

# V4 FA&CE 2020

Krakow, June 28 – July 1, 2021

## Programme

Monday, June 28, 2021	
10.00 – 16.00	Workshops
16.30 – 17.45	Symposium Opening
16.30	<u>Paweł Kościelniak</u> , <u>Petr Solich</u>
16.45 OL	<u>Bogusław Buszewski</u> , Viorica Raileanu, Paweł Pomastowski <i>Field flow fractionation and related techniques in the separation and characterization of colloids and biocolloids</i>
17.30 ML	<u>Marián Masár</u> <i>In memory of Prof. Milan Hutta (1955-2021)</i>

**Tuesday, June 29, 2021**

<b>9.00 – 11.20</b>	<b>Session 1</b> <b>Chair: Petr Solich, Bogusław Buszewski</b>	
9.00	KL-1	<u>František Švec</u> <i>Porous polymer monoliths: Versatile materials for a variety of applications</i>
9.30	KL-2	<u>Marcela Segundo</u> <i>Immunoaffinity methods using lab-on-valve platforms: benefits and pitfalls</i>
10.00	SL-1	SCIEX, BioPharma EMEA <u>Stephen Lock</u> , Jean-Charles Berliet, Karsten Hendriks, Marcia Santos, Tingting Li <i>The use of capillary electrophoresis in gene therapy product testing</i>
10.20	KL-3	<u>Mihkel Kaljurand</u> <i>Capillary electrophoresis as a monitoring tool for flow composition determination</i>
10.50	KL-4	Lars Geurink, <u>Cari Sängler – van de Griend</u> <i>Capillary electrophoresis for adenovirus vaccine analysis</i>
<b>11.20 – 11.50</b>	<b>Coffee break</b>	
<b>11.50 – 13.00</b>	<b>Session 2</b> <b>Chair: František Švec, Marcela Segundo</b>	
11.50	IL-1	<u>Jiri Barek</u> , Vlastimil Vyskocil, Pavel Dvorak <i>Novel electrode materials for electroanalytical chemistry in flow systems</i>
12.10	IL-2	<u>Attila Gáspár</u> , Cynthia Nagy, Ruben Szabó, Ádám Kecskeméti <i>Microfluidic enzyme reactors for fast protein digestion</i>
12.30	OP-1	<u>Raquel B. R. Mesquita</u> , António O. S. S. Rangel <i>Are <math>\mu</math>PADs overtaking classical methodologies as diagnosis tools?</i>
12.45	O-P2	<u>Petr Chocholous</u> , Dalibor Šatínský, Petr Solich <i>Enhanced capabilities of Sequential Injection Chromatography</i>
<b>13.00 – 14.00</b>	<b>Lunch</b>	

<b>14.00 – 16.05</b>	<b>Session 3</b> <b>Chair: Mihkel Kaljurand, Bohuslav Gaš</b>	
14.00	IL-3	<u>Petr Kubáň</u> , Petra Itterheimová, Věra Dosedělová, Pavol Ďurč, Jan Příkryl, Guillaume Erny, František Foret <i>Open source capillary electrophoresis</i>
14.20	IL-4	<u>Marián Masár</u> , Peter Troška, Jasna Hradski, Adriána Miškovčíková, Marta Ďuriš, Roman Szucs <i>Microchip electrophoresis for the analysis of complex ionogenic samples</i>
14.40	IL-5	Vyacheslav Bolkvadze, Piret Saar-Reismaa, Mihkel Kaljurand, Merike Vaher, Jelena Gorbatsova, <u>Jekaterina Mazina-Šinkar</u> <i>Advances in drug testing using capillary electrophoresis and native fluorescence</i>
15.00	SL-2	Spektrometria/908 Devices <u>Scott Mellors</u> <i>ZipChip: Achieving the full potential of CE-MS through the use of microfluidic technology</i>
15.20	OP-3	<u>Szymon Dziomba</u> , Aleksandra Steć, Joanna Jońca, Joanna Kasprzyk, Bogdan Lewczuk, Wojciech Piekoszewski, Agata Płoska, Leszek Kalinowski, Bartosz Wielgomas, Małgorzata Waleron, Krzysztof Waleron <i>Capillary zone electrophoresis of extracellular vesicles: what do we know and what we would like to learn?</i>
15.35	OP-4	<u>Jan Petr</u> , Daniel Baron, Petra Švecová, Andrea Šebestová, Tomáš Pluháček <i>Separation of enantiomers by capillary electrophoresis connected with mass spectrometry</i>
15.50	OP-5	<u>Jelena Gorbatsova</u> , Maria Kuhtinskaja, Evelin Halling, Jekaterina Mazina-Šinkar <i>Chloride, bromide, and TFA determination in the mixture of ionic liquids by CE-C4D</i>
<b>16.05 – 16.30</b>	<b>Coffee break</b>	
<b>16.30 – 18.30</b>	<b>Youth Session 1</b> <b>Chair: Attila Gáspár, Petr Chocholous</b>	
16.30	YS-1	<u>Agnieszka Czajkowska</u> , Marta Fiedoruk-Pogrebniak, Kamil Strzelak, Robert Koncki <i>Analytical system for monitoring bacterial growth – part 1</i>
16.45	YS-2	<u>Justyna Głowacka</u> , Kamil Strzelak, Robert Koncki <i>Flow analysis system for enzymatic determination of selected thiols</i>
17.00	YS-3	<u>Iga Malicka</u> , Izabela Lewińska, Łukasz Tymecki <i>Multicommutated flow analysis system with on-line deproteinization for fluorometric creatinine determination</i>

