



## Europass Curriculum Vitae

### Personal information

First name / Surname

**Victor BOCOȘ-BINȚINȚAN**

Telephone

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E-mail

victorbocos@yahoo.com ; victor.bocos@ubbcluj.ro

Nationality

Romanian

Date of birth

April 9, 1967

### Work experience

Dates

*February 2005 → to date (June 2017)*

Occupation or position held

Lecturer (Feb. 2005 – Feb. 2013) Senior Lecturer (Mar. 2013 – to date); full-time position Head of Department of Environmental Analysis & Engineering, from March 2012 to February 2016.

Main activities and responsibilities

Teaching and research activities, focused and related mainly to pollutants analysis and characterization using instrumental methods (spectrometric and chromatographic methods). Responsible for the master program *Environmental Quality and Energy Sources* since 2013.

Name and address of employer

Babeș-Bolyai University Cluj-Napoca, Faculty of Environmental Science and Engineering, Dept. of Analysis and Environmental Engineering, Fântânele Street no. 30, 400294, Cluj-Napoca, Romania

Type of business or sector

Public University

Dates

*May 2008 – September 2010*

Occupation or position held

Postdoctoral position (Research associate)

Main activities and responsibilities

Developing labeling technologies for goods with custom value, using sensitive spectrometric techniques based on ion mobility  
Supervisor: Prof. Dr. C.L. Paul Thomas

Name and address of employer

Loughborough University, Faculty of Science, Department of Chemistry, Ashby Road, Loughborough, Leicestershire LE11 3TU, United Kingdom

Type of business or sector

Public University

Dates

*October 2002 – December 2003*

Occupation or position held

Research Scientist – Chemist at the R & D Department

Main activities and responsibilities

Development and testing of new, miniaturized ion mobility spectrometric cells & instrumentation and related applications.  
Supervisors: Dr. Jörg-Ingo Baumbach; Dr. Stefanie Sielemann

Name and address of employer

G.A.S. (Gesellschaft für Analytische Sensorsysteme) mbH, Otto-Hahn-Str. 15, Dortmund, DE-44227, Germany

Type of business or sector

Private Company

Dates

*February 1992 – September 2002 + December 2003 – December 2004*

Occupation or position held

Research Scientist – Chemist

Main activities and responsibilities

Various research grants, most of them focused on trace detection of toxic gases and controlled substances using instrumental techniques (spectrometric and chromatographic methods).

Name and address of employer

INCDO INOE-2000 [National R&D Institute for Optoelectronics Bucharest], Branch ICIA (Research Institute for Analytical Instrumentation) Cluj-Napoca, Donath Street no. 67, 400293 Cluj-Napoca, Romania

Type of business or sector

Public Research Institute

|  |  |
|--|--|
| Dates  | <i>September 1991 – January 2002</i>   |
| Occupation or position held                                    | Teacher of Chemistry & Physics   |
| Main activities and responsibilities                           | Teaching & learning related activities: lesson plans, thematic units, etc.   |
| Name and address of employer                                   | School No. 11, Mogoșoaia Street No. 6, Cluj-Napoca, Romania  |
| Type of business or sector                                     | Public School  |
| <b>Education and training</b>                                  |  |
| Dates  | <i>September 1986 - June 1991</i>  |
| Title of qualification awarded                                 | <b>Bachelor degree – Long-term higher education (5 years): <i>Diploma of Merit</i></b>   |
| Principal subjects/occupational skills covered                 | Chemistry and Physics  |
| Name and type of organization providing education and training | Babeș-Bolyai University, Faculty of Chemistry and Industrial Chemistry   |
| Dates  | <i>February 1999 – May 1999</i>  |
| Title of qualification awarded                                 | <b>Pre-doctoral stage</b>  |
| Principal subjects/occupational skills covered                 | Training in ion mobility spectrometry (IMS) and hyphenated technique IMS-MS [supervisor: Dr. C.L. Paul Thomas from DIAS; Dr. Alan H. Brittain from Graseby Dynamics Ltd.]  |
| Name and type of organization providing education and training | University of Manchester Institute of Science and Technology (UMIST), Department of Instrumentation and Analytical Science (DIAS), Sackville Street, Manchester M1 3BB, United Kingdom   |
| Dates  | <i>July 1993 – June 2000</i>   |
| Title of qualification awarded                                 | <b>Doctoral degree in Chemistry; distinction “<i>Cum Laude</i>”</b>  |
| Principal subjects/occupational skills covered                 | Title of the PhD Thesis: “ <i>Studies on phosgene and chlorine by ion mobility spectrometry and mass spectrometry</i> ”  |
| Name and type of organization providing education and training | Babeș-Bolyai University, Faculty of Chemistry and Chemical Engineering   |
| Dates  | <i>May 2008 – September 2010</i>   |
| Title of qualification awarded                                 | <b>Post-doctoral position</b>  |
| Principal subjects/occupational skills covered                 | Contraband detection – using advanced trace detection techniques, like differential mobility spectrometry DMS, hyphenated GC-DMS, and transverse-field IMS.<br>Trapped human detection by sensing their chemical signatures.<br>Supervisor: Prof. Dr. C.L. Paul Thomas |
| Name and type of organization providing education and training | Loughborough University, Department of Chemistry, Loughborough, United Kingdom   |
| Level in national or international classification              | Level 6 - Second stage of tertiary education   |

