Program-NIR2009

2009.10.06

Mon 9 Nov

Time	Title	Speaker	Affiliation
08.30-09.00	**Openning ceremony**		
09.00-09.20	**K1 NIR History: How to set up an NIR networking system for agricultural products?**	**Phil Williams**	**PDK Projects (*Former Canadian Grain Commission*), Canada**
	Session 1: Agriculture	**Chair: Pierre Dardenne**	**Walloon Agricultural Research Centre (CRA-W), Belgium**
09.20-09.45	**01.I NIRS for sustainable agricultural development and protection from food deficiency**	**Graeme Batten**	**Sea Spec; Chief Editor, JNIRS, Australia**
09.45-10.00	**01.01** Tracking of deionised water and deuterated water in wheat by NIR hyperspectral imaging	Paul J. Williams	Stellenbosch University, South Africa
10.00-10.15	**01.02** The use of hyperspectral imaging to detect mildew damage in wheat samples	Muhammad Shahin	Canadian Grain Commission, Canada
10.15-10.45	*Coffee Break, Exhibitions*		
	Session 1: Agriculture (*continue*)	**Chair: Akifumi Ikehata**	**National Food Research Institute, Japan**
10.45-11.00	**01.03** Classification of grass samples containing or free of endophytes using NIR and extended canonical variates analysis (ECVA)	Johannes Jørgensen	Aarhus University, Denmark
11.00-11.15	**01.04** Moisture content analyzer for natural rubber sheet by handheld NIR spectrometer	Ronnarit Rittiron	Kasetsart University, Thailand
11.15-11.30	**01.05** Time-of-flight NIRS for detecting sugar and acid contents in thick peel fruit	Yohei Kurata	Nagoya University, Japan
11.30-11.45	**01.06** Outer product analysis applied to time-resolved reflectance (TRS) and NIR reflectance spectra of apples	Stefania Barzaghi	Research Centre for Fodder Crops and Dairy Production (CRA-FLC), Italy
11.45-12.00	**01.07** Development of an NIR sorting machine for detecting internal disorder and quality of mangosteens	Sontisuk Teerachaichayut	King Mongkut's Institute of Technology Ladkrabang, Thailand
12.00-13.00	*Lunch (4F)*		
	Session 1: Agriculture (*continue*)	**Chair: Ana Garrido-Varo**	**University of Cordoba, Spain**
13.00-13.15	**01.08** Use of VIS-NIR system combined with multispectral image analysis in spinach seed	Merete-Halkjær Olesen	Aarhus University, Denmark
13.15-13.30	**01.09** Calibration pixel selection for hyperspectral discrimination of ruminant and fish animal by-products	Cecilia Riccioli	University of Cordoba, Spain
13.30-13.35	**01.10** Starch and sugar – the assessment of maturation and ripening of fruit by short wave NIRS (P)	Kerry B. Walsh	Central Queensland University, Australia
13.35-13.40	**01.11** Use of peel spectral information to improve titratable acidity prediction in intact oranges by NIRS in long wavelength region (NoP)	Anupun Terdwongworakul	Kasetsart University, Thailand
13.40-13.45	**01.12** Potential of genetic algorithm and support vector regression to evaluate organic matter content of manure composts by NIRS (P)	Lujia Han	China Agricultural University, China
13.45-13.50	**01.13** Use of NIRS for the estimation of total isoflavone content in single seed soybean (P)	Tetsuo Sato	National Agricultural Research Center for Kyushu Okinawa Region (KONARC), Japan
13.50-13.55	**01.14** Rapid screening by NIRS for sugarcane smut resistance to improve breeding and selection outcomes (P)	Deborah Purcell	BSES Limited, Australia

