

# INFRAMATION



## INFRAMATION 2000 CONFERENCE EXPANDED

Due to the overwhelming response to the announcement of the InfraMation 2000 Thermographers Continuing Education Conference, the venue has been expanded to handle an additional 200 registrants. To date, confirmed registrations have been received from Thermographers all over the world including the UK, Poland, Italy, Croatia, Ukraine, Iran, Israel Bulgaria and the US. The conference, which will be held September 24-27, 2000 in Orlando, focuses on the development of effective Thermographic Inspection techniques and procedures in a wide variety of Industrial and Research settings. The conference also serves as a user's meeting for all AGEMA, Inframetrics and FLIR camera users.

42 author/presenters have been confirmed to be delivering material on a wide variety of exciting new developments in the field of Thermographic Inspection. The pre-

senters represent many of the leaders in the Thermographic community today, coming from such companies as Ford, Goodyear Aerospace, Intel, GM, IBM, TVA, UPS, 3M, BP Amoco, Tegg, Southern Nuclear and Oak Ridge National Laboratories.

The expansion of the conference means that an even greater number of Thermography professionals will be allowed to share information and benefit from what promises to be the world's largest gathering of users of Infrared Imaging and Measurement Systems.

The InfraMation 2000 conference is sponsored by The Infrared Training Center and FLIR Systems and is held on an annual basis. Registration information can be obtained at [www.inframation.org](http://www.inframation.org) or call 1 800 GO INFRA for more information. Early registration discounts will apply through July 30, 2000. ♦

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## THERMOGRAPHY IN VETERINARY MEDICINE

By Donna Harper, D.V.M

Infrared thermography (IRT) has been used in medicine for a number of years, and during that time, it has suffered from a reputation of questionable accuracy. In the last few years, that reputation has been vindicated by better equipment, better interpre-



tation of images, and the wisdom of time. We can now look back and observe that the infrared cameras of the past may have been more accurate than was properly understood at that point in medical history as it related to IRT.

Veterinarians have used IRT in veterinary medicine for almost as long as it has been used in medicine, and have slowly developed confidence in its results, as well as an understanding of its value in diagnostics.

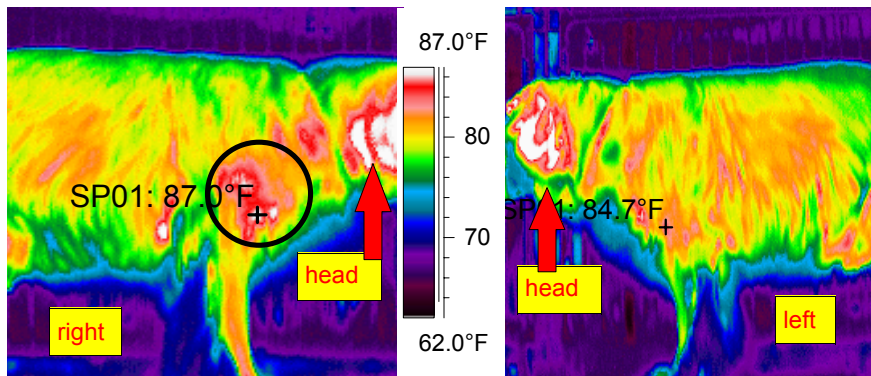
The newer variety of reasonably lightweight and easily portable cameras have helped tremendously, as have more sensitive detectors and colored video output. In medicine in general, the recognition of distinctive infrared patterns is as important as the actual temperatures that may be associated with those patterns. By recognizing developing patterns, we can accurately diagnose disease processes before they become greatly advanced, and other diagnostic tools can be used in a more effective way to con-

firm and expand our knowledge of those disease processes.

In veterinary medicine, IRT can be used to assist in the diagnosis and/or prognosis of

*"In the last few years, that (IRT's) reputation has been vindicated by better equipment, better interpretation of images, and the wisdom of time.*

*(Continued on page 2)*



### Case 1

The first case is a dog that had a lameness of the right front leg for almost one year. X-rays showed no remarkable abnormalities, and although the veterinarian suspected cervical vertebral compression, that condition could not be confirmed.

