

# Detailed Program

## Invited Lecture Session

<b>IS1, 7th Aug. (Mon.), 9:20-10:20</b>		Chair: Yasushi YAMAGUCHI
I01	DESIGN OF 3D PRINTED MATHEMATICAL ART	Henry SEGERMAN
<b>IS2, 7th Aug. (Mon.), 13:20-14:20</b>		Chair: Baoling HAN
I02	PROGRESS IN RESEARCH ON AUGMENTED REALITY TECHNOLOGIES AND THEIR APPLICATIONS	Yongtian WANG
<b>IS3, 8th Aug. (Tue.), 9:00-10:00</b>		Chair: Naomi ANDO
I03	PARAMETRIC GEOMETRY FOR DIGITAL CONSTRUCTION OF ARCHITECTURE	Yasushi IKEDA
<b>IS4, 8th Aug. (Tue.), 13:20-14:20</b>		Chair: Emiko TSUTSUMI
I04	SENSING GARMENT: A FASHION DESIGNER MEETS SCIENTISTS	Eri MATSUI
<b>IS5, 9th Aug. (Wed.), 9:00-10:00</b>		Chair: Kunio KONDO
I05	A STUDY ON THE ESTABLISHMENT OF FORMATIVE PRINCIPLE OF 3D PRINTING ORIGINATIVE	Sang Kwon GOO
<b>IS6, 10th Aug. (Thu.), 9:00-10:00</b>		Chair: Tomohiro TACHI
I06	FOLDING PAPER: VISUAL ART MEETS ALGORITHMS	Erik DEMAINE

## Full Paper Session

<b>FS1, 'Geometry', 7th Aug. (Mon.), 10:40-12:00, Hall A</b>		Chair: Shinobu NAGASHIMA
F01	FROM A TO B: NEW METHODS TO INTERPOLATE TWO POSES	Hans-Peter SCHRÖCKER
F02	VECTOR TRIGONOMETRY, ROTOR COORDINATES, AND THE GEOMETRY OF A QUADRILATERAL	N J WILDBERGER
F03	GENERALIZATION OF THE PAPPUS THEOREM IN THE PLANE AND IN THE SPACE	Victor OXMAN, Avi SIGLER and Moshe STUPEL
F04	MODEL IDENTIFICATION OF TOPOGRAPHIC SURFACES	Dilarom F. KUCHKAROVA and Dilnoza A. ACHILOVA
<b>FS2, 'Medical and Astronomical Application', 7th Aug. (Mon.), 10:40-12:00, Hall B</b>		Chair: Biljana S. JOVIĆ
F05	STRABISMUS SCREENING USING COMPUTER AIDED DIAGNOSIS	Udomchai SAISARA, Poonpong BOONBRAHM and Achara CHAIWIRIYA
F06	USING HYBRID IMAGE AS THE ASSESSMENT TOOL FOR DIFFERENT LEVELS OF MYOPIA	Peeraya SRIPIAN
F07	JAPANESE ASTRONOMY CURRICULUM IN SCHOOLS AND SPATIAL COGNITIVE ABILITY OF ELEMENTARY AND JUNIOR HIGH SCHOOL	Daiji OKADA
F08	THE ECLIPSES ABACUS – THE MECHANICAL PREDICTOR OF SOLAR AND LUNAR ECLIPSES	Branislav POPKONSTANTINOVIC, Ljubomir MILADINOVIC, Ratko OBRADOVIC, Zorana JELI and Misa STOJICEVIC
<b>FS3, 'Animation and Image Processing', 7th Aug. (Mon.), 15:10-17:10, Hall A</b>		Chair: Masatoshi NIIZEKI
F09	AUTONOMOUS LIGHTING IN 3D SCENE BASED ON SCENARIO TRACKING AND DIRECTOR BEHAVIOR	Andreas, Kunio KONDO, Mauridhi HERY PURNOMO and Mochamad HARIADI
F10	EFFECTS FOR TIMING OF REVEALING THREATS IN HORROR CONTENTS	Liselotte HEIMDAHL, Yoshihisa KANEMATSU, Naoya TSURUTA, Ryuta MOTEGI, Koji MIKAMI and Kunio KONDO
F11	RESEARCH ON MODELING AND ANIMATION OF IRREGULAR OBJECTS BASED ON PARTICLE SYSTEM	Jing GAN, Xianling LI and Lingyuan LUO
F12	A SUPPORT SYSTEM FOR DESIGNING CUT SEGMENTATION AND COMPOSITION OF ROBOT ANIMATION'S BATTLE SCENES	Hongyi XU, Yoshihisa KANEMATSU, Ryuta MOTEGI, Naoya TSURUTA, Kouji MIKAMI and Kunio KONDO
F13	IMPROVED VISUAL RETRIEVAL ALGORITHM BASED ON DEPTH INFORMATION	Lei SUN, Yongtian WANG, Jing CHEN and Zixiang ZHOU

