Subject index for papers in Volume 36

Each index entry below is accompanied by an author's name and a page number; the author index contains the title of the paper and the names of coauthors, if any.

Bipolar transistors
Advancing the st high-performant

ind the names of coauthors, if any.			high-performance logic and array technology	Brown	821
Subject	Author	Page	Capacitors Low-inductance decoupling capacitor for the thermal conduction modules of the IBM Enterprise System/9000 processors	Humenik	935
Artificial intelligence			System/9000 processors	Humenik	930
An experiment in constructing an			Ceramics		
open expert system using a			High-performance glass-ceramic/		
knowledge substrate	Apté	409	copper multilayer substrate		
Capturing the deep meaning of texts			with thin-film redistribution	Tummala	889
through deduction and inference	Antonacci	333	with this film redistribution	1 ummara	007
Explaining SLDNF resolution with	-	2.45	Channels		
non-normal defaults	Casanova	347	The IBM Enterprise Systems		
Knowledge in operation	Bollinger	965	Connection (ESCON) Architecture	Elliott	577
Logic programming with typed			The IBM Enterprise Systems	Linott	311
unification and its realization	D. 1	255	Connection (ESCON) channel—		
on an abstract machine	Bierle	375	A versatile building block	Flanagan	617
STORK and PENGUIN: Logic			Ti versuine sunomig stoom	1 141146411	01,
programming systems using general	Cuamaina	361	Chem-mech planarization		
clauses and defaults	Guerreiro	301	A four-level VLSI bipolar		
The controlled experiment in	Nicholson	958	metallization design with		
knowledge-acquisition research Topological reasoning about dextrous	NICHOISOII	930	chemical-mechanical planarization	Guthrie	845
	Nguyen	469	one meet meeting printer in		0.10
grasps Use of natural language for	14guyen	407	Clock (computer)		
knowledge acquisition: Strategies			IBM Enterprise System/9000 clock		
to cope with semantic and			system: A technology and system		
pragmatic variation	Wetter	435	perspective	Chiu	867
Zephyr: Toward true compiler-based	********		Possipoon		
programming in Prolog	Asakawa	391	Clock skew		
Lead-manage and a series			IBM Enterprise System/9000 clock		
			system: A technology and system		
4S/400 computer			perspective	Chiu	867
Architecture, design, and			perspective	ou	00,
performance of Application			Clock synchronization		
System/400 (AS/400)	D 1	1001	Coordination of time-of-day clocks		
multiprocessors	Bahr	1001	among multiple systems	Dhondy	655
				,	555
Bipolar logic			Clock system design		
Improved performance of IBM			IBM Enterprise System/9000 clock		
Enterprise System/9000 bipolar			system: A technology and system		
logic chips	Barish	829	perspective	Chiu	867
			• •		

