

SCIENTIFIC PROGRAM DAY-BY-DAY

Sunday, June 11

16:30-18:00

OPENING CEREMONY

OP01 Welcome by *Søren Balling Engelsen & Ana Garrido-Varo*
Karl Norris Award



Pierre Dardenne

Walloon Agricultural Research Center (CRA-W), Belgium

18:00-21:00

WELCOME RECEPTION (at the exhibition area)

Monday, June 12

8:30-9:30

TOMAS HIRSCHFELD AWARD

OP02 NIR Spectroscopy at Work In
Wood Science and Technology



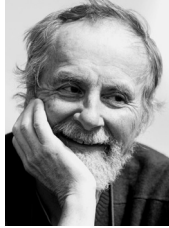
Satoru Tsuchikawa

Nagoya University, Japan

9:30-10:15

PLENARY LECTURE

OP03 NIRS in Big Data Cybernetics



Harald Martens

Dept. Engineering Cybernetics, Norway

10:15-10:45

COFFEE BREAK

10:45-12:00

SESSION: CHEMOMETRICS I

Chair: *Tom Fearn*

10:45

OP04 Orthogonalisation method for robustness improvement of on-line NIR applications

Sylvie Roussel

ONDALYS, France

11:15

OP05 Drop-D: Dimension reduction by orthogonal projection for discrimination

Jean Michel Roger

Irtsea, France

11:30

OP06 New strategies for local modelling for untarget analysis and regression using Near Infrared (NIR) spectroscopic data

Juan-Antonio Fernandez-Pierna

Walloon Agricultural Research Centre, Belgium

11:45

OP07 Batch modelling of NIR data in relative time

Geir Rune Flåten

CAMO Software AS, Norway

12:00-13:30

LUNCH & POSTER SESSION

13:30-14:15

PLENARY LECTURE

OP08 The use of NIRS in the Dairy Industry: New trends and applications



Steve Holroyd
Fonterra, New Zealand

14:15-16:45

SESSION: DAIRY & FOOD

Chair: *Jens Petter Wold*

14:15

OP09 Visualizing model dependencies by projections –
Predictions of individual fatty acids in a complex food matrix

Carl Emil Eskildsen
Nofima, Norway

14:45

OP10 Fine-tuning and cloning of a fiber-optic probe for in situ
monitoring and evaluation of quality of olive oil products

Dolores Pérez-Marin
University of Cordoba, Spain

15:00

OP11 NIRS – rethinking the analysis of sugarcane factory
streams

Stephen Walford
Sugar Milling Research Institute NPC, South Africa

15:15-15:45

COFFEE BREAK

15:45

OP12 Evaluating and increasing the robustness of a NIR sensor
for on-line quality analysis of raw milk

Ben Aernouts
KU Leuven, Belgium

16:15

OP13 On-site monitoring of Grana Padano PDO cheese production using portable XNIR spectrometers

Laura Marinoni

CREA-FLC, Italy

16:30

OP14 NIR and ¹H NMR statistical hetero spectroscopy for non-destructive quality evaluation of peaches

Yasuhiro Uwadaira

National Agriculture and Food Research Organization, Japan

17:00-18:00

POSTER SESSION

18:00-19:30

FOSS Event – Open bar sponsored by FOSS
Outside the Auditorium Foyer at Bella Center
Enjoy Danish Hot Dog and beer with live music

FOSS

Tuesday, June 13

8:30-9:15

PLENARY LECTURE

OP15 Current and future applications of Near-infrared in Pharmaceutical and Biopharmaceutical Industry



Erik Skibsted

Novo Nordisk, Denmark

9:15-11:45

SESSION: PHARMA & BIOTECH

Chair: *Birthe Møller Jespersen*

9:15

OP16 Lifecycle Management of process analytical technologies in Pharma/ Biopharma Industries: Integrating analysis with process control

Francisca Folque Gouveia

4Tune Engineering Ltd., Portugal

9:45 **OP17 Extracting and monitoring particle size distribution information for pharmaceutical crystallisation process using spatially and angularly resolved Visible-NIR Spectra**
Yi-Chieh Chen

University of Strathclyde, United Kingdom

10:00 **OP18 Qualitative and quantitative monitoring the ethanol precipitation process in human albumin separation by near infrared spectroscopy**

Hengchang Zang

Shandong University, China

10:15-10:45 **COFFEE BREAK**

10:45 **OP19 Identification of fengdou produced from different dendrobium species by a handheld NIR Spectrometer based on DLP Technology and Cars-Plsda evaluation**

Hui Yan

Jiangsu University of Science and Technology, China

11:15 **OP20 Determination of lactase activity using Near-Infrared Spectroscopy**

Mathias Schilling

Metrohm AG, Switzerland

11:45 **Presentation of ICNIRS2019**

Roger Meder

Australia

12:00-13:30 **LUNCH & POSTER SESSION**

13:30-14:15 **PLENARY LECTURE**

OP21 Could Near Infrared Spectroscopy be useful to digital agriculture?



