

図学国際会議京都

**The 14th
International Conference
on Geometry and Graphics**



ICGG 2010
Kyoto

August 5th - 9th, 2010
Kyoto, Japan

Sponsored by

Organized by

Supported by

International Society for Geometry and Graphics (ISGG)



Japan Society for Graphic Science (JSGS)



Osaka Electro-Communication University

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JSGS Hokkaido Branch 20th Anniversary Event

In cooperation with

Computer Graphic Arts Society

Group of Lighting and Visual Environment, Kinki Chapter,

Architectural Institute of Japan

Japan Origami Academic Society

Japan Society for Design Engineering

Japan Society of Mathematical Education

Japanese Society for Engineering Education

Japanese Society for the Culture of KATACHI

SIGGRAPH ASIA

Society for Art and Science

Society for Science on Form, Japan

Special Interest Group on Computer Graphics and CAD,

Information Processing Society of Japan

The Institute of Image Electronics Engineers of Japan

The Japan Society for Precision Engineering

Program

Social Events (p.10)

Aug. 5	15:00 - 18:00	Registration	
(Thu)	17:00 - 19:00	Welcome Reception (Welcome Lecture 17:30 - 19:00)	RM1

Aug. 6	9:20 - 10:20	Opening Ceremony	
(Fri)	10:20 - 10:30	Short Break	
	10:30 - 12:00	Plenary Session PS1	RM8
	12:00 - 13:30	Lunch	13:30 - Accompanying Persons Tour
	13:30 - 15:10	Technical Session TS1	
		TS1-A Mechanics & Structure	RM1
		TS1-B Formative Design	RM2
		TS1-C Engineering Design	RM3
		TS1-D Architectural Design Education	RM4
	15:10 - 15:20	Short Break	
	15:20 - 17:00	Technical Session TS2	
		TS2-A Surfaces	RM1
		TS2-B Art	RM2
		TS2-C Materials & Simulation	RM3
		TS2-D Spatial Ability	RM4
	17:00 - 17:30	Coffee Break	
	17:30 - 18:20	Poster Session POS	
		Short Presentation	RM2 & RM3
	18:20 - 19:00	Core Time	RM5
	18:30 - 20:00	ISGG Board Meeting	RM4

Aug. 7	9:10 - 10:40	Plenary Session PS2	RM2 & RM3
(Sat)	10:40 - 11:10	Coffee Break	
	11:10 - 12:30	Technical Session TS3	
		TS3-A History of Graphics	RM1
		TS3-B Paintings	RM2
		TS3-C 3D Captured Data Processing	RM3
		TS3-D CAD / CG Education (1)	RM4
	12:30 - 14:00	Lunch	13:00 - Accompanying Persons Tour
	14:00 - 15:40	Technical Session TS4	
		TS4-A Origami	RM1
		TS4-B Applied Geometry	RM2
		TS4-C Image Processing (1)	RM3
		TS4-D Engineering Graphics Education (1)	RM4
	15:40 - 16:10	Coffee Break	
	16:10 - 17:50	Technical Session TS5	
		TS5-A Surface Modeling	RM1
		TS5-B Architecture & Civil Engineering	RM2
		TS5-C Application Systems	RM3
		TS5-D Engineering Graphics Education (2)	RM4

Aug. 8 (Sun)	9:10 - 10:00	Plenary Session PS3	RM 2&3
	10:00 - 10:30	Coffee Break	
	10:30 - 11:50	Technical Session TS6	
		TS6-A CG	RM1
		TS6-B Motion / Curve Approximation	RM2
		TS6-C Animation	RM3
		TS6-D CAD / CG Education (2)	RM4
	11:50 - 13:20	Lunch	
	13:20 -	Official Excursion & Banquet	

Aug. 9 (Mon)	9:10 - 10:30	Technical Session TS7	
		TS7-A 2D Descriptive Geometry	RM1
		TS7-B Pattern & Image	RM2
		TS7-C 2D Applications	RM3
		TS7-D CAD Education	RM4
	10:30 - 11:00	Coffee Break	
	11:00 - 12:40	Technical Session TS8	
		TS8-A Drawing / Projection	RM1
		TS8-B Visualization of Spatial Composition	RM2
		TS8-C Image Processing (2)	RM3
		TS8-D Descriptive Geometry Education	RM4
	12:40 - 14:10	Lunch	
	14:10 - 16:10	Closing Ceremony & ISGG General Meeting	RM8

Plenary Sessions

PS1		FRI., 6 AUG.		10:30 - 12:00	RM8	K. SHINA	G. WEISS
Article	Page	TURNED IVORY POLYHEDRA				T. TARNAI - Hungary	
003	47						
004	53	AN INTRODUCTION TO THE USE OF 3D DIGITAL DATA OF CULTURAL PROPERTIES (SCULPTURE) IN EDUCATION AND RESEARCH				S. YABUUCHI - Japan	
PS2		SAT., 7 AUG.		09:10 - 10:40	RM2 & RM3	T. BRANOFF	I. TANAKA
Article	Page	BIM AND ITS IMPACT ON ENGINEERING & GRAPHIC COMMUNICATION EDUCATION				C. CORY - USA	
001	27						
005	57	RESEARCH OF DIGITAL LEAD DESIGN PROCESS				T. YAMASHITA - Japan	
PS3		SUN., 8 AUG.		09:10 - 10:00	RM2 & RM3	O. RÖSCHEL	
Article	Page	DISCRETE GLIDING ALONG PRINCIPAL CURVES				H. P. SCHROCKER - Austria	
002	37						
WL		FRI., 5 AUG.		17:30 - 19:00	RM1	T. IVORI	
Article	Page	AN ADVENTURE IN FOUR-DIMENSIONAL SPACE AND TIME				K. MIYAZAKI - Japan	
010	63						

Technical Sessions

TS1-A	Mechanics & Structure	FRI., 6 AUG.	13:30 - 15:10	RM1	P. MAYRHOFER	D. VELICHOVÁ
Article Page	246 319	CONSTRUCTIVE & ALGEBRAIC GEOMETRY IN KINEMATICS			P. ZSOMBOR-MURRAY - Canada	
188	216	A STUDY ON SPACIAL ARRANGEMENTS WITH TORUSES METHOD BASED ON HOW TO PACK RODS			K. MORITA - Japan	
109	89	GEOMETRY OF PENTAHEDRAL MACROSTRUCTURAL LATTICE			E. BERALDS, M. DOBELIS - Latvia	
203	240	THE SELF-MOTIONS OF A FULLEROID-LIKE-MECHANISM			O. RÖSCHEL - Austria	
149	157	ON SOME SURFACES IN KINEMATICS			M. HUSTY - Austria	

