System Dynamics Summer School, 16-18 July 2014, Delft

Erik Pruyt, Delft, The Netherlands

The summer school was organized right before the International System Dynamics Conference in Delft. It was organized by Erik Pruyt. Especially for a first time event, it was a very successful event: many students learned a lot in those three days!

In total, there were 82 participants. From these 82 participants, there were 77 paying participants: some participants were exempted (4 who assisted) and 1 participant did not pay (although he claims he did). That comes down to 77x300 euro income, or 23100 euro in total.

In total, 12 professors (international and from TU Delft) were involved in teaching and coaching. In alphabetic order: Andrew Ford, Cristian Erik Kampmann, Erik Pruyt, Gonenc Yucel, Hazhir Ramandad, John Morecroft, Kim Warren, Len Malczynski, Navid Ghaffarzadegan, Tushit Islam (minor role), Yaman Barlas, Wil Thissen (minor role). Thanks to all!

There were 4 different tracks (see below). Beforehand, most students indicated they were interested in advanced topics, but during the summer school, most students ended up following the basic track and the intermediate track.

Some expenses were sponsored, but most were not. After covering 12100 euro of unsponsored expenses (catering during the event, train tickets for social event, exceptional travel expenses, hotel and other expenses incurred by the teaching team during the summer school), 10999 euro remained for honorarium payments. From this amount, 600 euro was reserved to cover international wire transfer costs (the amount that will not be used will be wired to the Student Chapter or the SDS for covering start-up costs for a future SD summer school).

The remainder, some 10400 euro, has been divided equally between the 9 lecturers (except the lecturers with minor involvement). This comes down to 1155 euro per person. All receipts and bank statements are, for reasons of transparency, available in a dropbox folder.

For further information, please contact Erik Pruyt (e.pruyt@tudelft.nl or +31627976768).

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BASIC: Introduction to SD

		Basic (no background in SD / no modelling experience)	
Wednesday 1	08:30-10:00	**Introduction**	**Erik & Len**
Wednesday 2	10:30-12:00	**Introduction SD modeling**	**Erik & Len**
Lunch	*12:00-13:30*	*Joint lunch*	
Wednesday 3	13:30-15:00	Conceptualization	**Erik & Len**
Wednesday 4	15:30-17:00	Basic Quantitative Model Building	**Erik & Len**
Dinner	18:00-20:00	Joint dinner	
Thursday 1	08:30-10:00	Intermediate Model Building	**Erik & Len**
Thursday 2	10:30-12:00	SIW Model Building	**Erik & Len**
Lunch	*12:00-13:30*	*Joint lunch*	

Thursday 3	13:30-15:00	Lecture Model Testing	**Erik & Len**
Thursday 4	15:30-17:00	SIW Model Building & Testing	**Erik & Len**
end of Thurs4	17:00-18:00	Hand-in a model for feedback	
Dinner	*18:00-20:00*	*Own dinner*	
Friday 1	08:30-10:00	Lecture Model Analysis & Policy Analysis	**Erik & Len**
Friday 2	10:30-12:00	SIW Model & Policy Analysis	**Erik & Len**
Lunch	*12:00-13:30*	*Joint lunch*	
Friday 3	13:30-15:00	Real world cases	**Kim**
Friday 4	15:30-17:00	SIW Preparation for Retake	**Erik & Len**
Dinner	*17:00-18:00*	*Own light dinner*	
Friday 5	18:00-20:00	Exam: Basic Modeling & Simulation	**Erik**
	20:00-...	*Party time!*	
Saturday	11:00-19:00	joint activity	**Erik**

Legend	
Yellow:	Lecture
Blue:	Blended learning
Green SGW:	Supervised Group Work
Green SIW:	Supervised Individual Work
Red:	Test/Exam/Retake Exam
Orange:	joint activity