F14	FACIAL EXPRESSION SCRAPBOOK FOR CHARACTER MAKING BASED ON SHOT ANALYSIS	Ryuta MOTEGI, Yutaka YONEKURA, Yoshihisa KANEMATSU, Naoya TSURUTA, Koji MIKAMI and Kunio KONDO
<b>FS4, 'VR and AR', 7th Aug. (Mon.), 15:10-17:10, Hall B</b>		
		Chair: Kensuke YASUFUKU
F15	THE LEARNING OUTCOMES ON THAI CULTURE THROUGH VIRTUAL MUSEUM	Pratoomtong TRIRAT, Wasan SORNKHIEOI, Dean K. LANDUCCI and Vorapoj SONGCHAROEN
F16	THE DEVELOPMENT OF VIRTUAL MUSEUM TO ENHANCE LEARNING EFFICIENCY AND USER EXPERIENCE IN THAI NATIONAL MUSEUM	Vorapoj SONGCHAROEN and Suppakorn DISATAPUNDHU
F17	USING MARKER-BASED AR TECHNIQUE FOR MEASURING 3D OBJECT	Charlee KAEWRAT and Poonpong BOONBRAHM
F18	EXPLORING VIRTUAL ENVIRONMENT OF SINO-PORTUGUESE ARCHITECTURE WITH NATURAL INTERACTION IN MUSEUMS	Kosin KALARAT
F19	AUGMENTED REALITY LEARNING MEDIA FOR THAI SIGN LANGUAGE	Paiboon KIATTIKOMOL and Teerapat NIYUM
F20	3D REPLICA VIRTUAL ENVIRONMENT ENHANCED MARKETING RESEARCH CREATION: A CASE OF HOSPITALITY	Zhen LIU
<b>FS5, 'Origami and Paper Craft', 8th Aug. (Tue.), 10:20-12:00, Hall A</b>		
		Chair: Jun MITANI
F21	PAPER MODEL TEMPLATE DESIGN FOR SURFACE OF REVOLUTION	Yoshinobu MIYAMOTO
F22	CONFORMATION OF A FLEXIBLE MIURA PATTERN ON A DOUBLE CURVATURE SURFACE	Riccardo FOSCHI
F23	DOUBLE LINE RIGID ORIGAMI	Thomas HULL and Tomohiro TACHI
F24	STUDY ON LIGHTING ENVIRONMENT PERFORMANCE EVALUATION OF PAPER FOLDING LAMPSHADE	Nao KOYANAGI and Hirotaka SUZUKI
F25	DUAL TILING ORIGAMI	Akito ADACHI, Tomohiro TACHI and Yasushi YAMAGUCHI