|  |  |                  |         |                  |                    |                  |                   |                  |                    |                  |
|--|--|------------------|---------|------------------|--------------------|------------------|-------------------|------------------|--------------------|------------------|
| <b>Personal skills and competences</b> |  |                  |         |                  |                    |                  |                   |                  |                    |                  |
| Mother tongue(s)                       | <b>Romanian</b>  |                  |         |                  |                    |                  |                   |                  |                    |                  |
| Other language(s) self-assessment      | <b>Understanding</b>   |                  |         | <b>Speaking</b>  |                    |                  |                   | <b>Writing</b>   |                    |                  |
| <i>European level (*)</i>              | Listening  |                  | Reading |                  | Spoken interaction |                  | Spoken production |                  | Written production |                  |
| <b>English</b>                         | C2   | Experienced user | C2      | Experienced user | C2                 | Experienced user | C2                | Experienced user | C2                 | Experienced user |
| <b>French</b>                          | C1   | Proficient user  | C1      | Proficient user  | C1                 | Proficient user  | C1                | Proficient user  | C1                 | Proficient user  |
| <b>German</b>                          | B1   | Independent user | B1      | Independent user | A2                 | Basic user       | A2                | Basic user       | A2                 | Basic user       |
| <b>Spanish</b>                         | A2   | Basic user       | A2      | Basic user       | A1                 | Basic user       | A1                | Basic user       | A1                 | Basic user       |
|  | (*) <a href="#">Common European Framework of Reference for Languages</a>   |                  |         |                  |                    |                  |                   |                  |                    |                  |
| Organizational skills and competences  | Experienced in independent organizing of research activity. Strong initiative in developing & implementing new work tools and methodologies and in increasing efficiency and quality of work, such as: creating dedicated literature databases; designing and building various systems and devices related to trace detection of chemicals (preconcentrators; test-atmosphere generators; thermo-desorption units); expertise in ion mobility spectrometry IMS and its related techniques (IMS-MS; GC-IMS; DMS; GC-DMS) – with emphasis on contraband detection, industrial hygiene, detection of controlled substances, sensing of microorganisms, etc.   |                  |         |                  |                    |                  |                   |                  |                    |                  |
| Technical skills and competences       | Ability in using of a wide range of laboratory and office equipment.   |                  |         |                  |                    |                  |                   |                  |                    |                  |
| Social skills and competencies         | Used to working in multidisciplinary teams, with a significant component of independent activity. Great adaptability to new socio-cultural environments and work demands, proven by the 4 years of experience of working abroad, within both public and private entities. Highly developed spoken and written communication abilities, gathered through teaching, writing and editing papers, projects, technical reports, etc., and also due to the work in the commercial field.   |                  |         |                  |                    |                  |                   |                  |                    |                  |
| Computer skills and competences        | Microsoft Office<br>Origin<br>Various dedicated software   |                  |         |                  |                    |                  |                   |                  |                    |                  |
| <b>Additional information</b>          | <p><b>Other postgraduate trainings:</b></p> <p><b>Research stages abroad:</b></p> <p>a) University of Manchester Institute of Science &amp; Technology (UMIST), Manchester, UK [3 months in 1999]: expertise in IMS and IMS/MS.</p> <p>b) G.A.S. (Gesellschaft für Analytische Sensorsysteme) mbH Dortmund [14 months, in 2002-2003]; expertise in IMS and GC/IMS.</p> <p>c) Loughborough University – Centre for Analytical Science [Post-doctoral position; 29 months, in 2008-2010]; expertise in aspiration IMS, DMS and GC/DMS.</p> <p><b>Research Grants (selection):</b></p> <p>1992–1996: <i>“Paper-tape analyzers for toxic gases”</i>, funded by the Romanian National Research Ministry; member</p> <p>1993–1998: <i>“Investigations and advanced mobile technologies for detecting narcotics”</i>, funded by the Romanian National Research Ministry; project leader</p> |                  |         |                  |                    |                  |                   |                  |                    |                  |