17.15	YS-4	<u>Izabela Lewińska</u> , Mikołaj Speichert, Łukasz Tymecki <i>Microfluidic paper-based analytical devices for colorimetric determination of urinary creatinine</i>
17.30	YS-5	<u>Celestine Vubangsi Gemuh</u> , Burkhard Horstkotte, Petr Solich <i>Functionalization of commercial hydrophilic-lipophilic balanced copolymer for automatic magnetic dispersive micro-solid phase extraction of surface water contaminants</i>
17.45	YS-6	<u>Cynthia Nagy</u> , Adam Kecskemeti, Attila Gaspar <i>Immobilized microfluidic enzymatic reactor with pillar array structure for the rapid digestion of proteins</i>
18.00	YS-7	<u>Francisca T.S.M. Ferreira</u> , Karina A. Catalão, Raquel B.R. Mesquita, António O.S.S. Rangel <i>Novel microfluidic paper-based analytical device for the colorimetric determination of iron in urine samples</i>
18.15	YS-8	<u>Sofia Tvorynska</u> , Jiří Barek, Bohdan Josypčuk <i>Development of amperometric acetylcholine and choline biosensors based on the spatially separated detection and biorecognition part in flow injection analysis</i>

**Wednesday, June 30, 2021**

<b>Wednesday, June 30, 2021</b>		
<b>9.00 – 11.00</b>	<b>Session 4</b> <b>Chair: Marek Trojanowicz, Wolfgang Frenzel</b>	
9.00	KL-5	<u>Víctor Cerdà</u> , Piyawan Phansi, Kaewta Danchana, Sergio L.C.Ferreira <i>POTENTit</i> <i>a software program for potentiometric titrations</i>
9.30	KL-6	<u>Duangjai Nacapricha</u> <i>Microfluidic paper-based analytical devices with in-situ air gap for gas separation and its versatility in direct analysis of samples</i>
10.00	KL-7	<u>Bohuslav Gaš</u> , Petr Bravenec <i>Simul 6 – A fast dynamic simulator of electromigration</i>
10.30	KL-8	Jasmine S. Furter, <u>Peter C. Hauser</u> <i>Purpose Made</i> <i>Capillary Electrophoresis Instrumentation</i>
<b>11.00 – 11.30</b>	<b>Coffee break</b>	
<b>11.30 – 13.00</b>	<b>Session 5</b> <b>Chair: Duangjai Nacapricha, Antonio O.S.S. Rangel</b>	
11.30	IL-6	<u>Burkhard Horstkotte</u> , Kateřina Fikarová, Ivana H. Šrámková, Celestine Gemuh Vubangsi, Hana Sklenářová, Petr Solich <i>Lab-In-Syringe automated sample preparation.</i> <i>Looking back and forward</i>
11.50	IL-7	<u>Edyta Nalewajko-Sieliwoniuk</u> <i>Flow systems and chemiluminescence detection in the determination of phenolic compounds of plant origin</i>
12.10	IL-8	<u>Agnieszka Więckowska</u> <i>Application of flow analysis in surface plasmon resonance spectroscopy - thrombin determination</i>
12.30	OP-6	<u>Hana Sklenářová</u> , Martina Háková, Dalibor Šatínský, Petr Solich <i>Release of active substances from nanofibers tested in sequential injection system</i>