<b>FS6, 'Education', 8th Aug. (Tue.), 10:20-12:00, Hall B</b>		
		Chair: Kumiko SHIINA
F26	PERCEPTIONS OF EDUCATIONAL LEARNING PLATFORMS IN THE AGE OF THE 4TH INDUSTRIAL REVOLUTION	Dean K. LANDUCCI, Pratoomtong TRIRAT and Vorapoj SONGCHAROEN
F27	QUESTIONS OF MODELLING THE TEACHING PROCESS OF ENGINEERING GRAPHICS	Dilarom F. KUCHKAROVA and Dilnoza A. ACHILOVA
F28	A SEMANTIC ANNOTATION METHOD FOR EDUCATIONAL VIDEO APPLICATIONS	Hongming CAI, Yuanjun HE, Siyuan YU and Haiyan YU
F29	A SMALL PROJECT-BASED LEARNING PROGRAM ON GEOMETRY -MAXIMIZING THE VOLUME OF A SOLID-	Ichiro TANAKA
F30	DEVELOPMENT OF NEW OPTICAL ILLUSION BLOCKS	Tomoko OHTANI and Yuko HIGAKI
<b>FS7, 'Simulation and Measurement', 8th Aug. (Tue.), 15:10-17:10, Hall A</b>		
		Chair: Peeraya SRIPIAN
F31	DATA-DRIVEN APPROACH FOR ENHANCING SPLASHING EFFECTS OF LIQUID SIMULATIONS	Takashi KANAI, Mengyuan WAN and Fumiko ENOMOTO
F32	PRELIMINARY STUDY OF ILLUMINANCE DISTRIBUTION MEASUREMENT MAKING USE OF QUADCOPTER -STUDY OF GEOMETRICAL CONDITION-	Hirotaka SUZUKI, Kenta NAKURA, Takuya MAEMURA, Michico IWATA, Yuki AKIZUKI and Norikazu MATSUMOTO
F33	PRELIMINARY STUDY OF ILLUMINANCE DISTRIBUTION MEASUREMENT MAKING USE OF QUADCOPTER -EXAMINATION OF ACCURACY AND DRAWING OF ILLUMINANCE DISTRIBUTION-	Takuya MAEMURA, Kenta NAKURA, Hirotaka SUZUKI, Yuki AKIZUKI, Michico IWATA and Norikazu MATSUMOTO
F34	THE RESEARCH ON THE APPLICATION OF THE DEDUCTION OF WATER LEVEL AND FLOW RATE IN SMALL AND MEDIUM-SIZED RIVER SIMULATION SYSTEM	YE Wenyu, FENG Kaiping and LUO Lihong