The IRT images showed no abnormalities except that of abnormal heat in the area of the right shoulder joint, which was 2.3° F hotter than the left shoulder. Once the problem was correctly located, it was successfully treated; IRT was the key to making the proper diagnosis.

(Continued from page 1)

many problems: lameness; back pain/disk problems, muscle tears/strains; tendonitis, fractures; neuritis, periostitis, blood vessel and nerve entrapment, ligament tears, joint injuries, arthritis, sore feet, myositis, laminitis, compromised circulation, wound management, and others. The more we use IRT, the more new problems we find that can benefit from its use.

See the cases on this page and the preceding page to give you an idea of the type of problems that we commonly diagnose with the help of IRT. ♦

*Note: Dr. Harper would like to hear from any infrared thermographers who might be interested in taking a course to learn how to do IRT on animals. Once trained, these thermographers would do contract work for veterinarians or others that would otherwise not have access to IRT. Please reply to Dr. Harper at: [vetmaps@nmia.com](mailto:vetmaps@nmia.com)*

*Donna receives an "IR Thinking" T shirt for her enlightening article.- Editor*

MEET THE STAFF - BO WALLIN

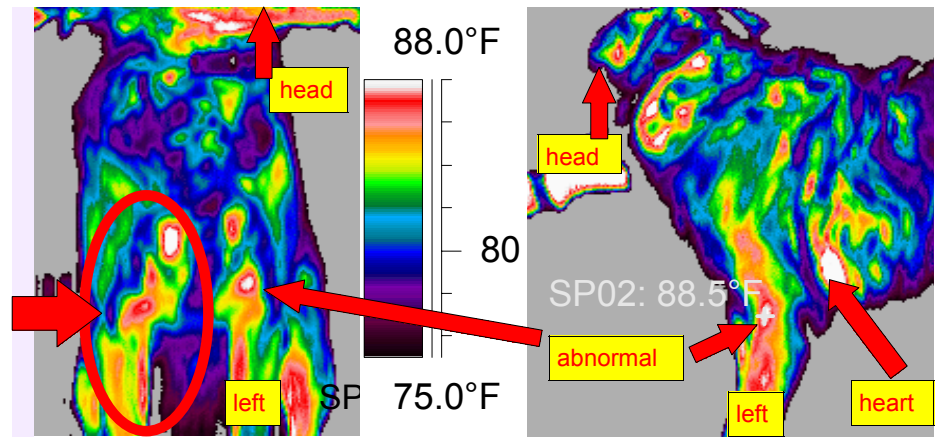
Bo is the International Course Moderator at the **iite** and holds an EN473 Level II Certification.



Mr. Wallin has a B.Sc. degree in Electronics from the Royal Institute of Technology in Stockholm and a M.Sc. degree in Slavic languages. After working for Ericsson, he joined AGA Infrared in 1981 as a trainer, and soon became the R&D product manager.

Bo is back to training, presenting all courses which run in French, Russian and Spanish. He is responsible for supporting training activities within the international region, with a focus on the Far East, and is also our primary R&D instructor.

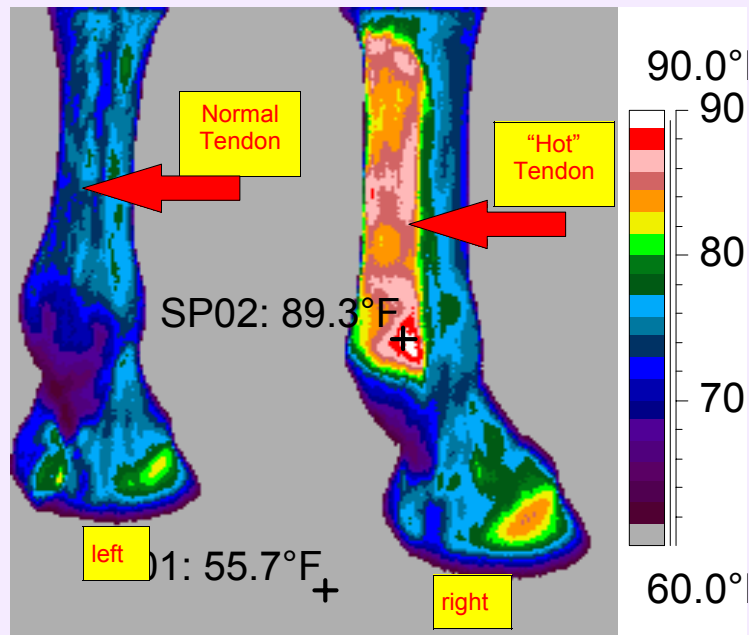
Bo's hobbies include sailing and a passion for opera. ♦