12.45	OP-7	<u>Michał Michalec</u> , Łukasz Tymecki <i>Essentials of customization. 3D printed optical detectors</i>
<b>13.00 – 14.00</b>	<b>Lunch</b>	
<b>14.00 – 15.40</b>	<b>Session 6</b> <b>Chair: Marian Masar, Paweł M. Nowak</b>	
14.00	KL-9	<u>Roman Szucs</u> <i>Capillary electrophoresis of small molecules: Applications and challenges in pharmaceutical analysis</i>
14.30	KL-10	<u>Claudimir Lucio do Lago</u> <i>From silica capillary to microchip and back to the classic</i>
15.00	IL-9	<u>Ewa Poboży</u> <i>Application of pseudostationary phases in capillary electrophoresis</i>
15.20	IL-10	<u>Małgorzata Król</u> , Marlena Nowak, Marta Gładysz, Paweł Kościelniak <i>Application of microemulsion electrokinetic capillary chromatography to forensic examination of lipsticks</i>
<b>15.40 – 16.20</b>	<b>Coffee break</b>	
<b>16.20 – 18.30</b>	<b>Poster Session</b> <b>Chair: Łukasz Tymecki, Ewa Poboży, Burkhard Horstkotte</b>	
16.20	P-1	<u>Sofiiia Tvorynska</u> , Jiří Barek, Bohdan Josypčuk <i>Comparison of biosensors based on different enzymatic mini-reactors for amperometric detection of uric acid using flow injection analysis</i>
16.22	P-2	<u>Mikołaj Sobstel</u> , Łukasz Tymecki, Michał Michalec <i>3D-printed optical flow cell fabricated from transparent materials</i>
16.24	P-3	<u>Michał Ścibisz</u> , Iga Malicka, Izabela Lewińska, Łukasz Tymecki <i>Towards paper-based potentiometric flow sensor for urea determination</i>
16.26	P-4	<u>Karolina Kurdziałek</u> , Izabela Lewińska, Łukasz Tymecki <i>Rational selection of colorimetric urinary protein determination method in paper-based analytical devices and its application to proteinuria diagnostics</i>

16.28	P-5	<u>Jana Šandrejová</u> , Alina Diuzheva, Renáta Chromá, József Balogh, Vasil Andruch <i>An automatic method based on dispersive liquid-liquid microextraction coupled with optical probe detection for determination of nitrate in vegetable and water samples</i>
16.30	P-6	<u>Ján Tóth</u> , Yaroslav Bazel' <i>Modern analytical applications of an automated system with an Optical Immersion Probe (OIP)</i>
16.32	P-7	<u>Paithoon Prasertying</u> , Nanthatchaphon Jantawong, Nuttamon Khoonrueng, Thitaporn Sonsa-ard, Thinnapong Wongpakdee, Duangjai Nacapricha <i>Gilding gold leaf as electrode in electrochemical flow analysis</i>
16.34	P-8	<u>Kitima Sirivibulkovit</u> , Thitaree Pimklang, Pasit Pakawatpanurut, Akhmad Sabarudin, Duangjai Nacapricha, Phoonthawee Saetear <i>Modification of carbon electrode on electrochemical paper-based devices using an electrochemically reduced graphene oxide for enhancement of voltammetric signal</i>
16.36	P-9	<u>Kaewta Danchana</u> , Piyawan Phansi, Kanchana Uraisin, Víctor Cerdà <i>Multicomponent determination based on multilinear regression analysis</i>
16.38	P-10	<u>Karolina Mermer</u> , Justyna Paluch, Grzegorz Siembab, Joanna Kozak <i>Determination of vancomycin in pharmaceutical products using smart photometric detection system</i>
16.40	P-11	<u>Justyna Paluch</u> , Joanna Kozak, Iwona Molęda, Karolina Mermer, Sławomir Kalinowski, Paweł Kościelniak <i>Flow-based module for steam distillation</i>
16.42	P-12	Joanna Kozak, <u>Daniel Kiełbasa</u> , Karolina Mermer, Justyna Paluch, Anna Bonczyk, Stanisława Koronkiewicz, Sławomir Kalinowski <i>Mechanized flow system for iron speciation analysis in water and white wines</i>
16.44	P-13	<u>Ruben Szabó</u> , Cynthia Nagy, Attila Gáspár <i>Development of an in-line enzyme reactor integrated into capillary electrophoresis system</i>
16.46	P-14	<u>Piotr Kowalski</u> , Michał Pieckowski, Natalia Miękus, Ilona Olędzka, Alina Plenis, Anna Roszkowska, Tomasz Bączek <i>Preconcentration techniques in electrophoretic analysis of thyroid hormones</i>
16.48	P-15	<u>Peter Troška</u> , Simona Dobosyová, Marián Masár <i>Determination of carnitines in milk products by microchip electrophoresis with conductivity detection</i>
16.50	P-16	<u>Marta Đuriš</u> , Jasna Hradski, Marián Masár <i>Development of microchip electrophoresis-ion mobility spectrometry coupling for the analysis of food and biological sample</i>

