concerns while performing thermal examinations on animals. **Nieman**

2:00 PM – 3:00 Anatomy and Physiology topics as they relate to veterinary thermal imaging
Nieman

3:00 PM – 4:00 PM Utilizing thermal imaging as part of an athletic wellness program in Thoroughbred racehorses.
Nieman

Dinner on your own Attendees are encouraged to visit the Farmer's Market downtown San Luis Obispo that starts at 5 PM. (Trolley service to and from downtown available in front of the hotel)

Friday March 21, 2008

8:30 AM-10:00 Thermal Imaging in Wildlife and Marine mammal species
Waldsmith

Break

10:15AM-11:00 History of Thermal Imaging and Instrumentation in Veterinary Medicine.
Turner

11:00 AM-12:00 Normal Mature Equine Thermographic Examination
Turner

LUNCH – Video presentation on how IR cameras are made.

Afternoon session

1:30 PM-2:00 Normal Juvenal Equine Thermographic Examination
Turner

2:00 PM-3:00 Artifacts in the Thermographic Exam
Turner

Break

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3:15 PM-4:00 Research update. Applications of thermal imaging in Equine Performance medicine.
Turner

4:00 PM -5:00 The Foot
Turner

Saturday March 22, 2008 Morning Session

9:00 AM-9: 45 Tendons and Ligaments.
Turner

Break

10:00-11:00 Joint Disease
Turner

11:00-12:00 Back and Muscular Conditions
Turner

12:00 PM- 1:00 **LUNCH – Video on IR camera Environmental testing.**

Afternoon Session

1:30-2:15 Saddle Fit
Corcoran

2:15-2:45 Dynamic Examinations using the High Speed Treadmill
Waldsmith

Break

3:00- 4:30 Picture Archiving and Communication Systems (PACS) and report generation. DICOM and Open Architecture software used in veterinary medicine. Discussion of basic image acquisition, image storage and report writing.
Craig

4:30 – 5:00
Knobology. Hands on session with participants in using their cameras and software. Participants to bring their cameras to this session. Software and computer lab. Demonstration of Flir cameras. Participants to bring their laptop Computers for hands on session. Vetel and Flir staff to assist with individual participants in utilizing their cameras and in report generation.
Waldsmith, Orlove, Vetel Staff and Dr. Turner.

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Sunday March 23, 2008 **Informal wet lab session**

9:00AM - 2:00 PM **The Equine Center, San Luis Obispo**
4850 Davenport Creek Road, SLO, CA. 93401. (805) 541-6367

This is a session for individuals to get one-on-one assistance in thermal imaging technique, camera function, software issues, and report generation. The session will begin with a demonstration of how to perform the basic equine thermal examination and a brief review of artifacts. The Equine Center staff, as well as representatives from Flir and Vetel will be available to work with participants individually with specific issues to further their educational experience.