TS1-B		Formative Design	FRI., 6 AUG.	13:30 - 15:10	RM2	M. KATO	E. WOHLLEBEN
Article	Page						
104	81	COMPUTING THE HISTORY TOWARD THE FUTURE					
							S. ANDREANI - Italy
219	269	UTILIZATION OF RAPID PROTOTYPING SYSTEM FOR LAMP SHADES DESIGN					
							H. SUZUKI, N. IIDA - Japan
150	159	DESIGNING A NEW TOY TO FIT OTHER TOY PIECES - A SHAPE-MATCHING TOY DESIGN BASED ON EXISTING BUILDING BLOCKS -					
							Y. IGARASHI, H. SUZUKI - Japan
173	192	PARAMETRIC RECONSTRUCTION OF THE SPACE IN VERMEER'S PAINTING »GIRL READING A LETTER AT AN OPEN WINDOW«					
							D. LORDICK - Germany
128	120	ANALYSIS OF OCULAR MOTILITY IN DIGITAL SIGNAGE SCREEN DESIGNS					
							J. ENDO, K. MOTOMYAMA, A. NAKAMURA - Japan
TS1-C		Engineering Design	FRI., 6 AUG.	13:30 - 15:10	RM3	H. ABE	Y. MA
Article	Page						
225	281	A METHOD FOR GEOMETRIC MODELING AND GRAPHIC SIMULATION OF ELLIPTIC GEAR WITH INVOLUTE TEETH PROFILE					
							X. TANG, M. ZHANG, F. REN, S. GAO - China
205	243	CONFIGURATION OF BIOLOGY AND ARTIFICIAL DESIGN					
							T. SAKURAI, R. NEMORI - Japan
194	226	A COMPUTER AIDED SYSTEM FOR INTERACTIVE WIG DESIGN					
							M. NIZEKI, Y. TAKENAKA, Y. TASAKA - Japan
212	257	DESIGN COLLISION-FREE GEOMETRY ON DENTAL PROSTHESES					
							E. SOLABERRIETA, A. ARIAS, R. MINGUEZ, J. MUNIOZGUREN, L. BARRENETXEA - Spain
152	162	THREE-DIMENSIONAL MULTI-PIPELINE PLANNING BASED ON ANT COLONY ALGORITHM					
							D. JIANG, B. LIU, Y.-F. QU - China
TS1-D		Architectual Design Education	FRI., 6 AUG.	13:30 - 15:10	RM4	P. CASU	K. SUZUKI
Article	Page						
206	245	3D-PLOTS CAUSE A REVIVAL OF PHYSICAL MODELS IN ARCHITECTURE AND ARCHITECTURAL EDUCATION					
							A. SCHMID-KIRSCH - Germany
172	190	SELF-TELLING DEVICES: THE GRAPHIC PORTFOLIO					
							M. LO TURCO, M. GHIO - Italy
166	180	GEOMETRIC STRUCTURALISM IN ARCHITECTURE					
							C. LEOPOLD - Germany
185	212	DEVELOPMENT OF PRE-ADMISSION GRAPHIC DESIGN EDUCATION					
							M. MIYAMOTO - Japan
207	247	ARCHITECTURAL PHOTOGRAPHY – A COURSE FOR STUDENTS OF ARCHITECTURE					
							F. SCHMITT - Germany
TS2-A		Surfaces	FRI., 6 AUG.	15:20 - 17:00	RM1	M. HUSTY	P. ZSOMBOR-MURRAY
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177	199	3D-MODELLING OF SPECIAL D-FORMS MADE FROM ELLIPTIC SHAPED DEVELOPMENTS					
							P. MAYRHOEFER - Austria
230	291	MODELLING AND PROPERTIES OF TUBES AND KNOTS					
							D. VELICHOVÁ - Slovakia
159	171	VISIBILITY OF SUBDIVISION SURFACES					
							H. KAWAHARADA, K. KASE - Japan
169	186	CONVERSION BETWEEN TRIANGULAR BEZIER PATCHES AND RECTANGULAR BEZIER PATCHES					
							H. LIU, H. WANG - China
106	85	USING BIQUADRATE TRANSFORMATIONS OF A PLAIN FOR DESIGNING DOME - SHAPED SURFACES					
							A. BAIDABEKOV - Kazakhstan
TS2-B		Art	FRI., 6 AUG.	15:20 - 17:00	RM2	J. ENDO	D. LORDICK
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189	217	THE CONSTRUCTION OF A RIDEABLE GEOMETRIC OBJECT BASED ON A CONICAL FORM: REGARDING "SPACE WALK ON THE EARTH" WITH ELLIPSOIDAL ROLLING PLANE					
							T. MURAMATSU - Japan
135	133	THE FORMATION OF THE CONCEPT OF A SOLID IN SCULPTURE					
							Y. FUKUE - Japan
236	303	TENSION AND DEFORMATIONS IN ELASTIC POLYHEDRAL RINGS MADE OF CORPUSCLE ELEMENTS					
							E. WOHLLEBEN, W. LIEBERMEISTER - Germany
204	242	A STUDY ON THE JAPANESE DESIGN THROUGH THE FAMILY CREST FORMS; UME AND SAKURA					
							A. SAITO - Japan
240	308	TRANSFORMATION OF THE FORM USING 3DCG AND APPLICATION TO THE WORKS					
							Y. YOKOYAMA - Japan
TS2-C		Materials and Simulation	FRI., 6 AUG.	15:20 - 17:00	RM3	L. BARRENETXEA	M. NIZEKI
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102	77	POLYHEDRAL DESIGN OF CELL-STRUCTURED MATERIALS FOR THEIR STATIC AND DYNAMIC MECHANICAL RESPONSES					
							T. AIZAWA - Japan
167	182	OPTIMIZATION METHOD TO FABRICATION ORIENTATION OF PARTS IN FUSED DEPOSITION MODELING RAPID PROTOTYPING					
							A. LI, Z. ZHANG, J. YANG, Y. LIU, D. WANG - China
171	188	VISIBLE NUMERICAL SIMULATION FOR HEAT TREATMENT TEMPERATURE FIELD OF LASER DYNAMIC REMELTING ON CAST IRON SURFACE					
							Y. LIU, P. YI, Y. SHI, G. LUN, H. REN - China
137	137	GEOMETRIC ANALYSIS FOR ADJUSTABLE PUNCH-DIES OF A PRESS-FORMING MACHINE OF SPIRAL PLATES					
							S. GAO, K. NAKASA - Japan
175	195	DEVELOPMENT OF AUTO-MODELING FOR NEUTRON TRANSPORT SIMULATION					
							Y. MA, G. XIAO, B. Y. ZHANG - China