1997–1999: “**Complex equipment for exploring the haemostasis**”, funded by the Romanian National Research Ministry; member

1998–1999: “**Opto-spectral systems for monitoring the principal pollutant factors within the environment**”, funded by the Romanian National Research Ministry; member

2005–2007: “**Ultrasensitive monitoring of pollutants based on tandem systems using non-conventional detectors**” (MONUPOL – CEEX No. 615/2005), funded by Romanian Agency for Science and Technology; project leader for consortium partner Babeş-Bolyai University. <http://www.itim-cj.ro/PNCDI/CUNA/monupol/index.html> .

2007–2010: “**Detection and identification of dangerous substances using ion mobility spectrometry coupled with mass spectrometry**” (MOBSPEC – PN2 No. 81-023/2007), funded by Romanian Agency for Science and Technology; project leader for consortium partner Babeş-Bolyai University. <http://www.itim-cj.ro/PNCDI/MOBSPEC%28CCUNA%29/engleza.htm>

2008–2010: European FP7 Project “**Second-Generation Locator for Urban Search and Rescue Operations**” (SGL for USaR, No. 217967) – funded by the EU; member of the Loughborough University’s team.

[http://cordis.europa.eu/search/index.cfm?fuseaction=proj.document&PJ\\_RCN=10222914](http://cordis.europa.eu/search/index.cfm?fuseaction=proj.document&PJ_RCN=10222914)

#### Scientific activity – summary:

Materialized in: 2 patents; 2 books published in Romania; 8 papers published in ISI journals; 4 papers published abroad (at Springer and IOP); 24 papers published in Romania; 21 communications & posters (of which 11 abroad).

**Hirsch Index (June 2017) = 4** [76 citations]. Source: ReseacherID (Thomson Reuters).

**Hirsch Index (June 2017) = 6** [172 citations]. Source: Google Scholar UK.

#### Affiliations:

Member of **International Society for Ion Mobility Spectrometry (ISIMS)**, since 1996

Associate Member of **Royal Society of Chemistry (AM RSC)**, since 2010

## Annexes

### Publication List

#### I. Patents [Intellectual property titles]:

1. Patent WO/2011/144897 A1 (International Application No.: PCT/GB2011/000756). “**Interface device for connecting injector and ion mobility spectrometer**”. Authors: Moll, Victor Hugo; Bocos-Bintintan, Victor; Thomas, Charles Lawrence Paul. Applicant: John Hogg Technical Solutions Ltd., Manchester, UK. [Publication date: 24 November 2011].
2. Patent GB 2480803 A. “**Device and use – Interface device for control of dopant levels in ion mass spectrometry**”. Authors: Moll, Victor Hugo; Bocos-Bintintan, Victor; Thomas, Charles Lawrence Paul. Applicant: John Hogg Technical Solutions Ltd., Manchester, UK. [Publication date: 07 December 2011].

#### II. Books:

1. Victor Bocoş-BinţiŃan, “**Spectrometria de mobilitate ionică**” [“**Ion mobility spectrometry**”], 1998, Cluj University Press, Cluj-Napoca, Romania, ISBN 973-9354-77-7, 290 pp.
2. Victor Bocoş-BinţiŃan, “**Tehnici moderne în analiza de ultraurme, cu impact în igiena industrială, protecŃia mediului și aplicaŃii de securitate. InvestigaŃii privind clorul și fosgenul prin spectrometrie de mobilitate ionică**” [“**Modern techniques in ultra-trace analysis, with impact in industrial hygiene, environmental protection and security applications. Investigations on chlorine and phosgene by ion mobility spectrometry**”], 2004, Cluj University Press, Cluj-Napoca, Romania, ISBN 973-610-243-2, 250 pp.