16.52	P-17	<u>Branislav Žabenský</u> , Róbert Bodor, Marián Masár <i>Determination of inorganic and organic acids in coffee samples using capillary electrophoresis</i>
16.54	P-18	<u>Adriána Miškovčíková</u> , Eva Vargová, Jasna Hradski, Marián Masár <i>Determination of carminic acid in food and pharmaceutical samples by microchip electrophoresis with spectrophotometric detection</i>
16.56	P-19	<u>Natalia Miękus</u> , Katarzyna Kowalik, Marta Chyła, Ilona Olędzka, Piotr Kowalski, Anna Roszkowska, Alina Plenis, Natalia Treder, Tomasz Bączek <i>L-tryptophan metabolites determination with the application of solid phase extraction coupled with capillary electrophoresis diode array detection</i>
16.58	P-20	<u>Ilona Olędzka</u> , Natalia Kaczmarczyk, Natalia Treder, Natalia Miękus, Alina Plenis, Piotr Kowalski, Anna Roszkowska, Tomasz Bączek <i>Influence of imidazolium-based ionic liquid on electrophoretic separation of selected biogenic amines</i>
17.00	P-21	<u>Paweł Stelmaszczyk</u> , Magdalena Świądro, Renata Wietecha-Posłuszny, Dominika Dudek <i>Application of dried blood spot method in combination with a capillary electrophoresis in detection of psychotropic drugs in blood</i>
17.02	P-22	<u>Aneta Woźniakiewicz</u> , Małgorzata Gołąb, Iwona Biel, Mateusz Gromba, Michał Woźniakiewicz <i>Application of micelle-assisted extraction for the analysis of nutmeg using capillary electrophoresis</i>
17.04	P-23	<u>Lenka Ryšavá</u> , Jana Dorazilová, Miloš Dvořák, Lucy Vojtová, Petr Sedláček, Pavel Kubáň <i>Development of soluble materials for dried blood spot sampling and analysis</i>
17.06	P-24	<u>Aleksandra Steć</u> , Joanna Jońca, Agata Płoska, Leszek Kalinowski, Bartosz Wielgomas, Małgorzata Waleron, Krzysztof Waleron, Szymon Dziomba <i>Characterization of outer membrane vesicles isolated from Pectobacterium strain producing GFP protein</i>
17.08	P-25	<u>Paweł Świt</u> , Joanna Orzeł, Michał Daszykowski <i>Application of the H-point standard addition method for simultaneous determination of bisphenols in receipts using HPLC-DAD</i>
17.10	P-26	<u>Aneta Woźniakiewicz</u> , Justyna Dobrowolska-Iwanek, Marcelina Rusin, Michał Woźniakiewicz <i>Development of the method for the determination of oligosaccharides in human milk</i>
17.12	P-27	<u>Phoonthawee Saetear</u> , Laurent Leclercq, Agnès Rolland-Sabaté, Jean-Philippe Biron, Joseph Chamieh, Luca Cipelletti, Darryl J. Bornhop, Hervé Cottet <i>Size-based characterization of polysaccharides by Taylor dispersion analysis with photochemical oxidation or backscattering interferometry detections</i>

17:14	P-28	<u>Felicia Auer</u> , Tamas Bihari, Gellert Sipos, Ferenc Darvas, Gabor Jarvas, Andras Guttman <i>Optimized oligosaccharide labelling protocol applying continuous flow catalysis</i>
-------	------	--