TS2-D	Spatial Ability	FRI., 6 AUG.	15:20 - 17:00	RM4	M. MIYAMOTO	A. SCHMID-KIRSCH
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122	110	TENDENCY OF SPATIAL ABILITY IN CG ANIMATION OF BUILDINGS			Y. DEKI, K. YASUFUKU, H. ABE	- Japan
216	264	CHANGE OVER TIME IN SPATIAL ABILITY OF STUDENTS ENTERING UNIVERSITY - IMPACT OF REVISION OF THE NATIONAL CURRICULUM GUIDELINES UP TO HIGH SCHOOLS-			Y. SUGAI, K. SUZUKI	- Japan
142	146	CHARACTERISTICS OF SPATIAL IMAGINATION ABILITY BY MEANS OF A DESCRIPTION OF ARCHITECTURE IN A BOOK BY JUNICHIRO TANIZAKI -RESEARCH INTO SPATIAL IMAGINATION ABILITY-			M. HAMANO, H. ABE	- Japan
209	251	RELATIONSHIP BETWEEN STRATEGIES USED TO SOLVE SPATIAL ORIENTATION PROBLEM AND QUALITY FACTORS REQUIRED FOR STUDYING AT UNIVERSITY			K. SHIINA, K. ITO	- Japan
226	283	DISCUSSION ON THE COGNITION TO TWO DISCIPLINES OF GRAPHICS AND ENGINEERING GRAPHICS			B. TONG, B. HAN	- China
TS3-A	History of Graphics	SAT., 7 AUG.	11:10 - 12:30	RM1	N. ODAKA	G. WEISS
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158	170	BETWEEN SEEING AND BEING -A HISTORICAL OVERVIEW OF PERSPECTIVE-			M. KATO	- Japan
114	97	GEOMETRIC ANALYSIS OF ARCHITECTURAL DRAWINGS OF THE 19TH CENTURY			P. CASU	- Italy
120	107	THE DOME OF SANTA MARIA DEL FIORE IN FLORENCE			R. CORAZZI	- Italy
103	79	DIAGRAMMATIC PLANS OF JAPANESE HOUSES - A STUDY ON THE FORMS OF CONTEMPORARY HOUSES -			N. ANDO, M. TANEDA, A. SHIBATA	- Japan
TS3-B	Paintings	SAT., 7 AUG.	11:10 - 12:30	RM2	F. FADON	J. MITANI
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223	277	EVALUATION OF DIFFUSE REFLECTANCE OF WATER SCREEN AND OPEN EXPERIMENT WITH PROJECTED ANIMATION			K. TAKECHI, H. SUZUKI	- Japan
141	145	RECONSTRUCTING VERMEER'S PERSPECTIVE IN 'THE ART OF PAINTING'			G. GUTRUF, H. STACHEL	- Austria
178	201	REGARDING DISTORTION IN PICTORIAL SPACE —REPRESENTATION OF BIRD'S EYE VIEW DRAWING BY HATSUSABURO YOSHIDA—			K. MENDE	- Japan
191	220	GRAPHIC PRESENTATION ON THE CITY DRAWINGS AND VIEW PAINTINGS OF HIRADO, THE FIRST DUTCH VOC TRADING FACTORY IN JAPAN			N. NAO	- Japan
TS3-C	3D Captured Data Processing	SAT., 7 AUG.	11:10 - 12:30	RM3	M. MANEVICH	H. SUZUKI
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108	87	SEGMENTATION OF CYLINDRICAL SURFACES ON UNFILTERED SCANNED OBJECTS BASED ON SPIN-IMAGES			L. BARRENETXEA, R. MINGUEZ, E. SOLABERRIETA, O. ETXANIZ, E. SIERRA	- Spain
148	155	VOLUME PROXY MESH AND NEW MESH QUALITY EVALUATION METHOD IN MODELING OBJECTS WITH BACKGROUND ELEMENTS			K. W. C. HUNG, M. NAKAO, K. YOSHIMURA, K. MINATO	- Japan
117	101	A LOD SYSTEM BASED ON BIOLOGICAL CLASSIFICATION AND ANATOMICAL SKELETON			L.-H. CHEN, Y.-S. CHEN, J. SHIE	- Taiwan
154	166	A FAST CULLING SCHEME FOR DEFORMABLE OBJECT COLLISION DETECTION USING SPATIAL HASHING			S. JUNG, M.-H. CHOI	- USA
TS3-D	CAD / CG Education (1)	SAT., 7 AUG.	11:10 - 12:30	RM4	T. BRANOFF	K. FENG
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196	229	CORRELATION OF MENTAL CUTTING TEST (MCT) RESULTS WITH THE APPLICANT SCORES ON CAD QUALIFICATION EXAMINATION			S. NISHIHARA, K. NISHIHARA	- Japan
184	211	DEVELOPMENT OF EDUCATIONAL 3D CAD SELF-LEARNING SYSTEM (PROCESSING OF AUTOMATIC SCORING AND GUIDANCE)			Y. MIYAMOTO, Y. NAGASAKA, S. HIRANO	- Japan
200	235	TEACHING COMPUTER AIDED DESIGN WITH THE USE OF DYNAMIC GEOMETRY			F. PEREZ	- Spain
193	224	DEVELOPMENT OF 3D SOLID MODELER FOR DESCRIPTIVE GEOMETRY EDUCATION			Y. NIITSU	- Japan
TS4-A	Origami	SAT., 7 AUG.	14:00 - 15:40	RM1	Y. NIITSU	H. STACHEL
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163	176	FORMATIONS FROM DEVELOPMENT PATTERNS			N. KOBAYASHI	- Japan
156	168	HIGH-DIMENSIONAL ORIGAMI AND FOLDING REGULAR SIMPLEX AROUND ITS INCENTER			K. KAINO, N. YAMAO, K. YAJIMA, T. SUENAGA	- Japan
221	273	FREEFORM VARIATIONS OF ORIGAMI			T. TACHI	- Japan
182	208	A METHOD FOR DESIGNING CREASE PATTERNS FOR FLAT-FOLDABLE ORIGAMI WITH NUMERICAL OPTIMIZATION			J. MITANI	- Japan