F35	STUDY ON SCREW'S STRUCTURE CHARACTERISTICS OF UNDER LOW VELOCITY IMPACT	Yingyan SONG, Jingying ZHNAG, Xiaofeng LI and Min CHEN
F36	HEAT MAP FOR VISUALIZING PHYSICAL ACTIVITY	Sakchai MUANGSRINOON and Poonpong BOONBRAHM
<b>FS8, 'Projection', 8th Aug. (Tue.), 15:10-17:10, Hall B</b>		
Chair: Sande GAO		
F37	A STUDY ON PICTURE ANGLE KIYOCHIKA'S EXPRESSION AND PHOTOGRAPHY	Aya SAITO
F38	STUDY ON REPRESENTING APPARENT SIZE OF ARCHITECTURAL 3D MODELS USING SPHERICAL GEOMETRY	Hiroki HIROSE and Yuichi SHIMOKAWA
F39	THE RELIEF PERSPECTIVE CAMERA: A JOURNEY INTO DEEP SPACE	Federico FALLAVOLLITA
F40	IMMERSIVE MATH ENVIRONMENT CONTINUABLE TO CROSS-SECTIONAL COMPLEX PROJECTIVE 2-SPACE	Atsushi MIYAZAWA, Masanori NAKAYAMA and Issei FUJISHIRO
F41	GEOMETRICAL ASPECTS OF DISTORTION OF THE STEREOSCOPIC IMAGES REPRODUCED FROM A PAIR OF PICTURES TAKEN WHILE ZOOMING	Katsuyuki YOSHIDA
F42	ENHANCED RGB-D SLAM WITH PLANE ESTIMATION	Zixiang ZHOU, Jing CHEN and Yongtian WANG
<b>FS9, 'Applied Arts', 9th Aug. (Wed.), 10:20-12:00, Hall A</b>		
Chair: Kazuko MENDE		
F43	STUDYING COOL TECHNIQUE OF CONSTRUCTION PROCEDURE ON THE SURROUNDING-AREA PROJECTION MAPPING	Risa SUZUKI and Toshihiro KOMMA
F44	THEORETICAL BASIS FOR THE OPTICAL ILLUSION BLOCK FROM THE VIEWPOINT OF ARCHITECTURE	Daiki AMANAI and Tomoko OHTANI
F45	PLOT WRITING SUPPORT SYSTEM FOR ENSEMBLE CAST BASED ON ANALYSING MOVIES	Yoshihisa KANEMATSU, Chiaki ONO, Ryuta MOTEGI, Naoya TSURUTA, Koji MIKAMI and Kunio KONDO
F46	DEVELOPMENT OF TACTILE EDUCATIONAL PLAY EQUIPMENT BASED ON A REGULAR PENTAGONAL SPHERICON	Toshio MURAMATSU
F47	GEOMETRIC FORMS EVOLUTION OF LABYRINTHS	Biljana S. JOVIĆ, Mihailo N. GRBIĆ, Aleksandar A. ČUČAKOVIĆ and Andela D. MITIĆ
<b>FS10, 'Curves and Surfaces', 9th Aug. (Wed.), 10:20-12:00, Hall B</b>		
Chair: Hans-Peter SCHRÖCKER		
F48	A B-SPLINE METHOD FOR CREATING DEVELOPABLE SURFACES	Francisco PEREZ-ARRIBAS, Elisa POZO-MENENDEZ and Leonardo FERNANDEZ-JAMBRINA
F49	A STUDY OF PATHS FORMED BY DIRECTED ARCS AND LINE SEGMENTS	Jun MITANI
F50	GENERATION OF 3D MODELS OF ANALYTICAL SURFACE IN MATHEMATICS	Shinobu NAGASHIMA
F51	EVALUATING A DAYLIGHTING SYSTEM WITH A CONVEX PARABOLIC REFLECTOR	Yusuke TSUJI and Hirotaka SUZUKI
<b>FS11, 'Cognition', 10th Aug. (Thu.), 10:20-12:00, Hall A</b>		
Chair: Xiao LUO		
F52	THE CHANGE OF SPATIAL ABILITY WITH AGE	Hiroshi SAKUTA, Sayuri NISHIHARA, Kazuyuki NISHIHARA, Emiko TSUTSUMI and Kenjiro SUZUKI
F53	SPATIAL RECOGNITION AFFECTED BY COLOR AND TEXTURE IN ARCHITECTURAL SPACE	Kensuke YASUFUKU, Takuro ENOMOTO and Hirokazu ABE
F54	ANALYSES ON CORRECT ANSWER RATES OF INDIVIDUAL PROBLEMS OF MENTAL CUTTING TEST TO PRE-UNIVERSITY STUDENTS	Emiko TSUTSUMI and Kenjiro SUZUKI
F55	RELATIONSHIP BETWEEN CHANGE OF GRAPHIC SCIENCE CURRICULUM AND SPATIAL ABILITIES EVALUATED BY MENTAL CUTTING TEST	Kumiko SHIINA, Ichiro TANAKA and Nobuhide NAO
<b>FS12, 'Pictures and Drawings', 10th Aug. (Thu.), 10:20-12:00, Hall B</b>		
Chair: Hongming CAI		

