

# Programme

Tuesday 17<sup>th</sup> April, 2012

16.00 Registration / Refreshments  
18.00 End of Day

Wednesday 18<sup>th</sup> April, 2012

	Lecture Theatre A – CWS/10	Lecture Theatre B – CWG/02
08.10	Registration / Tea & Coffee	
08.50	<b>Opening of the Conference:</b> welcome by the Vice-Chancellor Prof. Bob Cryan and the Conference Chair Prof. X. Jane Jiang (Lecture Theatre A)	
09.10	<b>Keynote session I</b> (Lecture Theatre A) Chair: Prof X Jiang	
	<i>Computed Tomography in quality control - Chances and Challenges</i> (Lecture Theatre A) A Weckenmann; Ph Kramer	
	<b>Session 1A</b> <i>Statistical Tolerancing</i> Chair: Prof. E Morse	<b>Session 1B</b> <i>Applications of Metrology</i> Chair: Prof. D J Whitehouse
09.40	<i>Statistical tolerance analysis of a mechanism with gaps based on system reliability methods</i> P Beaucaire, N Gayton, E Duc, JY Dantan	<i>Dimensional metrology in the macroscopic range with sub-nanometre resolution</i> T Hausotte, N Vorbringer-Dorozhovets, J C Shen, E Manske, G Jager
10.00	<i>Statistical tolerancing based on variation of point-Set</i> J Yang, J Wang, Z Wu, N Anwer	<i>A novel approach for 3D part inspection using laser-plane sensors</i> N Audfray, C Mehdi-Souzani, C Lartigue
10.20	<i>Statistical dynamic specifications method for allocating tolerances</i> C Hernandez, R Tutsch	<i>Application of sensor tilting for enhanced measurement of microstructures</i> A Weckenmann, A Schulera
10.40	<i>Optimal statistical tolerance allocation based on the Lambert W Function</i> K M Cheng, J C Tsai	<i>From surface defects of a planar joint to relative displacements and vice versa</i> H N Le, Y Ledoux, P Darnis, A Ballu
11.00	<b>Coffee &amp; Posters</b>	
	<b>Session 2A</b> <i>Tolerance Modelling &amp; Standards</i> Chair: Dr V. Srinivasan	<b>Session 2B</b> <i>Applications of Simulation</i> Chair: Prof. G. Moroni
11.20	<i>Size tolerancing revisited: A basic notion and its evolution in standards</i> E P Morse, V Srinivasan, H B Voelcker	<i>Numerical investigation into the impact of dimensional and geometric tolerances on the long-life fatigue strength of mechanical components</i> P Gust, C Schluer
11.40	<i>A simpler and more formal geometric tolerancing model</i> P Leonard, E Pairel, M Giordano	<i>Geometric variation simulation and robust design for flexible cables and hoses</i> T Hermansson, J S Carlson, S Bjorkenstam, R Soderberg
12.00	<i>Discrete shape modeling for skin model representation</i> M Zhang, N Anwer, A Stockinger, L Mathieu, S Wartzack	<i>Manufacturing tolerance analysis based on the Model of Manufactured Part and Monte Carlo simulation with experimental data</i> M H Bui, A Sergent, F Villeneuve
	<b>Session 3A</b> <i>Oral Presentation of Posters I</i> Chair: Dr V. Srinivasan	<b>Session 3B</b> <i>Oral Presentations of Posters II</i> Chair: Prof. J. Y. Dantan
12.20	<i>Dimensional stability and variance of carbon fiber reinforced plastics - Current state and necessary future developments</i> P Steinle, M Bohn	<i>Establishing the energy profile for geometric variations of a planar surface</i> G Ameta
12:26	<i>A generic method for the worst case and statistical tridimensional tolerancing analysis</i> M Mansuy, M Giordano, P Hernandez	<i>Hierarchization of characteristics applied to the component approval strategy</i> A Van Hoecke
12.31	<i>A strategy for testing product conformance to geometric dimensioning &amp; tolerancing standards</i> S P Frechette, B R Fischer	<i>Three dimensional manufacturing tolerance design using convex sets</i> J Zhang, L Qiao