Case 2

The second case is another case involving a dog that was baffling to veterinarians. The dog was lame in the left front leg for over a year, but would show no soreness when the leg was manipulated. Several veterinarians had examined the dog, but none could pinpoint the location of the problem in the leg. IRT was used to locate the abnormality, which was then confirmed by X-ray.

The heat seen in the right front leg is the result of this dog shifting his body weight away from his left front leg, the lame leg, and onto his right front leg which was not lame.



Case 3

The last case is a case involving a horse. This was a Quarter Horse that was used for barrel racing such as you may have seen at a rodeo. The horse had injured a tendon on its right front leg, and had been treated and rested for several months. The owner wanted to put the horse back to work, but the veterinarian advised an IRT exam before putting the horse back into the stress of competition. The IRT exam showed that there was still a significant amount of abnormal heat in the tendon and the surrounding tissue. The horse's rest/recovery time was extended until the tendon returned to normal.

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**About the Infrared Training Center**

The Infrared Training Center offers training and certification in all aspects of infrared thermography use. Our world-class training facilities are located near Boston, Massachusetts, USA and Stockholm, Sweden and have the world's most extensive hands on laboratories for infrared applications. Please join us in exploring the fascinating world of infrared!

Your comments and suggestions about this newsletter are welcomed and encouraged. If you have an interesting application or case study to share, we encourage you to submit it for publication.

Please e-mail to [Gary.Orlove@flir.com](mailto:Gary.Orlove@flir.com) or snail mail to the USA office

## "Hands On" Thermography Training, Certification, and Support

**We're on the Web!**  
[www.infraredtraining.com](http://www.infraredtraining.com)

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### Upcoming Classes - USA

Remember that we also teach customer site training courses at your convenience. Please contact us for more information.

550, 570, PM545, PM575, PM595, SC2000 cameras ONLY

All IR cameras

#### Level I PdM

- May 1-5
- May 8-12
- June 5-9
- June 12-16
- July 17-21
- July 31-August 4
- August 7-11

#### Level II PdM

- August 14-18

#### Level III PdM

- Nov 28-Dec 1

#### Management Certification

- May 22-23
- July 27-28
- August 22-23

#### Software Training

- May 24-25
- June 20-21
- July 25-26
- August 24-25

#### Regional Courses

- May 2-4 (Gillette, WY) - Level I
- May 23-25 (Portland, OR) - Level I
- June 5-8 (Toronto, ON) - Level II
- June 6-9 (Dallas, TX) - Level II

### Upcoming Classes - Sweden

#### Level I CM

- May 8-12 (W19)
- May 15-19 (W20), Spanish
- June 5-9, Russian (W23)
- June 12-16 (W24)
- July 10-14 (W28)
- August 7-11 (W32), Swedish
- August 21-15 (W34)

#### Level II CM

- May 29-June 2 (W22)
- September 4-8 (W36)

#### Level II R&D

- May 22-25 (W21)
- August 28-31 (W35)

#### Advanced Operator Training

- May 4-5 (W18)
- July 6-7 (W27)
- August 17-18 (W33)

#### Management Certification

- September 18-19 (W37)

### Upcoming Classes - Germany

#### Level I

- May 22-26 (W21)
- June 5-9 (W23)
- July 24-28 (W30)

#### Application Seminars

- April 5-7 (W14)
- May 3-5 (W18)

#### Level II

- June 15-17 (W24)
- June 29-July 1 (W26)



## INFRARED CAMERA RENTALS

### DON'T BE LEFT IN THE DARK.

With an Infrared Camera from FLIR Systems, you can see & solve problems before they shut your plant down.

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