TS4-B	Applied Geometry	SAT., 7 AUG.	14:00 - 15:40	RM2	L.-H. CHEN	O. RÖSCHER
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		F. FADÓN, J. E. CERÓN, D. SILIO, E. VALLEJO, J. FUENTE - Spain				
180	204	PARAMETRIC MODELING OF SQUARE-CIRCULAR TRANSITION TUBE WITH CONSTANT CROSS SECTION AREA				
		X. MENG, J. LI, Z. PAN, Y. ZHU, S. LI - China				
176	197	LIGHT RAY TRAJECTORIES AND PROJECTIVE CORRESPONDENCES				
		M. MANEVICH, E. ITS KOVICH - Israel				
134	131	FORMS IN THE RADIAL RECIPROCAL UNITARY SPACE				
		M. C. FRANCO - Argentina				
153	164	IN-AND CIRCUMELIPSES OF TRIANGLES: A CAGD APPROACH				
		I. JUHÁSZ, Á. RÓTH - Hungary, Romania				
TS4-C	Image Processing (1)	SAT., 7 AUG.	14:00 - 15:40	RM3	M.-H. CHOI	B. HAN
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		H. CHEN, B. LI, J. YANG - China				
170	187	LEVEL SET BASED METHOD FOR IMAGE CONTOUR SIMPLIFICATION				
		X. LIU, Y. OHTAKE, H. SUZUKI - Japan				
105	83	A NEW METHOD FOR EXTRACTION OF CIRCULAR TRAFFIC SIGNS USING SUBTRACTIVE COLOR MIXING				
		Y. ARAI, E. KIM - Japan				
214	260	TOWARD A SHAPE-FREE HYBRID IMAGE: EXPERIMENTAL ON VISUAL CONTRAST SENSITIVITY				
		P. SRIPAN, Y. YAMAGUCHI - Japan				
218	267	THE ANALYSIS OF FACIAL IMAGES' ATTRACTIVENESS AND AGE				
		T. SUN, Y. YAMAGUCHI - Japan				
TS4-D	Engineering Graphics Education (1)	SAT., 7 AUG.	14:00 - 15:40	RM4	K. NISHIHARA	F. PEREZ
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		K. FENG, R. FENG - China				
233	297	HOW TO DETERMINE THE OPTIMUM REPRESENTATION PLAN IN ENGINEERING GRAPHICS				
		L. WANG, Y. GUO - China				
161	174	EVALUATION OF SPATIAL ABILITY OF ENGINEERING STUDENTS IN EGYPT USING MENTAL CUTTING TEST				
		A. KHATTAB - Egypt				
110	91	UNDERSTANDING HOW STUDENTS USE ONLINE INSTRUCTIONAL RESOURCES IN A BLENDED INSTRUCTION INTRODUCTORY ENGINEERING GRAPHICS COURSE				
		T. BRANOFF, E. WIEBE, M. SHREVE - USA				
151	161	STUDY ON CONSTRUCTION SHAPE DESIGN				
		X. JIANG, J. CHEN - China				
TS5-A	Surface Modeling	SAT., 7 AUG.	16:10 - 17:50	RM1	G. GREENFIELD	D. TUTIĆ
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211	255	S-PATCH: MODIFICATION OF THE HERMITE PARAMETRIC PATCH				
		V. SKALA, V. ONDRAČKA - Czech Republic				
124	113	SIMULATION OF ENVELOPE CURVE MOTION OF THE HYDROPOWER STATION HIGH-NARROW DRAFT-TUBE				
		Q. DU, T. DU - China				
121	108	CONIC CURVES TO MODEL MECHANICAL PROPERTIES OF MATERIALS				
		C. CUADRA - Japan				
139	141	FORCE DIRECTED NEAR-ORTHOGONAL GRID GENERATION ON SURFACES				
		F. GRUBER, G. WALLNER, G. GLAESER - Austria				
131	125	A RULED SURFACE THROUGH THREE GIVEN SKEW STRAIGHT LINES AND THE CHASLES'S THEOREM: A REREADING THROUGH VIRTUAL LABORATORY				
		F. FALLAVOLLITA - Italy				
TS5-B	Architecture and Civil Engineering	SAT., 7 AUG.	16:10 - 17:50	RM2	Y. YOKOYAMA	L. VORÓS
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		T. KASHIWAGI, K. YASUHUKU, H. ABE - Japan				
202	239	THE PARAMETRIC MODELING OF CLASSIC ARCHITECTURE STRUCTURE ON PKPM PLATFORM				
		Y. REN, L. JIANG, L. LIU, L. ZHANG - China				
190	218	A SUPPORT METHOD FOR MAKING THREE-DIMENSIONAL COMPUTER GRAPHICS OF HISTORICAL ASSETS BY A SIMPLE THREE-DIMENSIONAL SCANNING SYSTEM				
		T. NAKAYAMA, K. MIYAZAKI, H. TSUJIAI - Japan				
129	121	ASGT: TERRITORIAL GEOGRAPHIC SYSTEM ARCHIVES				
		M. FABBRI - Italy				
136	135	GEOMETRY AND MEASUREMENT BETWEEN TRADITION AND INNOVATION				
		C. GAMBARDILLA, M. PISCITELLI - Italy				
TS5-C	Application Systems	SAT., 7 AUG.	16:10 - 17:50	RM3	K. KONDO	L. YUAN
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112	93	CONSTRUCTION OF ONTOLOGY-BASED GEOMETRY MODELING SERVICES TOWARDS LARGE-SCALE INFORMATION VISUALIZATION				
		H. CAI, Y. HE, F. BU - China				
213	259	DEVELOPING DRAWING OF SPIRAL GROOVE'S SURFACE GIVEN BOUNDARY EQUATIONS BASED ON REDEVELOPMENT OF SOLIDWORKS				
		Y. SONG, Z. CHENG, X. JIANG, M. ZHANG, L. HE - China				
115	98	APPLYING SMART GRAPHIC OBJECTS TO AUTOMATICALLY GENERATE A CONSTRUCTION PROJECT SCHEDULE IN CAD SYSTEM				
		Y.-J. CHEN, C.-W. FENG, Y.-R. WANG, P.-S. CHANG - Taiwan				

186	213	COMMUNICATION OF ENGINEERING COMPUTER GRAPHICS USING WEB 3D	T. MOCHIZUKI - Japan
239	306	SYNTHESIS OF IMAGES FOR INTEGRAL PHOTOGRAPHY USING BLENDER	M. YODA, K. YANAKA - Japan

