Welcome to MicroTAS 2010, the 14th International Conference on Miniaturized Systems for Chemistry and Life Sciences! This Conference is the latest in an international series of Conferences which is now in its 16th year. Maintaining an international presence has been important for our organization, and so the Conference has rotated between Europe/Africa, the Americas, and Asia/Oceania since its debut in Enschede, The Netherlands, in 1994. After 16 years and wonderful locations like Boston (2005), Tokyo (2006), Paris (2007), San Diego (2008), and Jeju Island (2009), I am very pleased to bring the meeting back to The Netherlands, this time to the northern city of Groningen. MicroTAS 2010 follows a very successful Conference in Korea last year, chaired by Tae Song Kim and Yoon-Sik Lee.

MicroTAS 2010 continues a now-longstanding tradition to provide the largest international forum for reporting the latest research advances and innovations in the science and technology of microfluidics and lab-on-a-chip. This area has experienced enormous growth since its inception in the late 1980’s, and Conference presentations now extend from fundamental micro- and nanofluidics to a myriad of new applications across both established and emerging areas in chemistry and biology. The Conference brings together researchers from the engineering, chemical, physical, and life sciences, making it a uniquely multidisciplinary event. The number of “scientific languages” spoken at the meeting may actually rival the number of traditional languages to be heard in the meeting rooms!

Having attended the first-ever MicroTAS in 1994, I have been privileged to participate in all the meetings since then. The growth in this area of scientific research has been nothing short of stunning, from just a handful of groups in the early days – we all knew each other by first name – to thousands of researchers today. The Conferences have grown accordingly, from less than 200 attendees and a still-portable Proceedings book in 1994 to recent Conferences numbering five times that many attendees and Proceedings volumes of back-breaking proportions. The use of micro- and nanotechnologies for cell studies, a trend which has steadily increased over the past decade, continues to be well represented at this year’s meeting. There have also been significant developments in the clinical diagnostics and related point-of-care testing areas, with an eye to increasingly sophisticated yet easily operated and disposable devices. As “chips” become more complex and applications more diverse, it was good to note a healthy number of submissions in topic categories like Microfluidics and Imaging and Detection Technologies. Progress in these areas today ensures a “pipeline” for future advances in chemical and biological science applications.

As of this year, the term Miniaturized Total Analysis Systems or microTAS has been around for 21 years, and the field – and this Conference – has reached a certain level of maturity. While most of the really dramatic breakthroughs, like the demonstration of ultrafast microchip electrophoresis, are perhaps behind us, research in the microTAS field remains robust and the number of publications continues to increase annually. A substantial amount of consideration in our Conference planning this year was devoted to implementing changes in program development and Conference organization to reflect the growing number of researchers in the microTAS field. One personal goal of mine was to engage more members of our community in these processes to ensure the continued vitality of the meeting in years to come. One new feature of this year’s Conference is the expanded Technical Program, which now for the first time numbers four parallel tracks, doubling the number of oral presentations to over 120. The Program also includes 6 plenary lectures featuring speakers who are world leaders in their respective scientific fields, as well as 10 invited oral presentations. The posters remain an exceedingly important component of the Program as well, with close to 600 posters being presented over the course of the Conference. This makes for over 720 presentations, more than ever at MicroTAS, by researchers from more than 25 countries. These Proceedings provide a record of all these contributions - for the first time on a memory stick only. While sadly the shelf space that my MicroTAS Proceedings books occupy will no longer increase, elimination of the printed copies has allowed the deadline for abstract submission to be extended by one month. The findings in these Proceedings thus represent the latest and greatest out of the contributors’ labs.