Mon 9 Nov	Session 2: Food	Chair: Roberto Giangiacomo	Research Unit for Agro-food processes (CRA-IAA), Italy
13.55-14.20	02.I Role of NIRS in the enhancement of food safety monitoring and food authentication	Gerry Downey	Irish Agriculture and Food Development Authority (TEAGASC), Ireland
14.20-14.35	02.01 Direct calculation of amylose-amylopectin ratios and other proximates by curve fitting of NIR reflectance spectra of cereal flours	Adrian Haiduc	Nestle PTC Orbe, Switzerland
14.35-14.50	02.02 Testing the ability of FT-NIR to determine the αs_1-casein and β-casein content in individual milk samples	Tiziana Cattaneo	Research Centre for Fodder Crops and Dairy Production (CRA-FLC), Italy
14.50-15.05	02.03 Detection of melamine contamination by NIRS and NIR microscopy techniques: which perspectives and limits?	Vincent Baeten	Walloon Agricultural Research Centre (CRA-W), Belgium
15.05-15.30	Coffee Break, Exhibitions		
	Session 2: Food (continue)	Chair: Steve Holroyd	Fonterra Co-operative Group, New Zealand
15.30-15.45	02.04 Portable NIR reflectance spectroscopy for assessing flesh quality of aquaculture produce	Malcolm Brown	CSIRO Marine and Atmospheric Research, Australia
15.45-16.00	02.05 Novel NIR transflection measurements for non-contact core temperature of processed meat products	Marion O'Farrell	SINTEF ICT, Norway
16.00-16.15	02.06 Ability of on site NIRS to predict shelf life extension of pork meat	Begoña de la Roza-Delgado	Regional Institute for Research and Agro-Food Development, Spain
	Session 2: Food (continue)	Chair: Marena Manley	Stellenbosch University, South Africa
16.15-16.30	02.07 Non-destructive in vivo classification of Iberian pigs measured with a handheld NIR digital transform spectrometer	Equardo Zamora-Rojas	University of Cordoba, Spain
16.30-16.45	02.08 Quantitative analysis of meat spoilage using VIS/NIR spectral imaging	Jens-Michael Cartensen	Videometer A/S, Denmark
16.45-16.50	02.09 Monitoring water content using multispectral imaging and NIR in minced meat preparation process (P)	Bjørn Dissing	Technical University of Denmark, Denmark
16.50-16.55	02.10 Imaging water in bread (NoP)	Flemming Moller	Danisco A/S, Denmark
16.55-17.00	02.11 Validation of NIRS analysis in authentication of fresh and frozen-thawed fish products (P)	Luca Fasolato	University of Padova, Italy
17.00-17.05	02.12 Identification of honey authenticity by NIRS (P)	Panmanas Sirisomboon	King Mongkut's Institute of Technology Ladkrabang, Thailand
	Session 3: Networking-Applications	Chair: Richard Streamer	Foss NIRSystems, Australia
17.05-17.20	03.01 Standardisation of factory online cane analysis systems for the NIR measurement of Brix and Pol	David Donald	BSES Limited, Australia
17.20-17.25	03.02 Sugarcane analysis system using NIR networking system (P)	Eizo Taira	University of the Ryukyus, Japan
17.25-17.30	03.03 The development of global milk powder calibrations (NoP)	Steve Holroyd	Fonterra Co-operative Group, New Zealand
17.30-19.00	Poster A (Odd numbers) (7F)		

Tue 10 Nov

Time	Title	Speaker	Affiliation
08.30-08.50	**K2 NIR History: Biomedical, pharmaceutical and environmental applications from early routine NIRS to InSb chemical imaging**	**David Wetzel**	**Kansas State University, USA**
	Session 4: Pharmaceutical and PAT	**Chair: Heinz Siesler**	**University of Essen, Germany**
08.50-09.15	**04.I PAT in the pharmaceutical industry: Applying NIRS to gain process understanding through the development process**	**Katherine Bakeev**	**CAMO (*Former* Glaxo-Smith-Kline), USA**
09.15-09.30	**04.01** Simultaneous determination of lamivudine and zidovudine in fixed dose combinations using NIRS	Simone Simões	LAFEPE/UFPE, Brazil
09.30-09.45	**04.02** Identification of counterfeit tablets and authentication of medicines in the international wholesaling supply chain	Sulaf Assi	University of London, UK
09.45-10.00	**04.03** Understanding calibration transfer problems in NIRS: diethylene glycol-glycerol-water mixtures	Nathaporn Hongsrisuk	University of London, UK
10.00-10.30	*Coffee Break, Exhibitions*		
	Session 4: Pharmaceutical and PAT (*continue*)	**Chair: Tsuyoshi Miura**	**Bruker Optics KK, Japan**
10.30-10.45	**04.04** Reliable quantitiative analysis of pharmaceutical suspension using NIRS	Young-Ah Woo	Korea United Pharm., Korea
10.45-11.00	**04.05** The using of NIR process analytical technologies (PAT) in pharmaceutical manufacturing drying processes	Chi-Shi Chen	Pfizer, USA
11.00-11.15	**04.06** Monitoring drug quality using NIR method in the circulation field	Yanchun Feng	National Institute for the Control of Pharmaceutical and Biological Products, China
	Session 4: Pharmaceutical and PAT (*continue*)	**Chair: Katherine Bakeev**	**CAMO, USA**
11.15-11.30	**04.07** NIR as a multitasking technique in the pharmaceutical field	Mafalda Sarraguca	Universidade do Porto, Portugal
11.30-11.45	**04.08** Mixture analysis in hand-held NIR instrumentation	David Day	Polychromix, USA
11.45-12.00	**04.09** Simultaneous determination of chlorogenic acid and baicalin in heat-clearing and detoxicating orally liquid by NIRS (P)	Jidong Yang	Yangtze Normal University and Southwest China Normal University, China
12.00-13.00	*Lunch (4F)*		
	Session 5: Medical and Life Science	**Chair: Yiping Du**	**East China University of Science and Technology, China**
13.00-13.25	**05.I Recent advancement of NIR technology in biomedical fields**	**Yukihiro Ozaki**	**Kwansei Gakuin University, Japan**
13.25-13.40	**05.01** A review of indocyanine green contrast agent in surgery	Jarmo Alander	University of Vaasa, Finland
13.40-13.55	**05.02** Testing NIR based skin spectra analyzer system and software with the simulated data generated by genetic algorithm	Timo Mantere	University of Vaasa, Finland
13.55-14.10	**05.03** Using self modeling curve resolution for quantification of NIR spectra of biomedical samples	David Burns	McGill University, Canada
14.10-14.25	**05.04** A Point-of-issue system for detecting platelet components contaminated with bacteria	Sirinnapa Saranwong	National Food Research Institute, Japan