	<b>Lecture Theatre A – CWS/10</b>	<b>Lecture Theatre B – CWG/02</b>
12:36	<i>Web-enabled, real-time, quality assurance for machining production systems</i> J L Michaloski, Y F Zhao, B E Lee, W G Rippey	<i>Tolerance re-distribution of a machine tool spindle by negative tolerancing</i> J C Tsai, S R Wu
12:41	<i>The application of standards in the context of evolving technical developments in the field of plastics</i> K Hetsch, P Steinle, M Bohn	
12.50	<b>Lunch &amp; Posters</b>	
13.50	<b>Keynote session II</b> (Lecture Theatre A) Chair: Prof. L Mathieu	
	<b>Reflections on the Role of Science in the Evolution of Dimensioning and Tolerancing Standards</b> (Lecture Theatre A) V Srinivasan	
	<b>Session 4A</b> <b>Lifecycle Oriented Tolerancing</b> Chair: S. Wartzack	<b>Session 4B</b> <b>Optical Metrology</b> Chair: Prof. X. Jane Jiang
14.20	<i>Cost estimation method for variation management</i> S Mirdamadi, A Etienne, A Hassan, J Y Dantan, A Siadat	<i>Optical Multi-Sensor Measurements in the shop by compensating environmental influences</i> A Weckenmann, J Bernstein
14.40	<i>Inspection strategies and multiple geometric tolerances</i> G Moroni, S Petro	<i>Accelerated surface measurement using wavelength scanning interferometer with compensation of environmental noise</i> H Muhamedsalih, X Jiang, F Gao
15.00	<i>Tolerancing subjective and uncertain customer requirements regarding perceived product quality</i> B Quattelbaum, R Schmitt	
15.20	<b>Coffee &amp; Posters</b>	
	<b>Session 5A</b> <b>Tolerancing Analysis</b> Chair: Prof J Yang	<b>Session 5B</b> <b>Error and Uncertainty Evaluation</b> Chair: A. Weckenmann
15.40	<i>Tolerance analysis approach based on the classification of uncertainty (aleatory/epistemic)</i> J Y Dantan, N Gayton, A J Qureshi, M Lemaire, A Etienne	<i>Synthetic error modelling for NC machine tools based on intelligent technology</i> X H Yao, J Z Fu, Y T Xu, Y He
16.00	<i>A tolerance analysis method for rotating machinery</i> J K Guo, J Hong, Z H Yang, Y Wang	<i>A coordinate measurement uncertainty evaluation software fully consistent with the GPS philosophy</i> W Jakubiec, W Plowucha
16.20	<i>Analysis of the effects of manufacturing-caused deviations and varying operation parameters on operation-depending deviations of systems in motion</i> M Walter, S Wartzack	<i>Volumetric error compensation for the MScMS-II</i> M Galetto, L Mastrogiacomio, G Moroni, S Petro
16.40	<i>New multimedia geometrical tolerancing course</i> Z Humienny, M Berta	<i>Evaluation of critical dimensions and geometric errors of thin foil laser targets through areal surface topography analysis</i> N. Senin, L. Blunt and M. Tolley
17.00	<i>Algorithm to calculate the Minkowski sums of 3-polytopes :application to tolerance analysis</i> D Teissander, V Delos, L Homri	<i>An investigation of the repeatability of non-rigid parts measurements: A case study of an aluminium panel</i> G N Abenham, A Desrochers, A S Tahan
17.20	<b>End of Day 1</b>	
18.30	<b>Transport to Yorkshire Sculpture Park</b>	
20.00	<b>Conference Banquet with Entertainment</b>	
22.45	<b>Transport to accommodation</b>	

