

INTERNATIONAL CONFERENCE ON THE APPLICATIONS OF COMPUTER SCIENE AND MATHEMATICS IN ARCHITECTURE AND CIVIL ENGINEERING JULY 04 - 06, 2012 AT THE BAUHAUS-UNIVERSITY WEIMAR







Session Overview

9:15am - 9:30am	Op: Opening Location: HS A - Lecture Hall Chair: Klaus Gürlebeck	
9:30am	P-1: Plenary Session	
- 10:30am	Location: HS A - Lecture Hall Chair: Klaus Gürlebeck	
	Presentations	
	Interaction modeling for mechanized tunneling	
	Schanz, Tom	
10:45am	S1-1A: Parallel Session	S1-1B: Parallel Session
-	Location: Room 004	Location: Room 303
12:15pm	Chair: Wolfgang Sprößig	Chair: Michał Musiał
	Presentations	Presentations
	Mean value properties for the Weinstein equation and	Discrete crack model of Borcz for calculating the
	modified Dirac operators	deflections of bending reinforced concrete beam
	Eriksson, Sirkka-Liisa	Musiał, Michał; Kamiński, Mieczysław; <u>Ubysz, Andrzej</u>
	Complete orthogonal systems of 3D spheroidal monogenics	Extended isogeometric analysis based crack identificatio
	Morais, Joao	applying multilevel regularizing methods
		<u>Lahmer, Tom</u> ; Ghorashi, Shahram
	On a quaternionic function theory arising from a	
	factorization of the Schrödinger operator with potential of a special form.	T-SPLINE BASED XIGA FOR ADAPTIVE MODELING OF CRACKED BODIES
	Luna-Elizarraras, Maria Elena	Ghorashi, Seyed Shahram; Rabczuk, Timon; Ródenas García, Jua
	Lulia-Liizali alas, Malia Lielia	José; Lahmer, Tom
1:30pm	S1-2A: Parallel Session	S1-2B: Parallel Session
-	Location: Room 106	Location: Room 202
3:00pm	Chair: Tom Lahmer	Chair: Tom Schanz
	Presentations	Presentations
	Wavelet-based Indicators for Response Surface Models in	Influence of different data types for the estimation of
	Damage Identification of Structures	hydromechanical parameters for a water retaining dam using synthetic data
	Ahmad, Sofyan; Zabel, Volkmar; Könke, Carsten	De Aguinaga, José Guillermo
	On the Inverse Problems for the Coupled Continuum Pipe	<u> </u>
	Flow model for flows in karst aquifers	Uncertainty quantification in cyclic creep prediction of
	Lu, Shuai	concrete
	System identification methods for ground models in	Motra, Hem Bahadur; Osburg, Andrea Dimmig; Hildebrand, Joerg
	mechanized tunneling	Constitutive Modeling of Crystalline Materials with Textur
	Miro, Shorash; Hartmann, Dietrich; Schanz, Tom; Zarev, Veselin	Characteristics
		Wudtke, Idna
3:15pm	S1-3A: Parallel Session	S1-3B: Parallel Session
-	Location: Room 106 Chair: Maria Elena Luna-Elizarraras	Location: Room 202 Chair: Frank Werner
4:45pm	Presentations	Presentations
	Computation of the reflectance and transmittance for an	
	inhomogeneous layered medium with turning point using	The influence of the local concavity on the functioning of bearing shell of high-rise construction
	the WKB and SPPS methods	Kulchytskyy, Artem; Horokhov, Yevgen; Gubanov, Vadim; Golikov.
	Castillo-Pérez, Raúl; Cedillo-Díaz, Azucena del Carmen; Oviedo-	Alexandr
	Galdeano, Héctor; Kravchenko, Vladislav V.	Analysis of the mode of defence Constitution in
	Some Harmonic analysis on Möbius strip domains and the	Analysis of the mode of deformation of the sub-pulley structures on shaft sloping headgear structures
	Klein bottle in \$\R^n\$	Nechytailo, Oleksandr; Horokhov, Yevgen; Kushchenko, Vladimir
	Kraußhar, Rolf Sören	- Totoliano, Olonounui, Horokilov, Tevgen, Rushichenko, Viduliili
		Robustness in Civil Engineering - Influences of the
	Orthogonal decompositions and their applications	Structural Model on the Evaluation of the Structural
	Le, Hoai Thu; Morais, Joao; Sprößig, Wolfgang	Robustness