F56	TOLERANCE DESIGN: EXPRESSING DESIGN INTENT IN DRAWINGS	Shigeo HIRANO, Sozo SEKIGUCHI, Kazuya OKUSAKA, Tsutomu ARAKI and Susumu KISE
F57	PRODUCING OF WOODBLOCKS FOR SELF-PORTRAIT UKIYO-E BY USING 3D PRINTER	Takashi OHTA, Hideki TODO, Toru KANO, Wataru NOGUCHI, Ai MASUDA and Kenji MURAOKA
F58	HARRY POTTER AND GOTHIC ARCHITECTURE	Yoko KOIKE and Naomi ANDO
F59	CIRCLE, TRIANGLE, SQUARE: TRINITY OF GEOMETRY IN THE ARCHITECTURES OF ALDO ROSSI	Yuji KATAGIRI
F60	EVALUATION OF A PROFILE PARAMETER OF WHEELS DRAWN IN ANCIENT PICTURES IN JAPAN AND CHINA	Kazuki TAKENOUCHI and Bo DONG
<b>FS13, 'Architecture and Structure', 10th Aug. (Thu.), 13:20-15:20, Hall A</b>		
Chair: Ai SAKAKI		
F61	BETWEEN THE MOUNTAINS AND THE SEA - THE LANDSCAPE AXIS OF LE CORBUSIER	Michio KATO
F62	ANALYTIC DRAWINGS OF SUNLIT AREAS IN BAUHAUS ARCHITECTURAL EDUCATION UNDER HANNES MEYER (1927-1930)	Hideo TOMITA
F63	THE RELIEF PERSPECTIVE OF THE AVILA CHAPEL IN SANTA MARIA IN TRESTEVERE	Leonardo BAGLIONI and Federico FALLAVOLLITA
F64	PARAMETRIC MODELING OF QUADRATIC RETICULATED SHELL BASED ON BIM	Ziru WANG, Yuanjun HE and Xiaoyu DING
F65	VISUALIZATION TECHNOLOGY RESEARCH AND APPLICATION IN PARTIAL-WEAR BETWEEN THE SUCKER ROD AND TUBE OF PUMPING UNIT	Yancong LIU, Xiaoli YIN, Jixiang YUE, Wenjie NIU, Zhiyuan WANG and Wenbo GUI
F66	DESIGN AND IMPLEMENTATION OF COMPUTER SIMULATION SYSTEM FOR VARIABLE SLOPE FLUME	Bo LI and Tingna DU
<b>FS14, 'CAD and Robotics', 10th Aug. (Thu.), 13:20-15:20, Hall B</b>		
Chair: Ichiro TANAKA		
F67	3D-MODELLING OF WORLD HERITAGES IN SRI LANKA	Dediyagale RIMINDI RANJULA, Kazuhiro YAMASHIMA and Tsutomu ARAKI
F68	AUTONOMOUS OBSTACLE AVOIDANCE OF MOBILE ROBOT BASED ON MULTI-SENSOR INTEGRATION	Baoling HAN, Xiao LUO, Qingsheng LUO and Ming ZHAO
F69	RESEARCH ON 3D MAP RENDERING TECHNOLOGY BASED ON ROBOT AD HOC NETWORK	Xiao LUO, Baoling HAN and Qingsheng LUO
F70	SERVICE ORIENTED CROSS-PLATFORM FRAMEWORK FOR 3D PART LIBRARY	Wei LIU, Qiang NIU, Xionghui ZHOU and Chuipin KONG
F71	A NEW APPROACH TO 3D GEOMETRIC COMPUTING FOR COMPUTER-AIDED DESIGN	Haiyan YU, Meng JIN, Yuanjun HE, Hongming CAI and Wenjun ZHANG