TS5-D	Engineering Graphics Education (2)	SAT., 7 AUG.	16:10 - 17:50	RM4	H. ABDELFAHATTAH	E. TSUTUMI
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147	153	STUDY OF A VIRTUAL TEACHING ENVIRONMENT ON MECHANICAL GRAPHICS				
		Q. HU, L. WANG, H. SHU, X. WANG, H. DAI - China				
232	295	TEACHING REFORM AND PRACTICE IN ENGINEERING DRAWING BASED ON 3D MODELING WITH COMPUTER				
		J. WANG, Y. HAO - China				
144	148	ENGINEERING GRAPHICS EDUCATION AND MODERN ENGINEERING DESIGN IN CHINA				
		B. HAN, H. ZHANG, X. LUO, Q. LUO - China				
168	184	USE OF SEMIOTIC APPROACH IN TEACHING OF THE ENGINEERING GRAPHICS COURSE				
		H. LILLE, A. RUUS, C. LEOPOLD - Estonia, Germany				
179	202	THE ORTHOGRAPHIC PROJECTION ANALYSIS OF GEOMETRICAL ELEMENTS ON A CUBOID				
		X. MENG, S. LI, J. LI, Y. ZHU, Z. PAN - China				

TS6-A	CG	SUN., 8 AUG.	10:30 - 11:50	RM1	G. GLAESER	V. SKALA
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		S. KAWANISHI, Y. UJIE, Y. MATSUOKA - Japan				
222	275	A DYNAMICAL MODEL OF MANIFOLD'S DEFORMATION AND ITS APPLICATION TO 3DCG ANIMATION				
		I. TAKAUCHI, Y. HARA, H. SAITO, R. ASAKURA, M. HATTORI - Japan				
231	293	SETS OF SPACE-FILLING ZONOTOPES WITH CONNECTION TO ART AND DESIGN				
		L. VORÓS - Hungary				
140	143	ALGORITHMS FOR GENERATION OF IRREGULAR SPACE FRAME STRUCTURES				
		F. GRUBER, G. WALLNER - Austria				

TS6-B	Motion / Curve Approximation	SUN., 8 AUG.	10:30 - 11:50	RM2	F. FALLAVOLLITA	H.-P. SCHROCKER
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229	289	NEW METHOD FOR REDUCING SHARP CORNERS IN CARTOGRAPHIC LINES WITH AREA PRESERVATION PROPERTY				
		D. TUTIĆ, M. LAPAINE - Croatia				
143	147	EXTENDED QUADRATIC B-SPLINES WITH APPLICATIONS FOR CONICS AND HISTOGRAMS APPROXIMATION				
		X. HAN - China				
138	139	ON SIMULATING DRAWING ROBOTS WITH STRAIGHT LINE MOTION BUT CURVILINEAR PEN PATHS				
		G. GREENFIELD - USA				
107	86	INVARIANT PLANAR MOTION INTERPOLATION USING POSITIONS AND POLES				
		G. F. BÄR - Germany				

TS6-C	Animation	SUN., 8 AUG.	10:30 - 11:50	RM3	C. GAMBARDILLA	T. KANAI
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244	315	DEVELOPMENT OF 3D ACCIDENT SIMULATION SYSTEM				
		L. YUAN, C. YUAN, J. YANG - China				
238	305	VISUALIZATION OF CROWD BEHAVIOR USING EVACUATION SIMULATION FRAMEWORK				
		K. YASUFUKU - Japan				
217	266	DEVELOPMENT OF STORE ARRANGEMENT SYSTEM BY CROWD SIMULATION				
		J. SUGIE, T. NAKATA, K. YASUFUKU, H. ABE - Japan				
164	178	THE ANALYSIS OF THE ANIMATION MOVEMENT				
		T. KOMMA, K. KONDO, H. SATO, S. CHO - Japan				

TS6-D	CAD / CG Education (2)	SUN., 8 AUG.	10:30 - 11:50	RM4	Y. HE	C. LEOPOLD
Article	Page					
101	75	THE USE OF MULTIMEDIA IN PREPARING AN EDUCATIONAL PROGRAM FOR WOMEN'S BRA SEWING SKILLS AND MEASURING ITS EFFECTIVENESS				
		H. ABDELFAHATTAH, G. KARAULOVA - Egypt, China				
227	285	CAD EDUCATION USING MINDSTORMS NXT				
		H. TSUJIAI - Japan				
187	215	AN EXPERIMENT ON EFFECTIVENESS OF INTERACTIVE VISUAL TEACHING MATERIAL IN 3-DIMENSION COMPUTER GRAPHICS EDUCATION				
		M. MORI, H. TOMINAGA, K. HIROSE - Japan				
228	287	IMPROVEMENT IN SPACE SENSE OF STUDENTS IN A COMPUTER GRAPHICS COURSE USING 3D-CG SOFTWARE				
		E. TSUTSUMI - Japan				

TS7-A	2D Descriptive Geometry	MON., 9 AUG.	09:10 - 10:30	RM1	G. F. BÄR	Q. YU
Article	Page					
127	119	A CONGRUENCE THEOREM OF TRIANGLE CONSTRUCTED BY 3 SIMSON-LINES ON 5 CENTROIDS + ONE POINT				
		H. EBISUI - Japan				
181	206	SOME PROPERTIES OF KIEPERT CONICS IN THE HYPERBOLIC PLANE				
		S. MICK - Austria				
197	231	EQUIOPTIC POINTS OF A TRIANGLE				
		B. ODEHNAL - Austria				
215	262	THE GOLDEN RATIO				
		I. STIPANČIĆ-KLAJČ, J. MATOTEK - Croatia				