### III. Papers published abroad, in ISI & BDI indexed journals:

1. Ileana-Andreea Rațiu, Victor Bocoș-Bințișan, Matthew Turner, Victor-Hugo Moll and Charles Lawrence Paul Thomas, **"Discrimination of Chemical Profiles of Some Bacterial Species by Analyzing Culture Headspace Air Samples Using TD-GC/MS"**, in Current Analytical Chemistry, 2013, in press (accepted 17.01.2013). Impact factor in 2013: 1,570.
2. George-Bogdan Ghira; Ileana-Andreea Rațiu; Victor Bocoș-Bințișan, **"Fast Characterization of Pyridine Using Ion Mobility Spectrometry and Photoionization Detection"**, Environmental Engineering & Management Journal, 2013, Vol. 12, No. 2, pp. 251-256. Impact factor in 2012: 1,003.
3. Victor Moll; Victor Bocoș-Bințișan; Ileana-Andreea Rațiu; Dorota Ruszkiewicz; C.L. Paul Thomas, **"Control of dopants/modifiers in differential mobility spectrometry using a piezoelectric injector"**, Analyst (London), 2012, Vol. 137, No. 6, pp. 1458-1465. [DOI: 10.1039/c2an16109e]. (Impact Factor: 3,913).
4. Ran Huo; Agapios Agapiou; Victor Bocoș-Bințișan; Lauren J. Brown; Corrinne Burns; Colin S. Creaser; Neil A. Devenport; B. Gao-Lao; Cristina Guallar-Hoyas; L. Hildebrand; A. Malkar; Helen J. Martin; Victor H. Moll; P. Patel; Andreea Rațiu; James C. Reynolds; Stefanie Sielemann; R. Slodzynski; Miltiades Statheropoulos; Matthew A. Turner; Wolfgang Vautz; Vicki E. Wright, and C. L. Paul Thomas, **"The Trapped Human Experiment"**, Journal of Breath Research, 2011, Vol. 5, No. 4, pp. 1-12. [DOI: 10.1088/1752-7155/5/4/046006].
5. Victor H. Moll; Victor Bocoș-Bințișan; John Chappell; David Hutt; Ileana-Andreea Rațiu and C.L. Paul Thomas, **"Optimisation of piezoelectric injection of dopants and drift gas modifiers in transverse ion mobility spectrometry"**, International Journal for Ion Mobility Spectrometry, 2010, 13(4), 149-155. [DOI 10.1007/s12127-010-0053-6].
6. Victor Bocoș-Bințișan; Victor H. Moll; Robert J. Flanagan and C.L. Paul Thomas, **"Rapid determination of alcohols in human saliva by gas chromatography differential mobility spectrometry following selective membrane extraction"**, International Journal for Ion Mobility Spectrometry, 2010, 13(2), 55-63. [DOI: 10.1007/s12127-010-0040-y].
7. James C. Reynolds, Gavin J. Blackburn, Cristina Guallar-Hoyas, Victor H. Moll, Victor Bocoș-Bințișan, Gushinder Kaur-Atwal, Mark D. Howdle, Emma L. Harry, Lauren J. Brown, Colin S. Creaser and C.L. Paul Thomas, **"Detection of Volatile Organic Compounds in Breath Using Thermal Desorption Electrospray Ionization-Ion Mobility-Mass Spectrometry"**, Analytical Chemistry, 2010, Vol. 82, No. 5, pp. 2139-2144. [DOI: 10.1021/ac9027593].
8. C. Cuna; M. Leuca; N. Lupsa; V. Mirel; V. Bocoș-Bințișan; Stela Cuna; V. Cosma and Florina Tusa, **"Ion mobility analyzer - quadrupole mass spectrometer system design"**, Journal of Physics: Conference Series (JPCS), Processes in Isotopes and Molecules (Institute of Physics Publishing, UK), Series 182, 012022, 5 pp., 2009. [DOI: 10.1088/1742-6596/182/1/012022].
9. Gushinder Kaur-Atwal; Gavin O'Connor; Alexander A. Aksenov; Victor Bocoș-Bințișan; C.L. Paul Thomas; Colin S. Creaser, **"Chemical standards for ion mobility spectrometry: a review"**, in International Journal for Ion Mobility Spectrometry, 2009, 12(1), 1-14. [DOI: 10.1007/s12127-009-0021-1].
10. Iovanca Haiduc; Victor Bocoș-Bințișan, **"Modern techniques in harmful pollutants detection"**, Revista de Chimie (Bucharest), 2006, 57(9), pp. 973-977.
11. Victor Bocoș-Bințișan; Alan H. Brittain; C.L. Paul Thomas, **"Characterisation of the phosgene response of a membrane inlet <sup>63</sup>Ni ion mobility spectrometer"**, Analyst (London), 2002, 127(9), 1211-1217. [DOI: 10.1039/b204298c].
12. Victor Bocoș-Bințișan; Alan H. Brittain; C.L. Paul Thomas, **"The response of a membrane inlet ion mobility spectrometer to chlorine and the effect of water contamination of the drying media on ion mobility spectrometric responses to chlorine"**, Analyst (London), 2001, 126(9), 1539-1544. [DOI: 10.1039/b100524n].

