Foreløbig identifikation af ph.d. projekter på BYG.DTUs relation til fokusområder identificeret af DBR

MGE, 06 oktober 2006

		Focusområde																												
		1 Effektivitet og økonomi							2 Æstetik, funktion og fleksibilitet						3 Miljø, arbejdsmiljø, indeklima								4 Rek., udd. FoU							
BYG.DTU (homepage 29 September 2006. III.9, III.10, IV.5 added – others?)		1.1 værktøjer	1.2 Udbuds og kontraktformer	1.3 Robuste materialer	1.4 Videndeling	1.5 Benchmarking	1.6 Automatisering	1.7 Krav	2.1 Gode historier	2.2 smukke overflader	2.3 Levetidsprojektering	2.4 Intelligente komponenter	2.5 Nanoteknologi	2.6 Fremme masteruddannelse	3.1 Videnudbredelse	3.2 Krav	3.3 Miljøneutrale delmaterialer	3.4 Udbredelse af SCC	3.5 Dokumentation for effekt på indeklima	3.6 Benchmarking systemer	3.7 Dokumentation for effekt på CO2-cyclus	4.1 Samarbejde mellem uddannelsessteder og	4.2 Krav til medarbejdere	4.3 Øge mængde og kvalitet af FoU	4.4 Koordinering af FoU					
Curent PhD projects																														
I	Section for Planning and Management of Building Processes																													
1.	Innovation in project-organised knowledge work: Facilitating the unfolding of competence among consulting engineers		?																											
2.	Integrating Lean Design and Lean Construction: Processes and Methods		?																											
3.	Theorising site management organizations		?																											
4.	Interorganisational Knowledge Processis in Construction - Knowledge and Practice in Partnering		?																											
II	Section for Structural Engineering																													
1.	Plasticity Theory applied to Seismic Analyses of Reinforced Concrete Structures	x																												
2.	Theory of Plasticity for Steel Structures																													
3.	Modelling and Experimental Verification of Reinforced Concrete under Blast Load	x		x					x				x																	
4.	Modeling of Reinforced Concrete Applying Fracture Mechanics	x									x																			
5.	Modelling of ECC Materials using Numerical Formulations based on Plasticity	x		x					x		x																			
6.	Understanding and Simulating wind-induced vibrations of iced vertical cables																													
7.	Dampers for the vibration control of structural cables																													
8.	The properties and structural use of toughened glass																													
9.	Ultimate Strength of a Large Wind Turbine Blade																													
10.	Sustainable strengthening of concrete structures with CFRP	x		x					x		x						x					x	x							
11.	CFRP retrofitting of concrete structures	x		x					x		x						x					x	x							
12	Fracture Mechanics for Cement Paste and Mortar: Measurement and Modeling	x									x											x	x							
13	Modeling of interacting cracks in reinforced concrete structures	x									x																			
14	Facetted glass shells																													

III	Section for Construction Materials																										
	1. Modelling Crack Initiation and Propagation in Wood Taking Into Account Viscoelasticity and Transient Moisture Conditions																										
	2. The Design of Cement-Based Materials with Given Microstructure										x		x														
	3. Management of Reinforcement Corrosion										x		x														
	4. New Principles in Atrium Smoke Management																										
	5. Ultimate Strength of Vestas Wing Box Design																										
	6. The Form Filling of Self Compacting Concrete	x																x									
	7. Transport and Corrosion Behavior of Cracked Reinforced Concrete										x																
	8. Electrochemical repair of heritage buildings with special focus on murals																										
	9. Non-destructive Electrochemical Methods for Monitoring of Reinforcement Corrosion (added)	x									x																
	10. The quantification of the degree of hydration of individual cement phases in Portland cement phases (added)										x																
IV	Section for Geotechnics																										
	1. Numerical and physical modelling of laterally loaded pile in sand subject to cyclic loading																										
	2. Deformation caused by installation and loading of large diameter piles in rate sensitive saturated clays																										
	3. Engineering geology of Quaternary deposits in Greenland																										
	4. Bearing Capacity of Arctic roads and airfields																										
	5. Temperature influence on rock mechanical properties																										
V	Section for Building Physics and Services																										
	1. Solar combi systems																										
	2. Hygrothermal Microclimate on Interior Surfaces of the Building Envelope																										
	3. Hygrowick – thermal insulation for cold piping																										
	4. Methods for optimization in the building energy field																										
	5. Competitive solar heating systems for residential buildings																										
	6. Analysis of combined production of electricity and heat in low-energy buildings																										
	7. Holistic Tropical Building Design																										
	8. New types of building integrated ventilation concepts with several functions																										
VI	**Previous projects**																										
	1. Integrated geophysical techniques for groundwater studies and permafrost investigations in Greenland																										
	2. Application of microbial products to promote electrodialytic remediation of heavy metal polluted soil																										
	3. Bridge Deck of Steel and Fiber Reinforced Concrete in Composite Action																										
	4. Effect of Prestressing in Brittle Elements of Concrete and Masonry																										
	5. The durability of white Portland cement to chemical attack (added)	x									x		x														

Noter
1.4 Samarbejde med DKBI etableret/under etablering
2.5 Deltagelse i div. NanoCem projekter, se www.nanocem.net
2.6. Emnerne søges inddraget i undervisningen af BSc og MSc
4.1 Advisory board på BYG.DTU, samarbejde om studenter og ph.d. projekter, udførelse af rekvireret forskning