Véronique Bellon-Maurel

Irstea, France

14:15-16:45

SESSION: WATER, SOIL & ENVIRONMENT

Chair: *Vincent Baeten*

14:15

OP22 Predicting Nutritional Quality for koala habitat assessment using Near-Infrared Spectroscopy

Jessie Au

Australian National University, Australia

14:45

OP23 Use of FT-NIR Spectroscopy for the detection of residues from wood processing industry in the pellet sector

Manuela Mancini

Università Politecnica delle Marche, Italy

15:00

OP24 Potential of polarized Light Spectroscopy to predict rheological parameter of sludges in wastewater treatment plants

Alexia Gobrecht

Irstea, France

15:15-15:45

COFFEE BREAK

15:45

OP25 On different roles of water in soft contact lenses – Near Infrared and Aquaphotomics study

Roumiana Tsenkova

Kobe University, Japan

16:15

OP26 Investigation of the feasibility for using NIRS for on-line monitoring of the mineral content and other impurities in reused industrial process water

Kasper Borg Damkjær

University of Copenhagen, Denmark

16:30

OP27 Comparison of two handheld NIR Spectrometers applying PLS-DA and Simca models for determination of the mahogany wood provenance

Tereza Pastore

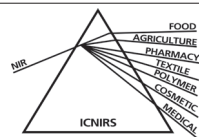
Forest Products Laboratory, Brazil

17:00-17:15

BREAK

17:15-19:00

General Council Meeting of ICNIRS



17:00-18:00

POSTER SESSION

19:15-21:15

Bruker Event – OPEN BAR sponsored by Bruker
Auditorium Foyer at Bella Center
Reception with food & drinks



Wednesday, June 14

8:30-9:15

PLENARY LECTURE:

OP28 NIRS in process control ... time is on my side



Frans van den Berg
University of Copenhagen, Denmark

9:15-12:00

SESSION: PROCESS ANALYTICAL TECHNOLOGY

Chair: *Frederico Marini*

9:15

OP29 Applying extreme value theory on Near Infrared Spectroscopy predictions of moisture content in milk powder

Peter Skou

University of Copenhagen, Denmark

9:45

OP30 From laboratory to the continuous manufacturing line: Update of a NIR Calibration model for tablets' content uniformity evaluation

Remo Simonetti

Janssen Pharmaceutical Companies of Johnson & Johnson,
Italy

10:00 **OP31 Particle size distribution estimation of suspensions based on bulk scattering properties**

Annelies Postelmans

KU Leuven, Belgium

10:15-10:45 **COFFEE BREAK**

10:45 **OP32 Monitoring of lamination and impregnation procedures in textile processing by Near-Infrared Chemical Imaging**

Tom Scherzer

Leibniz Institute of Surface Modification, Germany

11:15 **OP33 Fusing NIR and process sensors data for polymer production monitoring**

Marina Cocchi

University of Modena and Reggio Emilia, Italy

11:30 **OP34 Model system based scalability test and comparison of NIR and Raman Spectroscopy by the on-line prediction of the glucose concentration of Cho cell cultivations**

Benze Kozma

Budapest University of Technology and Economics, Hungary

11:45 **OP35 Spectroscopic raw material fingerprinting as an early stage step in a monitoring strategy for industrial pectin extraction**

Ricardo Caroco

Technical University of Denmark (DTU), Denmark

12:00-13:30 **LUNCH & POSTER SESSION**

13:30-14:15 **PLENARY LECTURE**

OP36 How to stop worrying about calibrations and embrace the benefits of NIR?



