

# Report on the 12<sup>th</sup> International Conference on Flow Analysis (Flow Analysis XII), 23-28 September 2012, Thessaloniki, Greece

Aristidis Anthemidis

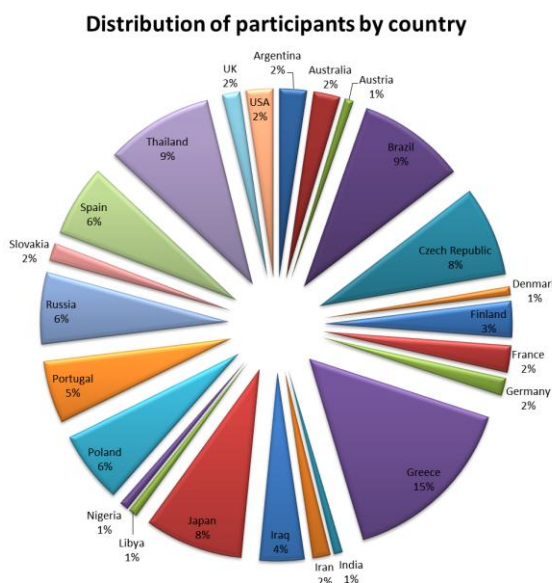
Laboratory of Analytical Chemistry, Department of Chemistry, Aristotle University of Thessaloniki,  
54 124 Thessaloniki, Greece

## 1. Introduction

The series of conferences on Flow Analysis is a five-day scientific forum, covering all areas of modern trends and applications of chemical analysis in flow processing. All International Conferences on Flow Analysis reflect the excitement, enthusiasm, and ingenuity of researchers, practitioners and manufacturers in flow-based analysis.

The 12<sup>th</sup> International Conference on Flow Analysis, “Flow Analysis XII” was held in Grand Hotel Palace, Thessaloniki, Greece 23-28 September 2012 and was organized by the Laboratory of Analytical Chemistry Department of Chemistry of Aristotle University (AUTH) with the collaboration of Japanese Association for Flow Injection Analysis (JAFIA) and Thai Association for Flow-based Analysis (Thai-AFA). This was the first time that Greece hosted this conference, which is regularly held every 3 years since 1979 in Amsterdam, the Netherlands. The Organizing Committee consisted of academic staff and PhD students from the Laboratory of Analytical Chemistry of Aristotle University. The Chairman and Co-Chairman were Aristidis Anthemidis and George Zachariadis respectively.

There were 130 participants from 24 countries from 5 continents yielding a truly international character.



## 2. Scientific Program

The scientific program included 51 oral communications of which 7 keynote lectures and 99 poster presentations.

The conference opened on Monday morning with the

welcoming by Prof. Aristidis Anthemidis and Prof. George Zachariadis followed by the Governor of Macedonia Northern Greece Mr. Apostles Tzitzikostas. Honorary awards were presented to the inventors of Flow Injection Analysis (FIA / SIA) Prof. Jarda Ruzicka (USA) and Prof. Elo Hansen (Denmark) for their great contribution to the development of flow analysis. Also, honorary award was presented to Prof. John Stratis (Aristotle University of Thessaloniki, Greece) for his contribution in Analytical Atomic Spectrometry more than 40 years.



Two outstanding Opening Lectures were given by Elo Hansen under the title “A generation with flow injection analysis – and passing the torch” and by Jarda Ruzicka under the title “Analytical Chemistry and its Invisible Presence in our Everyday Life”. Keynote Lectures were given by Víctor Cerdà (University of the Balearic Islands, Spain) on the way of electronic and mechanical components production for flow analysis in the workshop, Shoji Motomizu (Okayama University, Japan) on computer-controlled fluid flow chemical analysis (CC-FCA) for toxic elements by voltammetry and spectroscopy, Ian McKelvie (University of Melbourne, Australia) on flow analysis techniques for underway monitoring of macronutrients in estuarine and marine systems, Paul Worsfold (Plymouth University, United Kingdom) presented an overview of the application of FIA coupled with luminescence detection for the determination of key-trace elements such as iron, cobalt, zinc and aluminium in ocean waters, Purnendu K. Dasgupta (University of Texas at Arlington, USA) reported all what possibly researchers do not know about the optical absorbance measurements, Marcela Segundo (University of Porto, Portugal) highlighted the benefits of hyphenation and the possibilities to be exploited in the near future of flow analysis and HPLC and Marek Trojanowicz (University of Warsaw, Poland) presented the currently used flow methods in chiral analysis.

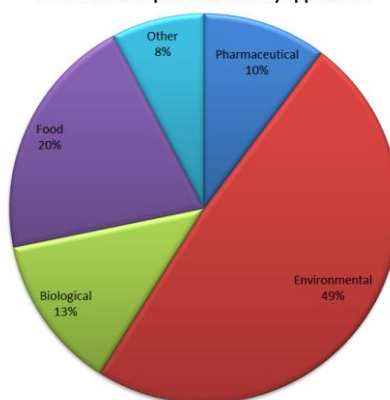
Invited Lectures were given by António Rangel

(Universidade Católica Portuguesa, Portugal) who presented some recent contributions on the way of monitoring dynamic systems by using flow analysis, by Manuel Miró (University of Balearic Islands, Spain) who reviewed the current role of the mesofluidic lab-on-a-valve platform in (bio)analytical sciences, by Burkhard Horstkotte (Mediterranean Institute for Advanced Studies, Spain) who overviewed the latest applications of in-syringe dispersive liquid-liquid extraction and in-syringe Agitation, by Anastasios Economou (National and Kapodistrian University of Athens, Greece) who reports the construction and characterization of plastic electrochemical micro-flow cells with integrated injection-molded polymer electrodes for applications in electroanalysis and electrochemiluminescence, by Erwin Rosenberg (Vienna University of Technology, Austria) presenting some recent sample preparation procedures in flow-injection ESI mass spectrometry for environmental and food analysis and also for analysis of natural substances,

