

## **Perspectives on International Drying Symposium (IDS) Series**

*Arun S. Mujumdar, August 2002*

A full quarter century has passed since the First International Symposium on Drying was successfully held on the beautiful downtown campus of McGill University – the premier Institution of Higher Learning of Canada way back in August 1978. When I first conceived the idea and sought suggestions and comments from both academia and industry in Canada as well as overseas, I received a mixed bag of encouragement as well as discouragement. Many academics thought R&D in drying was dead and did not deserve further work. Industry participants had just begun to appreciate the problem of ever increasing cost of energy that this unit operation demands. It was my lack of experience, and possibly vision at the time, that I still decided to test the ground and see if indeed there was no need and hence no opportunities in pursuing R&D in drying. Much to my surprise, the very first meeting was a success although it was called after just about one year after the first Call for Papers went by snail mail to the few persons whom I had located the hard way and to anonymous company personnel and journal editors. For months thereafter I received letters, no faxes or e-mails those days, from disappointed engineers and few academics that they learnt of the event after the fact. The proceedings of the first event actually sold many more copies than any of the subsequent symposia although they were published by an unknown publisher, who disappeared within two years of publication (hopefully not as a result of this publication!) This first event also attracted more participants from industry than from academia- a feat not repeated by any of the subsequent IDS.

Indeed, in my Foreword to the proceedings volume of the first event I stated as the key objective of the series development of a forum for exchange of latest knowledge on drying. Later I extended this to mean provision of a truly global forum for inter-industry interaction since many diverse industries share the common problem of drying and yet they do not talk to each other about their own experiences and knowledge. A quick perusal through the lists of participants of IDS meetings right from 1980 through 2002 shows that we have not fully succeeded in meeting one of my original goals; we now have a total domination by academics, which sadly can promote what I call “closed-loop” approach to academic research; research by academics and for academics. For an applied field like drying lack of pro-active industry participation can have a detrimental long-term effect on the viability and sustainability of the IDS movement. As the Founder of the series I am particularly sensitive to this fact. I hope that Organizing Committees and International Advisory Panels of future IDS’s will make it a point to upgrade industry participation. This will improve technology transfer and also allow academics, such as myself, to do more relevant research and produce researchers with the right training and attitude.

Quarter century is a very long time to hold sustained interest and activity in one area. The fact that drying is a very complex, cross- and trans-disciplinary subject helps, of course. There is much to be done and achieved. Dryers have a long shelf life. This means existing dryers will not become obsolete soon. The pace of R&D, therefore, need not be as swift as it is in biotechnology, material science or microelectronics. Much can be accomplished with modest R&D support. There is need, however, for academics and granting agencies to recognise the importance of continuing support over the long haul. Industry can help as an interested

stakeholder. Best results will come out of joint industry-university interaction and some degree of direct support by industry.

One of the important fallouts of the IDS movement has been the large number of international research networks that have formed over the last two decades. Personally, the friendly relationships that have developed over the years have also been professionally productive. Many researchers (or friends) have joined IDS and then left after short or long periods with us for various reasons, e.g., retirement, change of research interests or even change of career from research to management. Indeed, aside from me (which does not count as I had no viable choice in the matter!) only Professor Czeslaw Strumillo, a pre-eminent researchers and pioneer the drying field from Lodz Technical University, Poland had the staying power and consistent interest to participate in all IDS meetings held to date, from 1978 to 2002. Congratulations, Czeslaw!

Another person who displayed incredible staying power and faithfully remained with IDS movement right from the typing, printing and mailing of the Call for Papers for the first IDS at McGill in the hot summer of 1977 was no other than my better half Purnima Mujumdar. She typed, retyped and retyped again several drafts of papers, indexes, letters, proceedings, my own papers, etc., for over a quarter century that resulted in numerous books, proceedings volumes, journal issues and a couple of hundred of my own papers and chapters on drying. No resources were available from the university to carry out the many thousands of hours of effort that went into the IDS and related projects of mine. All this was done entirely voluntarily for which I owe a great debt of gratitude to Purnima. Indeed, directly or indirectly the entire world community benefited from her effort by making to them a massive volume of technical literature that was otherwise not available. Many works from non-English speaking authors (e.g., Russia, Czechoslovakia, Poland, Japan, China etc) were meticulously edited, revised and retyped (more recently word-processed) prior to publication. Many would never have been accessible in English but for this very tiring and demanding task sustained over a period of more than a decade without a break. Purnima's contributions in this regard are truly immeasurable although known only to a few of our close friends and collaborators.

Over the past decades, a number of individuals have made significant and sustained contributions to IDS. I will be remiss in my duty if I do not mention them here, along with my apologies to those whose names I have missed inadvertently. Among them are: Prof. G.S.V. Raghavan, Prof. Z. Pakowski, Dr. T. Kudra, Prof. M. Okazaki, Prof. M. Hasatani, Prof. M. Roques, Larry Genskow, etc. The list is too long to be complete. Program Chairs and Panel members of all IDS meetings deserve to be commended for their contributions. Many others were active for shorter periods of time and did their bit to help IDS carry on the torch. Sponsors of the Major awards program were instrumental in demonstrating industry interest in IDS.

I have written about the technical and impersonal aspects of the IDS series several times before but I thought completion of a quarter century was a good time to look at it through a different pair of glasses and record my personal experiences for archival purposes. I strongly believe that IDS has its work cut out for it for the next two decades at least. However, it will need both vision and new leadership. We need more younger blood and new ideas. We need to strive for excellence and seek true innovation that can be exploited by industry. Eventually the society at large must benefit from our efforts; our goal is not just to publish high impact papers but produce impactful research that enhances productivity and improves the bottom-line of industrial operations.

It is my fervent hope that IDS will continue its brilliant track record for the next quarter century and make even more remarkable strides.

**Arun S. Mujumdar**

National university of Singapore and McGill University

Founder, IDS Series