Tue 10 Nov	Session 6: Biology and Environment	Chair: Diane Malley	PDK Projects, Canada
14.25-14.50	**06.I NIRS in environmental research - the value of monitoring complexity**	**William Foley**	**The Australian National University, Australia**
14.50-15.05	**06.01** NIRS as a tool in cultural heritage conservation	Martin Šala	University of Ljubljana, Slovenia
15.05-15.20	**06.02** Use of NIRS to measure leaf water potential	Daniel Cozzolino	The Australian Wine Research Institute, Australia
15.20-15.45	*Coffee Break, Exhibitions*		
	Session 6: Biology and Environment (*continue*)	**Chair: James Reeves, III**	**USDA-Beltsville, USA**
15.45-16.00	**06.03** Feasibility of predicting several forms of phosphorus and phosphorus retention capacity in Canadian Prairie soils by NIRS	Diane Malley	PDK Projects, Canada
16.00-16.15	**06.04** Prediction of biochemical methane potential of municipal solid wastes and understanding of their biodegradability by NIRS	Mathiew Lesteur	INRA, France
16.15-16.30	**06.05** Rapid determination of methoxyl groups in plant fibrous material by NIRS	Yimin Xie	Hubei University of Technology, China
	Session 6: Biology and Environment (*continue*)	**Chair: Anupun Terdwongworakul**	**Kasetsart University, Thailand**
16.30-16.45	**06.06** Discrimination of wood origin with NIRS	Anna Sandak	Trees and Timber Istitute Ivalsa/CNR, Italy
16.45-17.00	**06.07** NIRS for mechanical stress grading of sawing lumber	Takaaki Fujimoto	Hokkaido Forest Products Research Institute (HFPRI), Japan
17.00-17.15	**06.08** Determination of moisture content and specific gravity of Pinus taeda discs using NIR hyperspectral imaging system	Laurence Schimleck	The University of Georgia, USA
17.15-17.30	**06.10** Prediction of kraft pulp yield in Eucalyptus: an inter-lab study	Roger Meder	CSIRO Plant Industry, Australia
17.30-19.00	**Poster B (Even numbers) (7F)**		
19.00-22.00	*Buchi Evening (Garden Terrace, 8F)*		

Wed 11 Nov

Time	Event		
08.30-08.40	**Award Ceremony: Thomas Hirschfeld Award (THA) and Buchi Award (*Sponsored by Buchi)***	**Chair: Peter Flinn**	**Chairperson, International Council for Near Infrared Spectroscopy (ICNIRS)**
08.40-09.00	**A1** How to get beautiful NIR spectra?	THA 2009 Winner: Sumio Kawano	National Food Research Institute, Japan
09.00-09.20	**A2** Alternative common basis for wavelet compression of NIR spectra and their application to food samples	Buchi Award 2009 Winner: Monica Casale	University of Genova, Italy
09.20-09.45	*Coffee Break, Exhibitions*		
09.45-12.15	**ICNIRS General Meeting**		
12.15-12.20	**Taking a group photo**		
12.20-13.00	*Lunch (4F)*		
13.30-17.30	***Mid-Conference tours (Gather at Hotel Lower Lobby at 13.00 for Tour A and 13.30 for Tour B)***		
18.30-22.00	***Bruker evening (Pool side, 8F)***		