#### IV. Papers published in Romania (selection):

1. Victor Bocos-Bintintan; M. Bocos; E. Cordos, "**Ion Mobility Spectrometry - A new and powerful trace detection technique**", Romanian Journal of Optoelectronics, 2000, vol. 8, nr. 1 (January-March), pp. 39-66.
2. Victor Bocos-Bintintan; C.L.P. Thomas; A.H. Brittain, "**Characterization of the ion mobility spectrometric response to phosgene at room temperature**", Romanian Journal of Optoelectronics, 2000, vol. 8, nr. 2 (April-June), pp. 1-12.
3. Victor Bocos-Bintintan, "**Ion Mobility Spectrometry - Theory and instrumentation**", Studia Universitatis Babes-Bolyai, Chemia, 2000, XLV, nr. 1-2, pp. 219-238.
4. Victor Bocos-Bintintan; E. Cordos; M. Bocos, "**Analytical applications of Ion Mobility Spectrometry**", Studia Universitatis Babes-Bolyai, Chemia, 2000, XLV, nr. 1-2, pp. 209-217.
5. Victor Bocos-Bintintan; C.L. Paul Thomas; Alan H. Brittain, "**Characterization of the chemical warfare agent simulant methyl salicylate by ion mobility spectrometry/mass spectrometry (IMS/MS) at ambient temperature**", Studia Universitatis Babes-Bolyai, Chemia, 2002, XLVII, nr. 1, 149-160.
6. Victor Bocos-Bintintan, "**Detection, properties and effects of main Chemical Warfare Agents (CWA)**", Romanian Journal of Optoelectronics, 2003, vol. 11, nr. 2 (April-June), pp. 55-86.
7. Victor Bocos-Bintintan, "**Environmental applications of Ion Mobility Spectrometry**", Romanian Journal of Optoelectronics, 2003, vol. 11, nr. 3 (July-September), pp. 71-80.