		Intermediate: supervised team projects	
Wednesday 1	08:30-10:00	**Introduction**	**Andy**
Wednesday 2	10:30-12:00		
Lunch	*12:00-13:30*	*Joint lunch*	
Wednesday 3	13:30-15:00	Conceptualization	**Andy**
Wednesday 4	15:30-17:00	Basic Quantitative Model Building	**Andy**
Dinner	*18:00-20:00*	Joint dinner	
Thursday 1	08:30-10:00	Intermediate Model Building	**Andy**
Thursday 2	10:30-12:00	SGW Model Building + Feedback	**Andy**
Lunch	*12:00-13:30*	*Joint lunch*	
Thursday 3	13:30-15:00	Lecture Model Testing	**Andy**
Thursday 4	15:30-17:00	SGW Model Building & Testing	**Andy**
end of Thurs4	17:00-18:00	Hand-in model (for testing by professor)	
Dinner	*18:00-20:00*	*Own dinner*	
Friday 1	08:30-10:00	Lecture Model Analysis & Policy Analysis	**Andy**
Friday 2	10:30-12:00	SGW Model & Policy Analysis	**Andy**
Lunch	*12:00-13:30*	*Joint lunch*	
Friday 3	13:30-15:00	Real world cases	**Andy**
Friday 4	15:30-17:00	Finalizing GW	**Andy**
Dinner	*17:00-18:00*	*Own light dinner*	
Friday 5	18:00-20:00	Retake or Presentations (with Advanced Group)	
	20:00-...	*Party time!*	
Saturday	11:00-19:00	joint activity	

BASIC&INTERMEDIATE: SD for Op.Str.Pol.

	Intermediate (for basic+ & intermediate & advanced- students)	
08:30-10:00	Overview and Intro to SD (lecture plus demos and workshop)	John m.
10:30-12:00	Exam, presumably	John
12:00-13:30	*Joint lunch*	
13:30-15:00	Intro to Feedback Systems Thinking (lecture + in-class ex)	John
15:30-17:00	Modelling Dynamic Systems (lecture plus demos)	John
18:00-20:00	Joint dinner	

08:30-10:00	Coordination, Complexity & Firm Perform. (lecture + demos)	John
10:30-12:00	Asset Stock Adjustment in Dynamic Systems (lecture + demos)	John
12:00-13:30	*Joint lunch*	
13:30-15:00	Cyclical Dynamics and Operating Policy (lecture plus demos)	John
15:30-17:00	Model Building and Testing Workshop – Simple Factory Model	John
17:00-18:00	Personal Workshop: Develop Structural Analogy to Factory Model	
18:00-20:00	*Own dinner*	

08:30-10:00	Diversification Strategy, Dynamic Compl. & Firm Perform. (lecture + demos)	John
10:30-12:00	Dynamics of Diversification Workshop	John
12:00-13:30	*Joint lunch*	
13:30-15:00	Reflections on System Dynamics, Operations and Strategy (lecture + advice)	John
15:30-17:00	Finalizing Personal Workshop Model	John
17:00-18:00	*Own light dinner*	
18:00-20:00	Presentations	Jury (all)
20:00-…	*Party time!*	
11:00-19:00	joint activity	Erik

	ADVANCED TOPICS IN SD / ADVANCED TRACK	**Volunteers:**
08:30-10:00	Intro + Problem Structuring & Advanced Conceptualization	Wil Thissen
10:30-12:00	Gr1: Advanced Conceptualiz. /// (((Gr2: dynamic problem definition)))	Gr1: KIM /// (Gr2: Navid - small group)
12:00-13:30	*Supervision / Intervision I*	Andy / Navid / Len / Kim
13:30-15:00	Advanced Modeling I (micro-macro, hybrid, modeling of choice,...)	Hazhir & Navid
15:30-17:00	Advanced Modeling II (macros, data, integration with other methods,…)	Hazhir & Navid
18:00-20:00	Joint dinner	All those who are already in Delft

08:30-10:00	Estimation/Calibration/Bootstrapping/Experimental design/…	Hazhir / Navid
10:30-12:00	Gr1: Visualizations & Experimental Stuff /// Gr2: Real world case	Tushith / Len / Andy /…
12:00-13:30	*Supervision / Intervision II*	Andy / Navid / Len / Kim
13:30-15:00	Advanced Model Testing (validation, SA+,...)	Yaman / Gonenc
15:30-17:00	Advanced Model Analysis I (statistics, screening, clustering,…)	Yaman / Tushith / Andy / Gonenc
17:00-18:00	Hand-in models (to professors T4, F1-4)	
18:00-20:00	*Own dinner*	

Time	Activity	People
08:30-10:00	Model critique	**Christian**
10:30-12:00	Advanced Model Analysis II (FMA)	**Christian**
12:00-13:30	*Supervision / Intervision III*	**Andy / Navid / Len / Kim**
13:30-15:00	Advanced Policy Analysis (pol. optimization, robustness testing,...)	**Andy / Erik / Yaman / ...**
15:30-17:00	Gr1: SGW Advanced Model Analysis & Policy Analysis //// Gr2: ABM	**Gr2: Gonenc**
17:00-18:00	*Own light dinner*	
18:00-20:00	Presentation of work + feedback	**Jury (everyone who wants to join)**
20:00-...	*Party time!*	
11:00-19:00	joint activity	