Thu 12 Nov

Time	Title	Speaker	Affiliation
08.30-08.50	**K3 NIR History: Progress in processing and evaluation of spectral data**	**Karoly Kaffka**	**Corvinus University of Budapest, Hungary**
	Session 7: Chemometrics	**Chair: David Hopkins**	**NIR Consultant, USA**
08.50-09.15	**07.I A Bayesian framework for NIR calibration**	**Tom Fearn**	**University College London, UK**
09.15-09.30	**07.01** Two-dimension correlation analysis of NIR fractional derivative spectra: correlation with constituent concentration	Jun Uozumi	Hokkai-Gakuen University, Japan
09.30-09.45	**07.02** CovSel: Variable selection for highly multivariate and multi-response calibration	Jean Michel Roger	Cemagref-ITAP, France
09.45-10.00	**07.03** Equivalent separated combination moving window MLR for wavenumbers selection of NIRS analysis	Tao Pan	Jinan University, China
10.00-10.30	*Coffee Break, Exhibitions*		
	Session 7: Chemometrics (*continue*)	**Chair: Yukihiro Ozaki**	**Kwansei-Gakuin University, Japan**
10.30-10.45	**07.04** The PLS database optimization concept	John S. Shenk	Shenk Analytical International, USA
10.45-11.00	**07.05** Methods based on statistics for quantitative modeling of NIR spectra	Xueguang Shao	Nankai University, China
11.00-11.15	**07.06** Minimisation of instrumental noise in the acquisition of FT-NIR spectra by means of Doehlert design and signal processing technique (noP)	Giogia Foca	University of Modena and Reggio Emilia, Italy
	Session 7: Chemometrics (*continue*)	**Chair: Thongchai Suwansichon**	**Kasetsart University, Thailand**
11.15-11.30	**07.07** Random model trees: a competitive off-the-shelf technology for NIRS	Remco Bouckaert	University of Waikato, New Zealand
11.30-11.45	**07.08** Preventing over-fitting in hyperspectral image regression	Aoife Gowen	University College Dublin, Ireland
11.45-11.50	**07.09** A comparison study of scattering correction methods (P)	Silje Ottestad	Nofima Mat, Norway
11.50-11.55	**07.10** Classification of spectra through data compression and spectral mapping for selected consumer plastics for on-line sorting process (P)	Venkataraman Venkateswaran	CEERI, India
11.55-13.00	*Lunch (4F)*		