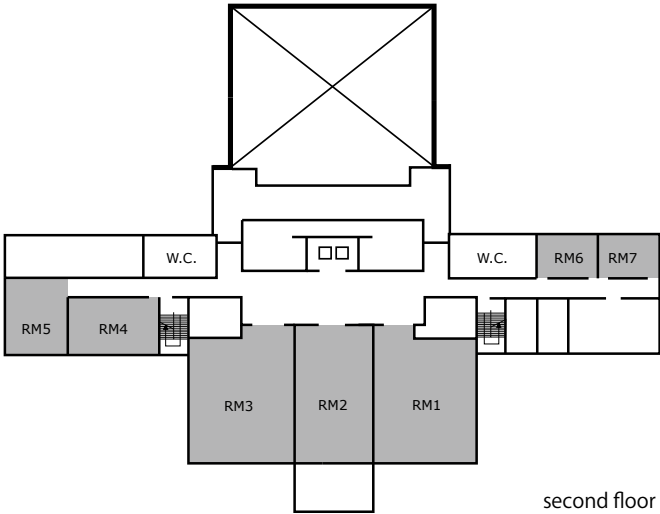
TS7-B		Pattern & Image	MON., 9 AUG.	09:10 - 10:30	RM2	I. JURANE	K. MENDE
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245	317	DYNAMIC GEOMETRY FOR ROMAN MOSAIC FLOORS IN POMPEII	O. ZERLENGA, L. SPURIA, A. SCHIAVONE - Italy				
119	105	BEHIND THE IMAGE: CODES AND SUGGESTIONS BETWEEN EASTERN AND WESTERN REPRESENTATION	L. COCCHIARELLA - Italy				
220	271	A STUDY OF THE STONES ARRANGEMENT IN THE GARDEN OF RYOAN-JI TEMPLE MAKING USE OF VORONOI DIAGRAM	H. SUZUKI, Y. FUJIMOTO, T. TSUJI - Japan				
125	115	A FAMILY OF "THREE ELEMENT" M.C. ESCHER PATTERNS	D. J. DUNHAM - USA				
TS7-C		2D Applications	MON., 9 AUG.	09:10 - 10:30	RM3	L.-Y. CHENG	S. YOSHIZAWA
Article	Page						
113	95	SPACE FILLING CURVES AND THE TOWER OF HANOI	D. R. CAMP - USA				
123	111	INTERACTIVE WEB-BASED APPLICATION FOR VISUALIZATION OF SPATIAL DATA OF THE FOUR-YEARS REHABILITATION AND RECONSTRUCTION PROCESS OF TSUNAMI AND EARTHQUAKE IN ACEH-NIAS, INDONESIA	N. DJALALUDDIN, H. ISHIZUKA - Japan				
165	179	MAP INFORMATION SYSTEM FOR MOBILE DEVICE USING AUGMENTED REALITY AND QR CODE	Y. KOSHIISHI, H. SATO, H. SUZUKI, S. CHO - Japan				
237	304	DEVELOPMENT OF A NAVIGATION SYSTEM FOR PEDESTRIANS USING IMAGE SEARCH BASED ON MAP-READING AND AUGMENTED REALITY	K. YAMASHIMA, H. ISHIZUKA - Japan				
TS7-D		CAD Education	MON., 9 AUG.	09:10 - 10:30	RM4	A. NASTASI	K. YOSHIDA
Article	Page						
183	210	INFLUENCE OF DIFFERENCES IN GRAPHIC OPERATION PROCEDURES ON WORK - PUZZLE OPERATION AS AN EXAMPLE -	N. MIYAKOSHI - Japan				
146	151	A NEW ARCHITECTURE OF COMPUTER GRAPHICS	Y. HE - China				
162	175	DESIGN CONCEPTION ABILITY OF MECHANICAL ENGINEERS USING THREE-DIMENSIONAL COMPUTER-AIDED DESIGN (3D CAD)	S. KISE, S. SEKIGUCHI, K. OKUSAKA, S. HIRANO - Japan				
145	149	THE REPORT OF APPAREL DESIGN EDUCATION WITH 3-DIMENSIONAL AND 2-DIMENSIONAL APPAREL CAD SYSTEMS	K. HATAKEYAMA, N. IIDA - Japan				
TS8-A		Drawing / Projection	MON., 9 AUG.	11:00 - 12:40	RM1	B. ODEHNAL	I. STIPANCIC-KLAIC
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234	299	A STUDY ON HIDDEN-REMOVAL METHOD OF DAM PERSPECTIVE DRAWING	Z. WANG, H. HUANG, S. QU, M. LI - China				
195	227	DEVELOPMENT OF A METHOD OF REPRODUCTION OF BUILDINGS FROM A PHOTOGRAPH WITH A MAP	K. NISHIHARA, S. NISHIHARA - Japan				
243	313	THE INTERFERENCE AREA AND THE INTERSECTION OF TWO CONES WHOSE AXES ARE NOT COPLANAR	Q. YU, Y. QU, L. LI - China				
118	103	A DESCRIPTIVE APPROACH FOR THE STUDY OF ORIGAMIC ARQUITECTURE	L.-Y. CHENG - Brazil				
TS8-B		Visualization of Spatial Composition	MON., 9 AUG.	11:00 - 12:40	RM2	L. COCCHIARELLA	D. J. DUNHAM
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111	92	RECONSTRUCTION OF THE ANCIENT TOWN OF EMDER BY THE MEANS OF A COMPUTER MODEL	N. BUBLOVA, G. GORYNIN, E. DEMYANENKO, A. KACHAEVA, A. FEDORTSOVA - Russia				
199	234	SPACE SUCCESSION OF TIDUNG'S DAGAT VILLAGE IN BORNEO	R. OISHI, N. ANDO, M. TANEDA - Japan				
201	237	VISUALIZATION AND HAPTIC RENDERING OF ANCIENT WOODCARVINGS IN SRI LANKA	R. J. RAJAPAKSE, Y. TOKUYAMA, A. MARASINGHE, K. MIYATA, R. SOMADEVA - Japan, Sri Lanka				
210	253	STUDY ON THE SPATIAL FUSION OF JAPANESE RAILWAY STATIONS AND THEIR SURROUNDINGS	T. SHIMADA, N. ANDO, M. TANEDA - Japan				
224	279	THE PLANE FORMS OF JAPANESE DEPARTMENT STORES - A STUDY ON THE VARIETY OF FORMS OF BUILDINGS	M. TANEDA, M. UCHIDA, N. ANDO - Japan				
TS8-C		Image Processing (2)	MON., 9 AUG.	11:00 - 12:40	RM3	G. KARAULOVA	K. YASUFUKU
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174	194	RESEARCH ON IMAGE MOSAIC ALGORITHM BASED ON OPTIMIZE FOURIER-MELLIN TRANSFORM	X. LUO, Q. LUO, B. HAN - China				
126	117	GEOMETRICAL ASPECTS IN RECONSTRUCTION OF THE CYLINDRICAL PANORAMA	J. DZWIERZYNSKA - Poland				
208	249	USING FRACTAL GEOMETRY TO EXTRACT FEATURES OF THERMAL IMAGES FOR EARLY BREAST DISEASES	R. C. SERRANO, R. C. F. LIMA, R. H. C. MELO, L. S. MOTTA, A. CONCI - Brazil				
242	311	CURVATURE EXTREMALITIES FOR INTELLIGENT SHAPE AND IMAGE INTERROGATION	S. YOSHIZAWA, A. BELYAEV, H. YOKOTA - Japan, UK				

