

## **Editorial**

### **Role of Academia in Industrial Developments**

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The word ‘academic’ often has a pejorative implication. The contribution of generations of academics in the development and dissemination of scientific, engineering and technical knowledge cannot be over-emphasized. Most of the industrial technologies owe their origins to contributions by academia. It should be noted that even the industry practitioners owe their education and training to academics. Most designers routinely refer to data, design methodologies and fundamental knowledge (e.g., thermodynamics, heat/mass transfer, advanced analytical and computational tools) generated and freely disseminated by academics working in a non-profit environment after careful peer review – also carried out voluntarily.

It is unfortunate that industry as well as various government and granting agencies do not give appropriate credit to the not-for-profit academic institutions and faculty members for their important impact on for-profit industrial technologies. The principal beneficiaries of the academic outcomes are industry and businesses, which take up ideas and knowledge germinated in educational institutions and research laboratories, develop them further and bring them to the market. Ultimately, the global society benefits from this joint effort of the non-profit institutions and for-profit businesses. Unfortunately, this synergy is often not recognized and appreciated in a tangible manner by the society in general. To promote academia-industry interaction in a mutually beneficial manner, it is important that governments, businesses, industry and their relevant agencies provide for adequate support of educational and research institutions. In return, academia and research institutions must seek excellence and aim to make definitive contribution to the society.

To sum, industry and granting agencies need to recognize the important role of academics and academia. It is naturally appropriate to expect that industry interacts tangibly with academia to extend the frontiers of current technologies. Rather than waiting for a random discovery or invention by an academic that could benefit some industrial product or process, albeit without cost, it is better that industry provides some direction and funding to accelerate development of knowledge that can benefit it sooner than later.

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