Thu 12 Nov	Session 8: Chemometrics for Networking	Chair: Phil Williams	PDK Projects, Canada
13.00-13.15	**08.01** Use of the CONDENSE algorithm to optimize calibration databases	Paolo Berzaghi	University of Padua, Italy
13.15-13.30	**08.02** NIR 3rd Party Instrument Networking	John W. Shenk	Unity Scientific, USA
	Session 9: Spectroscopy and Theory	**Chair: Hoeil Chung**	**Hanyang University, Korea**
13.30-13.55	**09.I A major issue in NIRS: How does water interact with organic matter?**	**Akifumi Ikehata**	**National Food Research Institute, Japan**
13.55-14.10	**09.01** Improvement of the measurement methodologies and optical property calculation for double-integrating-spheres system	Huijuan Zhao	Tianjin University, China
14.10-14.25	**09.02** Optical characterization of apple tissue: a multiscale approach	Wouter Saeys	Katholieke Universiteit Leuven, Belgium
14.25-14.40	**09.03** Determination of trace lead in water by on-line enrichment NIR spectra (P)	Yiping Du	East China University of Science and Technology, China
14.40-15.10	*Coffee Break, Exhibitions*		
	Session 10: Chemistry and Polymer	**Chair: Jochen Knecht**	**Buchi Labortechnik AG, Switzerland**
15.10-15.35	**10.I Mid-IR versus NIR Spectroscopy: A Case study of the quality control of bitumen**	**Heinz Siesler**	**University of Duisburg-Essen, Germany**
15.35-15.50	**10.01** Nondestructive and rapid identification of fabric fibers using NIRS	Hongfu Yuan	Beijing University of Chemical Technology, China
15.50-16.05	**10.02** Novel NIR reflection spectroscopic methods for the simultaneous determination of nanomaterial's properties	Christian Huck	Leopold-Franzens University, Austria
16.05-16.20	**10.03** Monitoring of the thickness of silica layers in the submicron range by NIR reflection spectroscopy	Tom Scherzer	Leibniz Institute of Surface Modification (IOM), Germany
16.20-16.35	**10.04** Understanding the molecular interaction and crystallization behaviours in polymer blends of poly (3-hydroxybutyrate) and cellulose acetate butyrate	Nattaporn Suttiwijitpukdee	Kwansei-Gakuin University, Japan
	Session 10: Chemistry and Polymer (*continue*)	**Chair: Satoru Tsuchikawa**	**Nagoya University, Japan**
16.35-16.50	**10.05** Hyperspectral NIR image analysis of a phenol formaldehyde adhesive curing process	Tom Lillhonga	Novia University of Applied Sciences, Finland
16.50-17.05	**10.06** Frustated paraffin phase transitions	Frederik Haibach	Polychromix, USA
17.05-17.20	**10.07** Determination of quality parameters of insulating oil by NIRS	Claudete Pereira	Universidade Federal da Paraíba, Brazil
17.20-17.25	**10.08** Determination of properties of lube oil by NIRS and optimization of sample temperature (NoP)	Hoeil Chung	Hanyang University, Korea
17.25-17.30	**10.09** Non-linear absorbance change in dichloromethane and alcohol (P)	Hideko Tanaka	Yokogawa Electric Corp., Japan
19.00-22.00	*Conference Banquet*		

Fri 13 Nov

08.30-08.50	**K4 NIR History: NIRS Instrumentation- The History and Lessons Learned**	**Woody Barton, II**	**Light Light Solutions, USA**
	Session 11: Instrumental/Imaging	**Chair: David Wetzel**	**Kansas State University, USA**
08.50-09.15	**11.I Science based spectral imaging: Combining first principles with new technologies**	**Rudolf Kessler**	**Reutlingen University, Germany**
09.15-09.30	**11.01** Sampling strategies for hyperspectral image models	James Burger	BurgerMetrics SIA, Latvia
09.30-09.45	**11.02** Chemometric pre-treatments for correcting effect of sample morphology in NIR hyperspectral imaging	Carlos Esquerre	Teagasc, Ireland
09.45-10.00	**11.03** Hyperspectral image segmentation: the butterfly approach	Nathalia Gorretta	Cemagref-UMR ITAP, France
	Session 11: Instrumental/Imaging (*continue***)**	**Chair: Gerry Downey**	**Teagasc, Ireland**
10.00-10.15	**11.04** Automatic detection of nematodes in cod fillets by hyperspectral imaging	Agnar Sivertsen	Nofima Marin, Norway
10.15-10.30	**11.05** A new cost-efficient high-speed VIS-NIR spectral imaging system for online sorting of plastic waste	Frank Hollstein	RTT Systemtechnik GmbH, Germany
10.30-10.45	**11.06** External detection of liquid explosives in bottles using NIRS	Hideo Itozaki	Osaka University, Japan
10.45-11.10	*Coffee Break*		
	Session 11: Instrumental/Imaging (*continue***)**	**Chair: Ronnarit Rittiron**	**Kasetsart University, Thailand**
11.10-11.15	**11.07** Handheld short wavelength NIR spectroscopy in Horticulture	Philip Purdy	Integrated Spectronics, Australia
11.15-11.20	**11.08** On-line NIR technique for biorefinery processes monitoring	Mehrdad Arshadi	Swedish University of Agricultural Sciences, Sweden
11.20-11.25	**11.09** High resolution absorption spectroscopy of carbon dioxide by NIR diode laser spectroscopy between 6320 and 6330 cm^{-1} (NoP)	Zhenhui Du	Tianjin University, China
11.25-11.45	**Closing conclusion**	**Ian Murray**	**Scottish Agricultural College, UK**
11.45-12.00	**Closing remark and future of NIRS**	**Pierre Dardenne**	**Walloon Agricultural Research Centre (CRA-W), Belgium**
12.00-12.10	**Conference close**		
12.10-13.30	*Lunch (4F)*		