#### V. Poster and Oral Communications (selection):

1. Victor Bocoș-Bințișan, "**Ion Mobility Spectrometry – A powerful trace detection technique applied to toxic industrial chemicals and pesticides**". Presented at The International U.A.B. – B.EN.A. [Balkan Environmental Association] Conference 2017 "**Environmental Engineering & Sustainable Development**", Alba-Iulia, Romania, May 25-27<sup>th</sup>, 2017 (Communication - Thursday 25.05.2017). Oral communication – distinguished with the Special Award.
2. Victor Bocoș-Bințișan; Ileana-Andreea Rațiu; Mircea Anton, "**Real-time detection of traces of HCN in air using Ion Mobility Spectrometry**". Presented at The National Symposium *Environment & Progress* 2015, 30<sup>th</sup> October 2015, Cluj-Napoca, Romania. Oral communication.
3. Victor Bocoș-Bințișan; George-Bogdan Ghira; Ileana-Andreea Rațiu; Mircea Anton; Aurel-Vasile Martiniuc, "**Sensing Precursors of Illegal Drugs – Rapid Detection of Acetic Anhydride Vapors at Trace Levels Using Photoionization Detection and Ion Mobility Spectrometry**". Presented at The 10<sup>th</sup> International Conference ELSEDIMA 2014, 18-19<sup>th</sup> September 2014, Cluj-Napoca, Romania. Oral communication.
4. Victor Bocoș-Bințișan, "**Ion Mobility Spectrometry – Four decades in trace detection for military, security and environmental applications**". Presented at The 9<sup>th</sup> International Conference ELSEDIMA 2012, Cluj-Napoca, Romania (Plenary lecture).
5. Ileana-Andreea Rațiu; Victor Bocoș-Bințișan; Victor Hugo Moll; Matthew Turner; Corrinne Burns; Constantin Cosma; C.L. Paul Thomas, "**Characterization of some chemicals, possible bacterial markers, from culture headspace air samples using TD-GC-MS**". Presented at The 17<sup>th</sup> International Symposium on Separation Sciences ISSS 2011, Cluj-Napoca, Romania, September 5-9 2011 (Communication OP-9, Thursday 08.09.2011).
6. R. Huo; A. Agapiou; V. Bocos-Bintintan; L. Brown; C. Burns; C.S. Creaser; N. Devenport; C. Guallar-Hoyas; L. Hildebrand; A. Malkar; H. Martin; V.H. Moll; P. Patel; A. Ratiu; J.C. Reynolds; S. Sielemann; R. Słodzynski; M. Statheropoulos; M. Turner; W. Vautz; V. Wright; C.L.P. Thomas, "**The Trapped Human Experiment**". Presented at The 20<sup>th</sup> International Conference on Ion Mobility Spectrometry ISIMS 2011, Edinburgh, Scotland, United Kingdom, 24<sup>th</sup>–29<sup>th</sup> July 2011 (Scientific communication – 28.07.2011).
7. Victor H. Moll; Victor Bocos-Bintintan; Ran Huo; Ileana-Andreea Ratiu; Cristina Guallar-Hoyas; Osmo Anttalainen; C.L. Paul Thomas, "**Developing ion mobility spectrometric methods for use in trapped human simulation experiment**". Presented at The 19<sup>th</sup> International Conference on Ion Mobility Spectrometry ISIMS 2010, Albuquerque, New Mexico, USA, July 18-23 2010 (Poster #8).

8. Colin S. Creaser; Mark D. Howdle; Gushinder Kaur-Atwal; James C. Reynolds; Emma L. Harry; Lauren J. Brown; Gavin J. Blackburn; Victor H. Moll; Victor Bocos-Bintintan; Cristina Guallar-Hoyas; C.L. Paul Thomas, **"Desorption Electrospray Imaging Combined with Ion Mobility-Mass Spectrometry"**. Presented at the 18<sup>th</sup> International Mass Spectrometry Conference (IMSC), Bremen, Germany, Aug. 30 – September 4, 2009 [www.imsc-bremen-2009.de]. Poster Session 2, Wednesday September 2, 2009 – PWA: 38.
9. James C. Reynolds; Victor H. Moll; Karmen Cheung; Gavin J. Blackburn; Victor Bocos-Bintintan; Cristina Guallar-Hoyas; Sultan Shair; Gushinder Kaur-Atwal; Mark D. Howdle; Emma L. Harry; Lauren J. Brown; Colin S. Creaser and C.L. Paul Thomas, **"Real-time non-invasive in-vivo exhaled breath monitoring by electrospray time-of-flight mass spectrometry"**. Presented at the 18<sup>th</sup> International Mass Spectrometry Conference (IMSC), Bremen, Germany, Aug. 30 – September 4, 2009 [www.imsc-bremen-2009.de]. Poster Session 1, Monday August 31 2009 – PMM: 274.
10. James C. Reynolds; Gavin A. Blackburn; Victor Bocos-Bintintan; Victor H. Moll; Cristina Guallar-Hoyas; Gushinder Kaur-Atwal; Emma L. Harry; Mark Howdle; Lauren J. Brown; Colin S. Creaser; C.L. Paul Thomas, **"Breath profiling by electrospray ion mobility spectrometry mass spectrometry"**. Presented at The 18<sup>th</sup> International Conference on Ion Mobility Spectrometry ISIMS 2009, Thun, Switzerland, July 25-31, 2009 (Communication #2).
11. Victor Moll; Victor Bocos-Bintintan; C.L. Paul Thomas; Robert J. Flanagan, **"Screening for methanol poisoning using thermal desorption – gas chromatography – differential mobility spectrometry"**. Presented at The 18<sup>th</sup> International Conference on Ion Mobility Spectrometry ISIMS 2009, Thun, Switzerland, July 25-31, 2009 (Poster #20).
12. Lauren J. Brown; James C. Reynolds; Victor Bocos-Bintintan; Danielle Toutoungi; Billy Boyle; C.L. Paul Thomas; Colin S. Creaser, **"Miniaturised high field asymmetric waveform ion mobility spectrometry for the detection of volatile and non-volatile analytes"**. Communication presented at the 1<sup>st</sup> Analytical Research Forum (Royal Society of Chemistry), Pfizer Global R+D Labs (Sandwich, Kent) and University of Kent (Canterbury), 13<sup>th</sup>–15<sup>th</sup> July 2009, United Kingdom.
13. Victor Moll; Victor Bocos-Bintintan; C.L. Paul Thomas, **"Rapid and sensitive screening for methanol and ethylene glycol poisoning using differential ion mobility techniques"**. Communication presented at the 1<sup>st</sup> Analytical Research Forum (Royal Society of Chemistry), Pfizer Global R+D Labs (Sandwich, Kent) and University of Kent (Canterbury), 13<sup>th</sup>–15<sup>th</sup> July 2009, United Kingdom.
14. Cornel Cuna; Daniel Ursu; Victor Bocos-Bintintan; Stela Cuna; Adrian Pamula, **"Gas chromatograph – ion mobility detector for environmental studies"**. Communication presented at The 25<sup>th</sup> Informal Meeting on Mass Spectrometry, Nyiregyháza-Sóstó, 6<sup>th</sup>–10<sup>th</sup> May 2007, Hungary.
15. Cornel Cuna; Victor Bocos-Bintintan; Stela Cuna, **"Ultrasensitive detection of the pollutants by ion mobility spectrometry - mass spectrometry"**. Communication presented at The 24<sup>th</sup> Informal Meeting on Mass Spectrometry, Ustroń, 14<sup>th</sup>–18<sup>th</sup> May 2006, Poland.