**Thursday 19<sup>th</sup> April, 2012**

	<b>Lecture Theatre A – CWS/10</b>	<b>Lecture Theatre B – CWG/02</b>
09.00	<b>Keynote session III</b> (Lecture Theatre A) Chair: Prof. D Whitehouse	
	<b>Recent Developments in ISO-GPS Standards and Strategic Plans for Future Work</b> (Lecture Theatre A) H S Nielsen	
	<b>Session 6A</b> <b>Tolerancing process</b> Chair: Prof Z Humienny	<b>Session 6B</b> <b>Computational Geometry (I)</b> Chair: Prof P J Scott
09.30	<i>Ontology Supported process based geometric tolerancing</i> A Sprenger, R Anderl	<i>Least-squares fit of measured points for square line-profiles</i> J Davidson, S Savaliya, J J Shah
09.50	<i>Methodic design of a customized Maturity Model for Geometrical Tolerancing</i> A Weckenmann, G Akkasoglu	<i>Curvature-based registration and segmentation for multisensor coordinate metrology</i> H Zhao, N Anwer, P Bourdet
10.10	<i>A scientific point of view of a simple industrial tolerancing process</i> F Charpentier, A Ballu, J Pailhes	<i>An adaptive sampling approach for digitizing unknown free-form surfaces based on advance path probing</i> K Lu, W Wang, Y Wu, Y Wei, Z Chen
10.30	<i>Methodology for requirement-driven tolerance specification of bevel gears</i> S Watrin, H Binz, B van de Lindeloof	<i>A unified method to evaluate form errors by minimum zone elements, maximum inscribed elements and minimum circumscribed elements for precision engineering</i> X Zhang, X Jiang, A B Forbes, H D Minh, P J Scott
10.50	<b>Coffee &amp; Posters</b>	
	<b>Session 7A</b> <b>Tolerance Evaluation and Verification</b> Chair: Prof P Gust	<b>Session 7B</b> <b>Computational Geometry (II)</b> Chair: Prof J Davidson
11.10	<i>Computed tomography as a tool for tolerance verification of industrial part</i> P Muller, A Cantatore, J L Andreasen, J Hiller, L De Chiffre	<i>An efficient divide and conquer algorithm for morphological filters</i> S Lou, X Jiang, P J Scott
11.30	<i>3D tolerances analysis integrated to Digital Mocu-Up: MECAMaster for CATIA V5</i> P Clozel, D Lacour, P A Rance	<i>Adaptive inspection plans in coordinate metrology based on Gaussian process models</i> R Ascione, G Moroni, W Polini, D Romano
11.50	<i>Profile tolerance verification for free-form surfaces using medial axis transform</i> K B Kale, B Gurumoorthy	<i>A new method to characterize the structured tessellation surface</i> W Zeng, X Jiang, P J Scott
12.10	<b>Lunch &amp; Posters</b>	
13:00	<b>Keynote session IV</b> (Lecture Theatre A) Chair: Prof. A Weckenmann	
	<b>General Metrology in Manufacture</b> (Lecture Theatre A) D J Whitehouse	
	<b>Session 8A</b> <b>Tolerancing of Assemblies</b> Chair: Prof F Villeneuve	<b>Session 8B</b> <b>Functional Tolerancing and Geometric Deviations</b> Chair: Prof L A Blunt
13.30	<i>On neural networks' ability of approximate geometrical variation propagation in assembly</i> L Andolfatto, F Thiebaut, M Douilly, C Lartigue	<i>Study on functional specification scheme on interface based on positioning features</i> Y Cao, H Zhang, Y Wei, J Yang
13.50	<i>A novel algorithm of posture best fit based on key characteristics for large components assembly</i> L Y Zheng, X S Zhu, R W Liu, Y W Wang, P G Maropoulos	<i>Process plans and manufacturing dimensions for the steering of machining: The Copilot-Pro methodology</i> E Pairel, E Goldschmidt, B Vayre, B Abdelhakim, M Pillet
14.10	<i>A sequential constraint solver to simulate assembling operations for tolerance analysis</i> P Franciosa, S Gerbino, S Patalano	<i>On the impact of geometric deviations on structural performance</i> B Schleich, A Stockinger, S Wartzack
14.30	<i>An entropy-based method to evaluate plane form errors for precision assembly</i> Z Zhang, F Zuo, T Zhang, X Jin, X Ye	<i>To analytically estimate the 3D position deviation of a hole pattern due to fixturing</i> A Armillotta, G Moroni, W Polini
14.50	<i>Form errors impact in a rotating plane surface assembly</i> J Grandjean, Y Ledoux, S Samper, H Favreliere	<i>A concurrent design method for functional tolerance and structure based on the principle of decomposition and reconstitution</i> H Zhang, Y Cao, Y Wei, J Yang
15.10	<i>Critical operating conditions for assemblies with parameter-dependent dimensions</i> A Armillotta, Q Semeraro	
15.30	<b>Refreshments + Tours</b> <b>End of Conference</b>	