The most vital part of any Conference is its Technical Program, and so I found myself in a state of some trepidation as the abstract submission deadline of May 4th approached. Fortunately, the number of abstract submissions exceeded 1,100, which is on par with the previous 2008 and 2009 meetings. Needless to say, I breathed a small sigh of relief when the final numbers were in – we were very pleased to have done so well in today’s poor global economic climate and its inevitable adverse effects on research funding. The next challenge was evaluating all these submissions in order to achieve the best Technical Program possible, something that has always been a top priority of the MicroTAS Conferences. The numbers of abstracts submitted over the years has increased substantially, and the Technical Program Committee (TPC) membership was expanded accordingly to 25 members as recently as 2008 to continue to assure the best, most objective peer-review process possible. However, the Conference has grown enough that we decided to adopt a new program assembly process this year, involving a larger Program Committee (PC) consisting of many more experts than the prior TPC. An additional 30 members, 10 from each global region and representing a wide range of expertise, were generous enough to accept our invitation to join the PC and commit time to the rigorous and time-consuming process of abstract evaluation. In total, 54 individual scientists contributed to the Technical Program development process this year. I thank each and every scientist who contributed to this enormous effort. The result, I hope you as attendee will agree, is another outstanding Technical Program.
With MicroTAS 2010 just 7 weeks away and my job as Chair almost over (well, maybe not quite…), I would like to take a moment to acknowledge all those who have helped in one way or another over these past two years, donating countless hours of time to tasks too numerous to mention. First, I express my thanks to the Chemical and Biological Microsystems Society (CBMS), whose Board members entrusted me with the responsibility of organizing this Conference back in 2008 and donated substantial funds to support student travel to Groningen. I also extend my gratitude to those 20 or so members of the Technical Program Committee who attended the Program Meeting in London in June to put the final Program in place, based on the results of the abstract evaluation process. My special thanks go to Laurie Locascio, James Landers, and Jean-Louis Viovy, who acted as facilitators during hours of sometimes tough discussion. I am also grateful to Harp Minhas of the Royal Society of Chemistry, who as a perfect host helped us arrange the very special site of this year’s Program Meeting at the RSC’s historic Burlington House with accompanying pub and Indian cuisine events.

This year also saw the debut of the MicroTAS Promotions Committee, headed by Aaron Wheeler, with a mission to reach out especially to scientists who had never been to MicroTAS before. My thanks to all of you – your efforts have surely had a positive impact on abstract submissions and numbers of attendees!

What’s a Conference without a Local Organizing Committee?? To all of you, hartelijk dank for all the support and helpful advice you have provided me this past year, from brilliant scenarios for Conference openings to recruiting sponsors to reviewing abstracts to just simply promoting MicroTAS at other Conferences – and so on and so forth! Another new MicroTAS event, the Special Focus Sessions on Thursday, have taken shape thanks to several of you. These will feature microfluidics research and business which we as Committee wanted to highlight at this year’s Conference – I hope you as attendee will enjoy this new addition to the Conference!

The first thing many Dutch colleagues asked me was whether Groningen was actually large enough to host a meeting like ours. Of course, said Jaap Westerhuijs of the Groningen Congres Bureau – and proved it by blocking hotel rooms, making arrangements with the Martiniplaza and the Martinikerk, and not least negotiating free bus transportation for us all this week. Dank je wel, Jaap!

I would be remiss not to acknowledge the very strong support we have received this year from all our sponsors. Thanks to all of you for your generosity, as it has particularly helped us support student attendance through travel awards and lower registration fees. We also very much appreciate the financial support we have received for the student poster and scientific awards which will be presented during the meeting to individuals for their outstanding scientific achievements.

A huge dank je wel goes to Jolanda Meindertsmaja of my group at the Rijksuniversiteit Groningen for her many hours of work preparing visa invitation letters, draft programs, MicroTAS Xmas cards, and the like, but especially for her wise advice on many of the essential things that will make this Conference unique. Jolanda, thanks for always being able to count on you! I also express my eternal gratitude to Katharine Cline and her staff at PMMI – together they are the force behind the scenes that has made this Conference possible. Thanks especially to Shirley Galloway and Sara Stearns for all the essential legwork they have done and their never-ending patience. And Katharine, what I can say? Your advice and support has helped me shape this Conference in so many ways it’s impossible to count – and acknowledge – them all. It has been a real pleasure working with you, and I shall miss our phone calls. Thanks.

Finally, I’d like to thank all of you, the Conference attendees who have come to Groningen this year for the 14th edition of MicroTAS. You ultimately are the joint creative force that brings the meeting about in the first place, and it is a great pleasure for me, together with my colleagues on the CBMS Board and Local Organizing Committee, to act as your hosts in Groningen. Enjoy the meeting, enjoy the city!

Met vriendelijke groeten uit Groningen!

Sabeth Verpoorte
Chair, MicroTAS 2010