TS8-D	Descriptive Geometry Education	MON., 9 AUG.	11:00 - 12:40	RM4	D. R. CAMP	N. IIDA
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133 129	VIRTUAL IN VIRTUAL, DISCRETIZATION IN DISCRETIZATION: SHAPE AND PERCEPTION IN PARAMETRIC MODELING FOR RENEWING DESCRIPTIVE GEOMETRY				M. FILIPPUCCI - Italy	
192 222	SHADOWS DESIGNING CONIC SECTIONS				A. NASTASI - Italy	
155 167	EDUCATIONAL AIDS IN GRAPHICAL EDUCATION				I. JURANE - Latvia	
198 233	USING GEOMETRIC FIGURES TO EXPLAIN THE SHAPE OF THE SUN AND GREEN FLASH PHENOMENON AT SUNRISE AND SUNSET				M. OHNISHI - Japan	

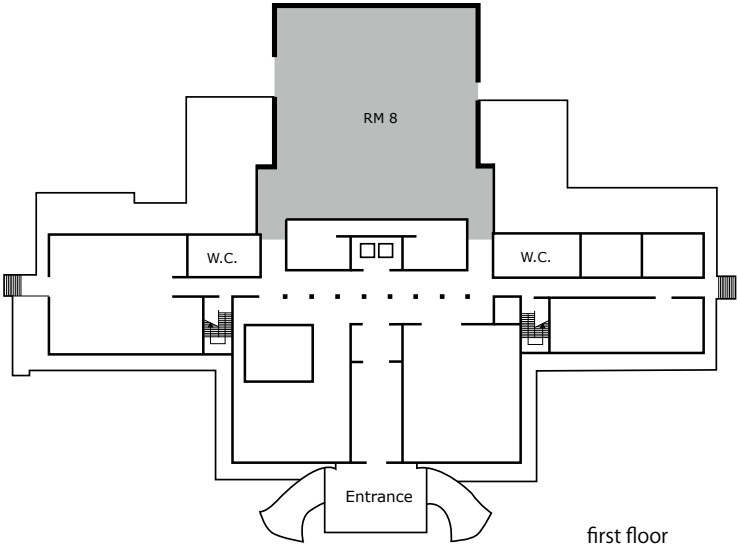
Poster Session

POS	Short Presentation	FRI., 6 AUG.	17:30 - 18:20	RM2 & RM3	N. ANDO
Article Page					
301 323	MECHANICAL DESIGN AND DRAWING EDUCATION FOR HEARING-IMPAIRED STUDENTS THROUGH 3D-CAD/RP MODELING AT TSUKUBA UNIVERSITY OF TECHNOLOGY				T. ARAKI, S. HOSAKA - Japan
302 324	FUNDAMENTAL PRINCIPLES OF DESIGN AND TECHNOLOGICAL DEVELOPMENT OF AN ENGINEERING PRODUCT				A. Y. BRAILOV - Ukraine
303 326	STEREO PERSPECTIVE			A. A. CUCAKOVIC, M. S. NESTOROVIC, B. S. JOVIC - Serbia	
304 328	4D SPACE GEOMETRY			A. A. CUCAKOVIC, M. S. NESTOROVIC, B. S. JOVIC - Serbia	
305 330	FREE FORM SURFACE STRUCTURES			A. A. CUCAKOVIC, M. S. NESTOROVIC, B. S. JOVIC - Serbia	
306 332	FROM THE DESCRIPTIVE GEOMETRY TO THE INFORMATICS LANGUAGE			F. DI PAOLA, M. R. PIZZURRO - Italy	
307 334	HOW TO EVALUATE THE ABILITY TO READ ENGINEERING DRAWINGS			M. DOBELIS, G. VEIDE, E. LEJA - Latvia	
308 336	GEOMETRICAL PERSPECTIVE - THE TORICAL PERSPECTIVE			F. DOLI - Republic of Kosovo	
309 338	COLLINEAR NOTE			H. EBISUI - Japan	
310 339	THE ALGORITHMIC ASSEMBLY APPLYING PENROSE TILING PATTERN			Y. IKEDA, Y. OMURA, K. HASEGAWA - Japan	
311 341	FACILITATION OF INDIVIDUAL LEARNING PROCESSES WITH ADVANCED INSTRUCTIONS			G. INTVEEN, C. PUTZ - Germany	
312 343	CONCEPT OF GRAPHIC THINKING IN GRAPHICS RECOGNITION			R. IWATA, S. HIRANO - Japan	
313 344	RESEARCH ON AN EXACT SOLUTION TO THE INTERSECTION LINE ON THE CURVED SURFACE OBJECTS			G. MA, X. WU - China	
314 346	WHY DOES THE FACE OF "VENUS OF MILO" DIFFER BETWEEN RIGHT AND LEFT?			M. MIYANAGA - Japan	
315 348	RELATIONSHIP BETWEEN EACH PROBLEM OF MCT AND STATUS OF ACTIVATION REGIONS OF SUBJECT'S PREFRONTAL CORTEX BY FNIRS			S. NISHIHARA, K. NISHIHARA - Japan	
316 350	A BOOK OF STONE			N. PISACANE, L. CARLOMAGNO - Italy	
317 352	GEOMETRIC ANALYSIS OF GOTHIC OPENINGS WITH OGEE ARCH			C. PISU - Italy	
318 353	THE TRADITIONAL KHMER ARCHITECTURE. LOOKING FOR THE HIDDEN GEOMETRY			F. PUGNALONI, G. ISSINI, F. OTTAVIO, C. CARLOROSI - Italy	
319 355	MODELS OF MISSING HISTORICAL ARCHITECTURE: COMPARISON EXPERIENCES OF GEOMETRICAL INTERPRETATION			F. PUGNALONI, G. ISSINI, F. OTTAVIO, C. CARLOROSI - Italy	
320 357	GEOMETRIC MODEL OF KINEMATIC SURFACES ON THE BASE OF ONE-SHEET HYPERBOLOIDAL SURFACES OF REVOLUTION (ONE AXOID IS LOCATED IN THE INTERIOR OF ANOTHER AXOID)			G. S. RACHKOVSKAYA, Y. N. KHARABAYEV - Russia	
321 359	"GEMA PROJECT", GEOMETRY AND MATHEMATICS			D. ROCHMAN - Mexico	
322 361	FONT DESIGN FOR USE IN THE VISUALLY IMPAIRED - PROPOSAL OF A GUIDELINE FOR FONT DESIGN -			H. RYU - Japan	
323 362	A VISUAL REPRESENTATION FOR RELATIONSHIPS BETWEEN EQUATIONS IN PHYSICS			K. SHIGA, K. MOTONYAMA - Japan	
324 363	GEOMETRIC COMPUTATION, DUALITY AND PROJECTIVE SPACE			V. SKALA - Czech Republic	
325 365	DO ARCHITECTS USE GEOMETRY? THE GEOMETRICAL FORMS OF SELECTED CONTEMPORARY ARCHITECTURAL OBJECTS			M. SROKA-BIZON - Poland	
326 367	PROPOSAL OF FREE-FORMED LINE-OF-ACTION AND DYNAMIC GENERATION METHOD			N. SUGA, H. SATO, S. CHO - Japan	
327 369	ON QUADRUPLES OF GRIFFITHS POINTS			K. WITCZYŃSKI - Poland	
328 370	CONCEPTION OF SPATIAL AND TEMPORAL AXIAL CENTERING IN THE "GEOMETRIES" OF A CAR AND A DRIVER / MAN			I. YERSHOVA-BABENKO, O. GONCHAROVA - Ukraine	