#### Research interests:

Possessing a consistent expertise in:

- time-of-flight IMS and aspiration IMS (ion mobility spectrometry) and the hyphenated techniques IMS/MS and GC/IMS;
- DMS (differential mobility spectrometry) and GC/DMS
- mass spectrometry MS
- gas chromatography GC.

This expertise is based on a series of 3 research stages abroad, with a total duration of ca. 4 years and is being corroborated to the professional experience as a researcher in Romania – over 11 years. To the best of my knowledge, there is no other Romanian researcher with such a scientific and technical background in the above mentioned fields.

Another consequence of my continuous activity in the IMS field is the existence of good contacts with companies that manufacture such dual-use, ultrasensitive analytical instrumentation: IUT GmbH Berlin, Germany; GAS mbH Dortmund, Germany; Smiths Detection Ltd. Watford, UK; Environics Oy, Finland.

In conclusion, my principal research interests and expertise encompass:

- trace detection;
- generation of test atmospheres with low analyte concentrations;
- toxic gas detection;
- illicit drugs and other controlled substances detection;
- sensing of microorganisms by monitoring their volatile biomarkers;
- advanced spectrometric techniques for detecting chemicals at ultra-trace levels, based on ionization phenomenon: ion mobility spectrometry IMS (plus hyphenated techniques: IMS/MS and GC/IMS) and its applications; differential mobility spectrometry DMS and the tandem GC/DMS; photoionization detection PID.

ResearcherID profile: C-4172-2011.

Profile URL : <http://www.researcherid.com/rid/C-4172-2011>.

**References:**

1. Professor Charles Lawrence Paul Thomas, Loughborough University, Loughborough, United Kingdom
2. Dr. Jörg-Ingo Baumbach, Ex-Head of Department at ISAS Dortmund, Germany (currently with Reutlingen University, Germany)
3. Dr. Alan H. Brittain, Ex-Research Group Manager at Graseby Dynamics Limited (now Smiths Detection Ltd.), Watford, United Kingdom
4. Dr. Gerd Arnold, former General Manager at Bruker Detection GmbH, Leipzig and former Research Manager at I.U.T. GmbH Berlin, Germany
5. Professor Gary Alan Eiceman, New Mexico State University, Las Cruces, NM, USA
6. Professor Miltiadis Statheropoulos, National Technical University Athens (NTUA), School of Chemical Engineering, Athens, Greece

*June 2017*