Daniel Cozzolino

Central Queensland University, Australia

- 14:15-16:45 **SESSION: AGRICULTURE**
Chair: *Dolores Perez-Marin*
- 14:15 **OP37 Random forest approach for modelling on-line VIR-NIR Spectroscopy of soil total nitrogen and total carbon for different scale datasets**
Said Nawar
Cranfield University, United Kingdom
- 14:45 **OP38 Classification of citrus fruit with ensemble techniques**
Kerry Walsh
Central Queensland University, Australia
- 15:00 **OP39 Application of local regression methods to NIR Spectra database of citrus fruits for the assessment of internal quality**
María-Teresa Sánchez
University of Cordoba, Spain

15:15-15:45 **COFFEE BREAK**

- 15:45 **OP40 Performance comparison of bench-top, Hyperspectral Imaging, hand-held and pocket NIR Spectrometers: The example of protein quantification in wheat**
Vincent Baeten
Walloon Agricultural Research Center (CRA-W), Belgium
- 16:15 **OP41 Calibrations for the determination of minor fiber components**
Franklin Barton
LLS Instruments, Inc., United States of America
- 16:30 **OP42 Classification of citrus fruit with ensemble techniques**
Eloise Keeffe
Sugar Research Australia, Australia

16:45-18:00 **POSTER SESSION**

- 19:30-00:00 **Gala Dinner at Langelinie Pavillon**
Ticket required.
Transfer departures from Bella Center at 18:30!

Thursday, June 15

8:30-9:15

PLENARY LECTURE

OP43 Theoretical and technical advancements of NIRS and its operational impact in industry



Christian Huck
Universität Innsbruck, Austria

9:15-10:15

SESSION: THEORY & INSTRUMENTATION

Chair: *Franklin Barton*

9:15

OP44 Long wavelength Near-Infrared Transmission Spectroscopy using a supercontinuum laser: Prediction of beta-glucan content in barley

Tine Ringsted
University of Copenhagen, Denmark

9:45

OP45 A handheld multispectral sensor for the separation of scattering and absorption properties

Robbe Van Beers
KU Leuven – MeBioS, Belgium

10:00

OP46 Towards imaging Micro-Spectrometers for airborne applications

Dilusha Silva
The University of Western Australia, Australia

10:15-10:45

COFFEE BREAK

10:45-12:00 **SESSION: CHEMOMETRICS II**

Chair: *Åsmund Rinnan*

10:45 **OP47 Setting local rank constraints using orthogonal projections for Image Resolution Analysis: Application to the determination of a low dose pharmaceutical compound**

Nathalie Gorretta

Irstea, France

11:15 **OP48 In the neighborhood: Advances in local modeling for calibration and classification**

Federico Marini

University of Rome "La Sapienza", Italy

11:30 **OP49 Classification with NIR Spectra using Bayes rule and kernel density estimates**

Tom Fearn

University College London, United Kingdom

11:45 **OP50 Near Infrared Calibration with linear mixed models**

Sharon Nielsen

Charles Sturt University, Australia

12:00-13:30 **LUNCH & POSTER SESSION**

13:30-14:15 **PLENARY LECTURE**

OP51 Clinical Neuro-Monitoring with Diffuse Correlation Spectroscopy



Maria Angela Franceschini

Harvard Medical School, United States of America

- 14:15-16:45 **SESSION: HYPERSPECTRAL IMAGING**
Chair: *José Manuel Amigo*
- 14:15 **OP52 On-line detection of wooden breast syndrome in chicken fillets by Hyperspectral NIR Imaging**
Jens Petter Wold
Nofima, Norway
- 14:45 **OP53 Data dimensionality reduction strategies for fast exploration and classification of large datasets of Hyperspectral Images**
Rosalba Calvini
University of Modena and Reggio Emilia, Italy
- 15:00 **OP54 Cross-polarised VNIR Hyperspectral Reflectance Imaging for mapping moisture content and texture of banana slices during drying**
Nghia Nguyen Do Trong
KU Leuven, Belgium
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- 15:15-15:45 **COFFEE BREAK**
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- 15:45 **OP55 Bacteria cell classification with Hyperspectral Microscope Imaging and multivariate analysis**
Seung-Chul Yoon
US Department of Agriculture, United States of America
- 16:15 **OP56 Hyperspectral Imaging of lateritic nickel deposits in New Caledonia**
Erick Ramanaidou
CSIRO, Australia
- 16:30 **OP57 Increased sensitivity in NIR Hyperspectral Imaging by enhanced background noise subtraction**
Torbjørn Mehl
Norwegian University of Life Sciences, Norway
- 16:45-17:30 **CLOSING CEREMONY**
Highlights from ICNIRS2017
Farewell and see you again in Australia for ICNIRS2019!