Floor map



second floor



first floor

Social Events



Welcome Reception

Aug. 5 (Thu) 17:00 - 19:00

Meeting Point: RM1 of the conference site (next to the registration desk)

Content: Snacks. The welcome lecture by Dr. Koji MIYAZAKI will be presented from 17:30.

Official Excursion

Aug. 8 (Sun) 13:30 - 18:30

Meeting Point: The main gate of Kyoto University

Content: OOE NOUGAKUDOU (NOU: Japanese traditional art) and KIYOMIZU-DERA (KIYOMIZU temple)

Banquet

Aug. 8 (Sun) 18:30 - 21:00

Meeting Point: The main entrance of The Garden Oriental Kyoto

Content: Official dinner at The Garden Oriental Kyoto

Accompanying Persons Tour

Aug. 6 (Fri) 13:30 -

Tour: "Making your own WAGASHI (Japanese traditional confectionery)"

Meeting Point: The main gate of Kyoto University

Destination: The Japanese confectionery store, KAMEYA-YOSHINAGA

Aug. 7 (Sat) 13:00 -

Tour: "ZEN experience at the Buddhist Temple SHUNKOUIN"

Meeting Point: The main gate of Kyoto University

Destination: The Buddhist Temple, SHUNKOUIN



Official Excursion OOE NOUGAKUDOU (NOU theater)



Banquet The Garden Oriental Kyoto



Accompanying Persons Tour ZEN experience



Accompanying Persons Tour
Making your own WAGASHI



Official Excursion KIYOMIZU-DERA (KIYOMIZU temple)
Historic Monuments of Ancient Kyoto, UNESCO World Heritage

Access

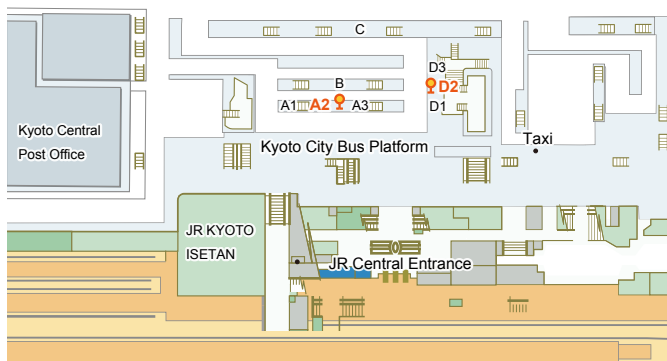
From JR Kyoto Station:

Bus ride will take about 30-35 minutes and cost 220 JPY.

Bus schedule depends on traffic condition.

Bus Platform	Bus #	Route	Bus Stop
D2	206	Bound for Kitaoji Bus Terminal via Higashiyama St.	Kyodai Seimonmae
A2	17	Bound for Ginkaku-ji, Kinrin-syako via Kawaramachi St.	Hyakumanben

Taxi will take about 20 minutes and cost approx. 1,800 JPY.



JR Kyoto Station

1 From Kyoto Hotel Okura

Route 1: Take Tozai subway line from Kyoto Shiyakusho-mae station to Higashiyama station (4 min). Then take City Bus (206-line or 201-line or 31-line) from Higashiyama Sanjo bus stop to Kyodai Seimonmae bus stop (5th bus stop, 10-15 min).

Route 2: Take City Bus (3-line or 17-line) from Kyoto Shiyakushomae bus stop to Hyakumanben bus stop (6th bus stop, 15-20 min).

2 From Westin Miyako Hotel Kyoto

Take Tozai subway line from Keage station to Higashiyama station (2 min). Then take City Bus (206-line or 201-line or 31-line) from Higashiyama Sanjo bus stop to Kyodai Seimonmae bus stop (5th bus stop, 10-15 min).

3 From Hotel Unizo Kyoto

Route 1: Take City Bus (201-line or 31-line) toward Hyakumanben from Shijo Kawaramachi bus stop to Kyodai Seimonmae bus stop (9th bus stop, 20-25 min).

Route 2: Take City Bus (3-line or 17-line) from Kawaramachi Sanjo bus stop to Hyakumanben bus stop (7th bus stop, 15-20 min).

4 From Hotel Fujita Kyoto

Route 1: Take Tozai subway line from Kyoto Shiyakusho-mae station to Higashiyama station (4 min). Then take City Bus (206-line or 201-line or 31-line) from Higashiyama Sanjo bus stop to Kyodai Seimonmae bus stop (5th bus stop, 10-15 min).

Route 2: Take City Bus (3-line or 17-line) from Kyoto Shiyakushomae bus stop to Hyakumanben bus stop (6th bus stop, 15-20 min).

5 From Holiday inn Kyoto

Take the City Bus (206-line) from Takanobashi Higashizume to Kyodai Seimonmae bus stop (6th bus stop, 15-20 min).

← Keihan Demachiyang Station



- 1 Kyoto Hotel Okura
- 2 Westin Miyako Hotel Kyoto
- 3 Hotel Unizo Kyoto
- 4 Hotel Fujita Kyoto
- 5 Holiday inn Kyoto