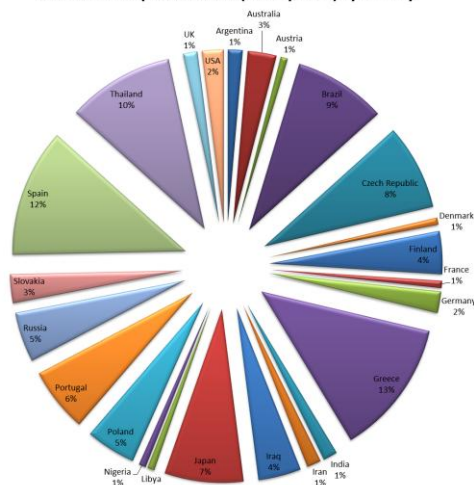
spectrophotometric methods.

Taking a thorough look at the presentations and the following diagram distribution, it is obvious that environmental analysis reflects the vast majority of flow analysis applications, followed by food and biological analytical assays.

**Distribution of presentations by application**



**Distribution of presentations (oral + poster) by country**



by Antony Calokerinos (National and Kapodistrian University of Athens, Greece) focusing on FIA-CL methods for the evaluation of phenolic profile and antioxidant capacity of natural products, by Paul S. Francis (Deakin University, Australia) who reviewed the hyphenation of flow analysis and chemiluminescence giving the advances, applications and limitations as well, by Tadao Sakai (Aichi Institute of Technology, Japan) introducing a novel simultaneous injection effective mixing analysis system (SIEMA) for albumin, bilirubin and creatinine determination in urine, by Petr Chocholouš (Charles University in Prague, Czech Republic) overviewing the current status of sequential injection chromatography (SIC) in last ten years, by Spas Kolev (University of Melbourne, Australia) presenting a gas-diffusion flow injection analysis method for determination of acetaldehyde in saliva, by Duangjai Nacapricha (Mahidol University, Thailand) discussing and showing on-line vaporization devices for flow analysis of volatile compounds, and by Norio Teshima (Aichi Institute of Technology, Japan) who proposed a novel scaled-down distillation system for phenol index which was evaluated by flow/sequential injection

### 3. Social events

The welcome cocktail, the scientific program, the gala dinner, the accommodation and the lunches were located in the same hotel facilitating the participants to stay together and have fruitful communications.



Flow Analysis XII was a great opportunity especially for young researchers to broad their scientific horizons, compare their accomplishments as well as learn the new trends in the field of automatic and automated chemical analysis.



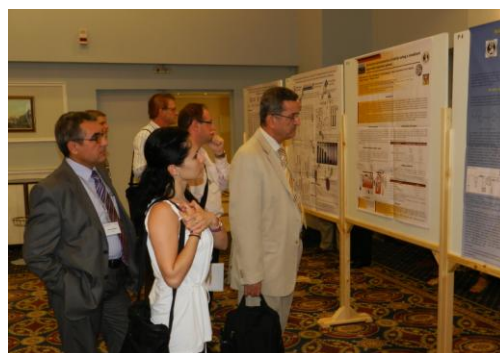
In Tuesday evening, most of the participants enjoyed the sightseeing of the historical places of Thessaloniki and the beautiful overview of the city and Thermaikos gulf while later they enjoyed a boat trip in the port of Thessaloniki having also a night vision of the city in the bay of Thessaloniki.

Wednesday was a whole day for excursion. During the day we visited the archaeological site of Pella (the seat of the king Philip II and of Alexander, his son), the Great tomb at Lefkadia, and the place of the famous Aristotle's school where Alexander the Great was a student. At noon, the participants had a traditional Greek lunch in a tavern by the river in Agios Nikolaos area and also enjoyed local folk music and dances.

The conference gala dinner was on Thursday evening in an exceptional ballroom of the Grand Hotel Palace. The participants enjoyed the excellent food and danced international and greek music.

#### 4. Poster awards

On the closing ceremony, two awards to the best poster presentations were given: First Award to, Sam-ang Supharoek (Department of Chemistry, Center of Excellence for Innovation in Chemistry, Faculty of Science, Chiang Mai University, Thailand) for her poster under the title, *"Microfluidic devices and mass spectrometry for studying of peptide release in bag cell neuron of Aplysia californica"* and authors, Sam-ang Supharoek, Callie A. Croushore, Chang Young Lee, Jaroon Jakmunee, Jonathan V. Sweedler. Second Award to the group of Professor Petr Solich for their poster under the title, *"Determination of fat-soluble vitamins in human blood plasma with use of MEPS-SIC"* and authors, Petr Chocholouš, Burkhard Horstkotte, Iva Jelínková, Hana Vlčková, Dalibor Šatínský, Petr Solich.



#### 5. Flow Analysis XIII

The next 13<sup>th</sup> International Conference on Flow Analysis will be held in Prague, Czech Republic in 2015 and will be hosted by Petr Solich from Charles University, Czech Republic. Moreover people interested in Flow injection will have the opportunity to meet earlier, in 2013 in Porto, Portugal, at the 18<sup>th</sup> International Conference on Flow Injection Analysis which will be hosted by Antonio Rangel from the Portuguese Catholic University. To both organizers, I wish all the best for the organization of these conferences with maximum success.

Closing this brief account of the Flow Analysis XII Conference, on behalf of all the members of the local organizing committee, I again express our acknowledgments to all the participants of the conference for their great contribution.



Aristidis Anthemidis