Ignacio Grossmann's 65th Birthday Celebration Sessions, Atlanta AIChE Meeting

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On Monday November 17th, two CAST-sponsored sessions [136, 192] were organised by Chris Floudas and Stratos Pistikopoulos in honor of Ignacio Grossmann's 65th Birthday – to recognize Ignacio's seminal contributions, lasting impact and unique career in process systems engineering. The sessions were a follow-up to a very nice celebration dinner that was held on Sunday evening, November 16th attended by Ignacio's wife Blanca and over seventy, over-enthusiastic friends, colleagues and former PhD students and associates (see photos). It was quite a gathering at which amongst other events and happenings, Ignacio was presented with a poster featuring his impressive, strong and growing Academic Tree – numbering over 350 members (see Figure attached).

The two afternoon sessions in a fully packed room involved twelve presentations, with contributions from Ignacio's close academic colleagues, associates and members of his Academic Tree. After a brief introduction by Chris Floudas, setting the tone and background for the event, Rex Reklaitis gave an impressive account on 'Process systems engineering advances supporting the development and manufacture of pharmaceuticals' – clearly demonstrating the far reaching role that multi-scale modelling, process and product design, and intelligent manufacturing have been playing in this important sector. This was then followed by three contributions from former PhD students of Ignacio's, Ross Swaney, Stratos Pistikopoulos and Nick Sahinidis, who tried hard to impress their former supervisor with their recent and ongoing research contributions, from 'field theories' to 'multi-parametric programming' to 'black-box model-based mixed-integer nonlinear programming' (presentations attached). The last presentation of the first session was an elegant contribution by Pedro Castro on a subject that Ignacio himself pioneered and championed: how 'generalized disjunctive programming' can bring out creativity in model development – transforming the 'art' into 'science' (presentation attached). The second session started equally impressive with Manfred Morari on 'Mixed Logic Dynamical Systems', who provided a guided tour of the power of this modelling, optimization and control paradigm coupling mixed integer modelling & optimization within model predictive control, creating unparalleled opportunities in a wide range of application areas from automotive to power systems. This was followed by three more contributions from Ignacio's former PhD students, with Chris Floudas on 'global optimization', Christos Maravelias on 'scheduling' and Metin Turkay on 'multi-objective optimization' (presentations attached). Marianthi Ierapetritou, one of Ignacio academic grand-daughters, gave an excellent overview presentation on everything one would like to know about 'process flexibility' - and arguably much

more. They all provided ample evidence of Ignacio's Academic Tree influence and impact on the field across the globe.

The session finally ended with Ignacio himself – this was indeed the highlight of the full event, the moment everyone was waiting for. And it was equally rewarding, as Ignacio's class act touched us all with his 'Reflections on 35 years in process systems engineering research' – see attached. The 'Lessons Learned' that he shared with us in particular should serve as a standard reference for anyone who wants to embark on academic adventures and beyond. Ignacio, of course did re-assure us all that this is only an 'interim report', and that he intends to continue in full-speed, even accelerating!

Certainly a most memorable event that will be remembered and cherished! Many thanks Ignacio and Many Happy Returns - we are all looking forward to your 'Reflections on 50+ years in research' and we all hope to be there with you to celebrate again!

Ignacio E. Grossmann
Imperial College, PhD, 1977
Carnegie Mellon, 1979–2014

Center column

Jennifer Davidson – MS, 1980
Robert Drabbant – MS, 1981
Keshava Halemane – PhD, 1982
Soterios Papoulias – PhD, 1982
Ilan Avidan – MS, 1982
Ross Swaney – PhD, 1983
Marco Duran – PhD, 1984
Jane Vaselenak – PhD, 1985
Mark Shelton – PhD, 1985
Christodoulos Floudas – PhD, 1986
Mohini Chatrathi – MS, 1987
Sanjay Pradhan – MS, 1987
Gary Kocis – PhD, 1988
Efstratios Pistikopoulos – PhD, 1988
Deepak Birewar – PhD, 1989
Terence Yee – PhD, 1990
Nikolaos Sahinidis – PhD, 1990
David Straub – PhD, 1991
Raman Ramesh – PhD, 1992
Ignacio Quesada – PhD, 1993
Vasilios Voudouris – PhD, 1993
Dimitrios Varvarezos – PhD, 1994
Robert Clay – PhD, 1994
Mark Daichendt – PhD, 1995
Jose Pinto – PhD, 1995
Metin Turkay – PhD, 1996
Ramaswamy Iyer – PhD, 1997
Juan Zamora – PhD, 1997
Craig Schmidt – PhD, 1998
Vipul Jain – PhD, 1999
Hector Yeomans – PhD, 1999
Aldo Vecchietti – PhD, 2000
Susara Van Den Heever – PhD, 2001
Edgar Perea – PhD, 2002
Sangbum Lee – PhD, 2002
Jennifer Jackson – PhD, 2003
Jayanth Balasubramanian – PhD, 2003
Mariana Barttfeld – PhD, 2003
Christos Maravelias – PhD, 2004
Gabriela Garcia – MS, 2004
Vikas Goel – PhD, 2005
Soumitra Ghosh – PhD, 2005
Ashish Agarwal – PhD, 2006
Nicolas Sawaya – PhD, 2006
Muge Erdirik-Dogan – PhD, 2007
Ramkumar Karuppiah – PhD, 2007
Bora Tarhan – PhD, 2008
Fengqi You – PhD, 2009
Sylvain Mouret – PhD, 2010
Juan Pablo Ruiz – PhD, 2011
Sebastián Terrazas – PhD, 2011
Scott Kolodziej – MS, 2012
Abdularahman Alattas – PhD, 2012
Ravindra Kamath – PhD, 2012
Vijay Gupta – PhD, 2013
Sumit Mitra – PhD, 2013
Ahmad Alothman – MS, 2013
Martijn van Elzakker – PhD, 2013
Linlin Yang – PhD
Bruno Calfa – PhD
Pablo Garcia Herreros – PhD
Francisco Trespalacios – PhD
Qi Zhang – PhD
Robert Apap – PhD
Markus Drouven – PhD
Irene Lotero-Herrantz – MS

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Edson Antonio da Silva
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Myrian Schenk
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Jun Ryu
Vassilis Kosmidis
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Petros Proïos
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Merve Bodur
Thai Dinh
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