### Poster Session

<b>PS, Poster Short Talk, 7th Aug. (Mon.), 14:20-14:50</b>		
<b>Poster Discussion, 8th Aug. (Tue.), 12:30-13:20 and 14:20-15:10, Lobby</b>		
Chair: Naoya TSURUTA		
P01	A COMPUTER-AIDED MODELING AND MANUFACTURING SYSTEM BASED ON UG FOR THE WHIRLING PROCESS OF SCREWS	Shantao WANG and Riliang LIU
P02	A MIXED REALITY TECHNOLOGY FOR MEDICAL MEDIA	Wijittra PRASATKAEW and Siwat SUKSRI
P03	A STUDY ON THE COMPOSITION ON THE WORKS OF PIET MONDRIAN DURING HIS DAYS IN LONDON AND NEW YORK	Sayaka TANAKA and Michiyo MIYANAGA
P04	ANALYTICAL METHODS IN DESIGN OF ENGINE PARTS USING THREE-DIMENSIONAL CAD	Toshiaki KANDA, Masatoshi NIIZEKI, Nariaki UOI and Toshihiro OZASA
P05	ART INSTALLATION AS A RESULT OF GRAPHICS EDUCATION OF GEOMETRY WORKSHOP	Biljana S. JOVIĆ, Aleksandar A. ČUČAKOVIĆ, Mihailo N. GRBIĆ and Andela D. MITIĆ
P06	CAD/CAM TRAINING THROUGH ENTERPRISE-UNIVERSITY COOPERATION	Sande GAO and Loulin HUANG

P07	CHALLENGE AND REFORM: EXPLORATION OF ENGINEERING GRAPHICS COURSE TEACHING REFORM BASED ON SCIENTIFIC AND TECHNOLOGICAL INNOVATION AND IMPROVEMENT FOR STUDENTS' ENGINEERING QUALITY	XIAO Yang and HAN Chuan-jun
P08	COMBINATION OF NON-FLAT PATTERN AND GEOMETRICAL PATTERN BY TRANSMITTANCE FOR LAMPSHADE DESIGN	Hiroataka SUZUKI, Nao KOYANAGI and Kimihiro SAKAGAMI
P09	DEVELOPMENT AND EVALUATION OF AN EXAGGERATED EXPRESSION ANIMATION SUPPORT SYSTEM USING MAYA	Yusuke SAKAI, Satoshi CHO and Hisashi SATO
P10	DIGITAL SIGNAGE THAT IMPLICITLY CAUTIONS SMOKERS IN NO-SMOKING ZONES	Takashi OHTA, Fuminori KATO, Syogo KAWAGUCHI and Ryo MURAMOTO
P11	EFFECTIVE USE OF SPREADSHEET FOR CREATIVE DESIGN INVOLVING INVERSE PROBLEM	Shoko KAWATA and Kazuki TAKENOUCI
P12	MIST IN PICTURE SCROLL -FOCUSSING ON EXPRESSION OF KASUGA GONGEN GENKIE-	Noriko SATO
P13	MULTI CHARACTER ANIMATION SYSTEM FOR KIDS BASED ON PATH FOLLOWING	Alaa ALHERZ, Naoya TSURUTA, Koji MIKAMI and Kunio KONDO
P14	QI HE YUAN	Seiyu SON
P15	REASERCH ON THE APPLICATION OF TWO-DIMENSIONAL CODE TECHNOLOGY IN PUBLISHING DRAWING TEXTBOOKS	Hongliang FAN
P16	THE HILL OF DAIMYO THE GROUND AND UNDERGROUND SURFACE CREATED BY ARCHITECTURE	Konatsu NAMI and Tetsuo KANEKO
P17	THE PROGRAMME AND METHODOLOGY OF ART EDUCATION USED IN A PRACTICAL COURSE PREPARING STUDENTS FOR WORK IN CREATIVE INDUSTRIES	Małgorzata ŁUSZCZAK, Katarzyna KROCZEK-WASIŃSKA and Paweł SYNOWIEC
P18	TOURISTS' OPINIONS ON APPLICATIONS VS PRINTED MEDIA FOR CONSERVATIVE TOURISM	Wasan SORNKHIEO, Pratoomtong TRIRAT, Dean K. LANDUCCI and Vorapoj SONGCHAROEN