**Thursday, July 1, 2021**

<b>9.00 – 10.30</b>	<b>V4 Session</b> <b>Chair: Petr Solich, Joanna Kozak</b>	
9.00	V4L-1 FA	<u>Petr Solich</u> , Petr Chocholouš, Hana Sklenářová <i>History and current status of Flow analysis in Czech Republic</i>
	V4L-1 CE	<u>Petr Kubáň</u> , František Foret <i>Capillary electrophoresis in Czech Republic</i>
9.15	V4L-2 FA CE	<u>Attila Gáspár</u> , András Guttmán, <u>László Hajba</u> <i>Flow analysis and capillary electrophoresis in Hungary</i>
9.30	V4L-3 FA	<u>Łukasz Tymecki</u> <i>Flow analysis in Poland</i>
	V4L-3 CE	Paweł Nowak, <u>Michał Woźniakiewicz</u> <i>Capillary electrophoresis in Poland</i>
9.45	V4L-4 FA CE	<u>Jana Šandrejová</u> , <u>Marián Masár</u> , Jasna Hradski <i>Flow analysis and Capillary electrophoresis in Slovakia</i>
<b>10.00 – 10.30</b>	<b>Panel discussion V4</b> <b>Chair: Michał Woźniakiewicz, Łukasz Tymecki</b>	
<b>10.30 – 11.00</b>	<b>Coffee Break</b>	
<b>11.00 – 12.15</b>	<b>Youth session 2</b> <b>Chair: Cari Sanger van de Griend, Petr Kuban</b>	
11.00	YS-9	<u>Narmin Hamidli</u> , Andrasi Melinda, Nagy Cynthia, Gaspar Attila <i>A comparison of bare silica and coated capillaries for CZE-MS analysis of intact proteins</i>
11.15	YS-10	<u>Věra Dosedělová</u> , Markéta Laštovičková, Jiří Dolina, Štefan Konečný, Petr Kubáň <i>Application of separation techniques in diagnostics of gastroesophageal reflux disease</i>
11.30	YS-11	<u>Małgorzata Gołab</u> , Martyna Przybyłowska, Petr Kubáň, Petra Itterheimová, Michał Woźniakiewicz <i>Determination of atropine and scopolamine by CE-C4D in drugs and plant extracts</i>

11.45	YS-12	<u>Anna Sałdan</u> , Małgorzata Król, Michał Woźniakiewicz, Paweł Kościelniak <i>Application of capillary electrophoresis for examination of disperse dyes extracted from fibers</i>
12.00	YS-13	<u>Olga Kaczmarczyk</u> , Aneta Woźniakiewicz, Justyna Dobrowolska-Iwanek, Paweł Paško, Agnieszka Dąbek-Drobny, Paweł Zagrodzki, Małgorzata Zwolińska-Wcisło, Michał Woźniakiewicz <i>Investigation of short-chain fatty acids profiles in human faeces by the capillary electrophoresis</i>
<b>12.15 – 13.30</b>	<b>Lunch</b>	
<b>13.30 – 15.15</b>	<b>Session 7</b> <b>Chair: Victor Cerda, Hana Sklenářová</b>	
13.30	KL-11	<u>Elias A.G. Zagatto</u> , Fábio R.P. Rocha <i>Expert flow analyzers</i>
14.00	KL-12	<u>António O.S.S. Rangel</u> , Raquel B.R. Mesquita <i>Use of sorbent materials in flow-based modes for the determination of metal ions in recreational waters</i>
14.30	OP-8	<u>Tânia C.F. Ribas</u> , Charles F. Croft, M. Inês, G. S. Almeida, Raquel B.R. Mesquita, Spas D. Kolev, António O.S.S. Rangel <i>Use of a polymer inclusion membrane and a chelating resin for the flow-based multi-determination of metals in waters and soil leachates</i>
14.45	OP-9	<u>Maksym Fershal</u> , Halyna Yankovych, Yaroslav Bazel <i>Kinetic-potentiometric determination of boron in honey using a sequential injection system with integrated [BF<sub>4</sub>]- sensor</i>
15.00	OP-10	<u>Pochivalov Aleksej</u> , Christina Vakh, Andrey Bulatov <i>Automation of switchable-hydrophilicity solvent liquid-phase microextraction based on in-syringe concept</i>
<b>15.15 – 15.45</b>	<b>Coffee Break</b>	

<b>15.45 – 17.00</b>	<b>Session 8</b>	
	<b>Chair: Elias A.G. Zagatto, Edyta Nalewajko-Sieliwoniuk</b>	
15.45	KL-13	<u>Wolfgang Frenzel</u> <i>The role of flow injection analysis and related techniques in atmospheric research and air pollution surveillance</i>
16.15	OP-11	<u>Marta Fiedoruk-Pogrebniak</u> , Agnieszka Czajkowska, Dorota Korsak, Kamil Strzelak, Robert Koncki <i>Analytical system for monitoring bacterial growth – part 2</i>
16.30	OP-12	<u>Kamil Strzelak</u> , Justyna Głowacka, Dorota Korsak, Robert Koncki <i>Lactate determination under flow analysis conditions for clinical and microbiological purposes</i>
16.45	OP-13	<u>Paweł Knihnicki</u> , Bartłomiej Kusior, Jolanta Kochana, Paweł Kościelniak <i>Flow system with direct injection detector for the DPASV determination of cadmium and lead in water</i>
<b>17.00 – 17.30</b>	<b>Closing remarks</b>	
	<u>Paweł Kościelniak</u>	