

Day	Timing	Activity	Responsible/ Lecturers
Monday, July 28 th 2014	10.00- 14.00	Welcome & Registration	
	14.00- 18.00	1. Introduction, Overview Process – Structure – Properties	
		<p>“The Molten Metal and Its Care Prior to Casting”</p> <p>“Development of Microstructure During Solidification”</p> <p>“Transport Phenomena Considerations – Heat Flow, Fluid Flow and Mass Flow-affecting and Influencing Microstructure and Control of Defects”</p>	<p>Diran Apelian (WPI)</p> <p>Lars Arnberg (NTNU)</p> <p>Diran Apelian (WPI)</p>
Tuesday, July 29 th 2014	09.00- 13.00	2. Simulation	
		<p>“Simulation and Optimization of Aluminium Castings and Casting Processes”</p> <p>“Simulation of as cast microstructures for Al-alloys on the grain scale”</p>	<p>Moritz Weidt (MAGMA GmbH)</p> <p>Markus Apel (ACCESS e.V.)</p>
	14.00- 18.00	3. Processes and process control	
<p>"A short overview of foundry processes for light alloys"</p> <p>"Quality mapping in light alloys castings"</p> <p>"Key-process parameters for high-quality light alloys castings"</p>		<p>Franco Bonollo (DTG) Nicola Gramegna (Enginsoft)</p> <p>Franco Bonollo (DTG) Nicola Gramegna (Enginsoft)</p> <p>Franco Bonollo (DTG) Nicola Gramegna (Enginsoft)</p>	
4. Alloys			
	09.00- 13.00	<p>“Principles for the Design of Cast Alloys and an Overview of Commercial Alloys “</p>	M. M. Makhlof (WPI)

Wednesday, July 30 th 2014		<p>“Grain Refinement and Modification of Cast Alloys”</p> <p>“Heat Treatment of Cast Alloys”</p> <p>“Primary, Secondary Alloys, and the Effect of Impurities and Trace Elements”</p>	<p>Lindsay Greer (Cambridge University)</p> <p>Kevin Anderson (Mercury Marine)</p> <p>Giulio Timelli (DTG)</p>
	14.00-18.00	<p>5. Innovative processes and materials</p> <p>“Diffusion Solidification for the Casting of Wrought Alloys”</p> <p>“Semi-Solid Processing – status report”</p> <p>“Innovations in High Pressure Die Casting”</p> <p>“Hybrid Components (Steel/Al/Mg/Polymer) produced in High Pressure Die Casting</p>	<p>S. Shankar (WPI), Diran Apelian (WPI)</p> <p>John Jorstad (JLJ Technologies), Diran Apelian (WPI)</p> <p>Lothar Kallien (GTA)</p> <p>Andreas Bührig-Polaczek (RWTH)</p>
	09.00-13.00	<p>6. Ingot casting</p> <p>“DC Casting fundamentals”</p> <p>“Recycling”</p>	<p>Gerd-Ulrich Grün (Hydro Aluminium Rolled Products GmbH)</p> <p>Gerd-Ulrich Grün (Hydro Aluminium Rolled Products GmbH)</p>

Thursday, July 31 st 2014		“DC casting technologies”	A. Håkonsen (Hycast)
		“Melt treatment of Aluminium”	A. Håkonsen (Hycast)
14.00- 18.00	7. Advances in Foundry Management		
	"Life Cycle Assessment (LCA) applied to light alloys casting production"		Franco Bonollo (DTG)
	“Recycling of Aluminium”		Ragnhild Aune (NTNU)
		“Al Mini Mills”	Diran Apelian (WPI)
Friday, August 1 st 2014	09.00- 13.00	8. Industrial cases	?
		AUDI CASE STUDY “Automotive aluminum cylinder blocks : has the engineering community a winning casting process ? “	Claudio Mus – Teksid
		“Development of a Low Pressure Sand Cast Stator Housing”	David WeissEck Industries
		NEMAK case study	?
	13.00- 13.30	Closing of the Summer School	Andreas Bührig- Polaczek (RWTH)