Date: Thursday, 05/Jul/2012

Schmeikal, Bernd Anton

9:00am - 10:00am	P-2: Plenary Session Location: HS A - Lecture Hall Chair: Helmuth R. Malonek			
io.ooaiii	Presentations			
	Some aspects of hypercomplex analysis and its applications past and presence Sprößig, Wolfgang			
				10:15am
- 11:45am	Location: Room 004 Chair: Sirkka-Liisa Eriksson	Location: Room 303 Chair: Volkmar Zabel		
	Presentations	Presentations		
	Totally regular variables and Appell sequences in	Model Quality Evaluation of Coupled RC Frame-Wall		
	Hypercomplex Function Theory	Systems for Global Damage Assessment		
	Malonek, Helmuth R.; Cruz, Carla; Falcão, M. Irene	Marzban, Samira; Schwarz, Jochen		
	On M-conformal mappings and geometric properties	Evaluation of Soil-Structure Interaction models using		
	Nguyen, Manh Hung; Guerlebeck, Klaus	different modelrobustness measures		
	Integral manifolds for semi-linear evolution equations and admissibility of function spaces	Stutz, Henning; Wuttke, Frank		
		Quantifying the quality of partial model coupling and its		
	Vu, Thi Ngoc Ha	effect on the simulated structural behavior		
		Keitel, Holger		
1:00pm	S2-2A: Parallel Session Location: Room 101	S2-2B: Parallel Session Location: Room 202		
- 2:30pm	Chair: Shuai Lu	Chair: Yilmaz Simsek		
-	Presentations	Presentations		
	Rotational ductility of crack in static and dynamic	The problem of coupling between analytical solution and		
	calculations of reinforced concrete bar structures	finite element method		
	Musiał, Michał; Ubysz, Andrzej	Legatiuk, Dmitrii; Bock, Sebastian; Guerlebeck, Klaus		
	Model describing static and dynamic displacements of silos	Split Quaternionic Analysis and Representation Theory		
	wall during the flow of loose material	Libine, Matvei		
	Musiał, Michał; <u>Ubysz, Andrzei</u> ; Ulatowski, Piotr	A note on the Clifford Fourier-Stieltjes transform		
	System identification of a wind turbine structure using	Morais, Joao; Georgiev, Svetlin; Sproessig, Wolfgang		
	robust model updating strategy			
0.45	Liu, Xiangqin; Leimbach, Robert; Hartmann, Dietrich	Joseph Browllide Control		
2:45pm -	S2-3A: Parallel Session Location: Room 101	S2-3B: Parallel Session Location: Room 202		
4:15pm	Chair: Joao Morais	Chair: Guido Morgenthal		
	Presentations	Presentations		
	On interpolation function of the Bernstein polynomials	Model combinations for assessing the flutter stability of		
	Simsek, Yilmaz	suspension bridges Abbas, Tajammal; Morgenthal, Guido		
	Binary and ternary Clifford analysis on Nonion algebra and	Abbas, rajanina, morgentia, outdo		
	su(3)	Assessment of Integral Bridges using Quantitative Mode		
	Lawrynowicz, Julian; Nouno, Kiyoharu; <u>Suzuki, Osamu</u> ; Nagayama, Daiki	Evaluation Jung, Bastian; Morgenthal, Guido		
	Daiki	Jung, Bastian, Morgential, Guido		
		Dependency of the influence of input parameters of BVI		
		models on the initial excitations and speed ranges Karaki, Ghada		
4:30pm	S2-4: Late Session			
-	Location: HS C - Lecture Hall Chair: Klaus Gürlebeck			
5:30pm	Presentation and discussion will be in German			
	Presentations			
	Bauhaus Isometry and Fields			
	Schmeikal, Bernd Anton			

Date: Friday, 06/Jul/2012

9:00am - 10:00am	P-3: Plenary Session Location: HS A - Lecture Hall Chair: Frank Werner			
. 5.000111	Presentations Solar Updraft Power Plants - From structural engineering to multi-physics simulations Krätzig, Wilfried B.			
10:00am -	P-4: Plenary Session Location: HS A - Lecture Hall Chair: Frank Werner			
11:00am	Presentations Solving coupled problems in civil engineering by chaining conceptually different submodels - a Computational Engineering view			
				Hartmann, Dietrich
	11:15am - 12:15pm	Location: HS A - Lecture Hall		
12. Iəpili	Presentations			
	Introduction to Geometric Algebra			
	Benger, Werner	1		
1:30pm	S3-1A: Parallel Session Location: Room 004	S3-1B: Parallel Session Location: Room 303		
3:00pm	Chair: Werner Benger	Chair: José Guillermo De Aguinaga		
	Presentations	Presentations		
	The Clifford Fourier transform in real Clifford algebras Hitzer, Eckhard	The application of POD curves to damage detection base on partial models— a numerical and experimental study Deeb, Maher; Zabel, Volkmar		
	Formalizing Grassmann-Cayley and Clifford algebras in the	Deep, Marier, Zaper, Volkinar		
	Coq proof Assistant	Thermo-Hydro-Mechanical Coupling Analysis of Saturate		
	Fuchs, Laurent; Thery, Laurent	Poroelastic Column fulfilling Thermal Non-equilibrium Condition		
	New foundations for geometric algebra Gonzalez Calvet, Ramon	Yang, Yang; Guerlebeck, Klaus; Schanz, Tom; Steeb, Holger		
		A small to large strain stiffness macroelement for shallor foundation.		
		Kafle, Binod; Wuttke, Frank		
3:15pm -	S3-2A: Parallel Session Location: Room 004 Chair: Matvel Libine			
5:15pm	Presentations			
	The Gaussian and other kernels in discrete Clifford analysis			
	Bernstein, Swanhild; Baaske, Franka; de Ridder, Hilde; Sommen, Frank			
	The inversion of the Radon transform on the rotation group Hielscher, Ralf			
	Illustrating Differential Geometry via Geometric Algebra of Color Space Benger, Werner			
	Software Demo Benger, Werner			