a			Die Lee Anders Lees		
Color images A gray-scale addressing technique			Display technology A gray-scale addressing technique		
for thin-film-transistor/liquid crystal			for thin-film-transistor/liquid crystal		
displays	Alt	11	displays	Alt	11
Cell design of gray-scale thin-film-			Cell design of gray-scale thin-film-		
transistor-driven liquid crystal			transistor-driven liquid crystal		
displays	Takano	23	displays	Takano	23
Color filter for 10.4-indiagonal			Color filter for 10.4-indiagonal		
4096-color thin-film-transistor			4096-color thin-film-transistor		
liquid crystal displays	Koseki	43	liquid crystal displays	Koseki	43
			Functional testing of TFT/LCD	Jenkins	59
Computer architecture			arrays Lateral field effect in twisted nematic	Jenkins	39
Architecture, design, and			cells	Lien	51
performance of Application			Thin-film-transistor/liquid crystal	Lien	J1
System/400 (AS/400)	D. L.	1001	display technology—		
multiprocessors	Bahr	1001	An introduction	Howard	3
Design of the IBM System/390					
computer family for numerically intensive applications: An			Electrical connection		
overview for engineers and			Electrical connections to the thermal		
scientists	Gibson	695	conduction modules of the IBM		
MVS/ESA coupled-systems			Enterprise System/9000 water-		
considerations	Swanson	667	cooled processors	Brofman	921
Unique design concepts in GF11					
and their impact on performance	Kumar	990	Electrical design		
			Aspects of the electrical design		
Computer organization and design			and analyses of the printed circuit		
Design of the IBM Enterprise			boards of the IBM Enterprise		
System/9000 high-end processor	Liptay	713	System/9000 water-cooled	_	0.40
Design of the IBM System/390			processors	Boone	943
computer family for numerically					
intensive applications: An			Emitter-coupled logic (ECL)		
overview for engineers and	Cibaaa	60 5	Improved performance of IBM		
scientists	Gibson	695	Enterprise System/9000 bipolar	D 11	020
Fault-tolerance design of the IBM Enterprise System/9000 Type 9021			logic chips	Barish	829
processors	Chen	765			
MVS Dynamic Reconfiguration	Chon	702	Enterprise Systems		
Management	Cwiakala	633	Coordination of time-of-day clocks	Dhaada	655
MVS/ESA coupled-systems			among multiple systems	Dhondy	655
considerations	Swanson	667	Design of the IBM Enterprise System/9000 high-end processor	Liptay	713
Simulation of IBM Enterprise			Design of the IBM System/390	Lipitay	715
System/9000 Models 820 and 900	Ackerman	751	computer family for numerically		
			intensive applications: An		
Computer-system availability			overview for engineers and		
Fault-tolerance design of the IBM			scientists	Gibson	695
Enterprise System/9000 Type 9021	C1	565	Integrated Cryptographic Facility		
processors	Chen	765	of the Enterprise Systems		
MVS Dynamic Reconfiguration	Cwiakala	633	Architecture/390: Design	Cish	683
Management	Cwiakata	055	considerations	Smith	063
			MVS Dynamic Reconfiguration Management	Cwiakala	633
Cryptography			MVS/ESA coupled-systems	Ownana	000
Integrated Cryptographic Facility of the Enterprise Systems			considerations	Swanson	667
Architecture/390: Design			Physical and electrical design		
considerations	Smith	683	features of the IBM Enterprise		
Considerations			System/9000 circuit module	Davidson	877
Detection and acception			The IBM Enterprise Systems		
Data structure and accessing MVS Dynamic Reconfiguration			Connection (ESCON) Architecture	Elliott	577
2	Cwiakala	633	The IBM Enterprise Systems		
Management	Owianaia	033	Connection (ESCON) channel—	Tilona	£17
5.00			A versatile building block	Flanagan	617
Differential current switch (DCS)			The IBM Enterprise Systems		
Improved performance of IBM Enterprise System/9000 bipolar			Connection (ESCON) Director: A dynamic switch for 200Mb/s		
logic chips	Barish	829	fiber optic links	Georgiou	593
logic cinps	Durion	027	noor optic mins	000.8.00	
Diala antina per continu			ESCON architecture		
Dislocation generation			The IBM Enterprise Systems		
Stress-induced dislocations in silicon integrated circuits	Fahey	158	Connection (ESCON) Architecture	Elliott	577
integrated circuits	1 and y	150	Connection (Locort) Incintecture		

The IBM Enterprise Systems Connection (ESCON) channel— A versatile building block	Flanagan	617	Directory and Trace memory chip with active discharge cell Improved performance of IBM	Bunce	859
The IBM Enterprise Systems Connection (ESCON) Director: A dynamic switch for 200Mb/s			Enterprise System/9000 bipolar logic chips	Barish	829
fiber optic links Expert systems An experiment in constructing an	Georgiou	593	Interconnection design A four-level VLSI bipolar metallization design with chemical-mechanical planarization	Guthrie	845
open expert system using a knowledge substrate	Apté	409	Interconnection processing		
The controlled experiment in knowledge-acquisition research	Nicholson	958	A four-level VLSI bipolar metallization design with chemical-mechanical planarization	Guthrie	845
Fault-tolerant power systems Three-loop feedback control of fault- tolerant power supplies in IBM Enterprise System/9000 processors	Covi	781	Interconnection technology Enterprise Systems Connection (ESCON) Architecture— System overview	Calta	535
Feedback control Three-loop feedback control of fault-			Fiber Distributed Data Interface attachment to System/390	Coleman	647
tolerant power supplies in IBM Enterprise System/9000 processors	Covi	781	IBM Enterprise Systems multimode fiber optic technology The IBM Enterprise Systems	Aulet	553
Fiber optics The IBM Enterprise Systems Connection (ESCON) Architecture The IBM Enterprise Systems	Elliott	577	Connection (ESCON) Director: A dynamic switch for 200Mb/s fiber optic links	Georgiou	593
Connection (ESCON) Director: A dynamic switch for 200Mb/s fiber optic links	Georgiou	593	Interface analysis Application of electron and ion beam analysis techniques to microelectronics	Kuan	183
Field-effect transistors Reactive ion etching technology in thin-film-transistor processing Study of the $V_{\rm th}$ shift of the thin-film transistor by the bias temperature	Kuo	69	I/O architecture MVS Dynamic Reconfiguration Management	Cwiakala	633
stress test	Fujimoto	76	Lithography A statistical approach to quality		
GF11 computer Unique design concepts in GF11 and their impact on performance	Kumar	990	control of non-normal lithographical overlay distributions Advancing the state of the art in high-performance logic and array	Booth	835
Heat transfer Dual-tapered-piston (DTP) module			technology	Brown	821
cooling for IBM Enterprise System/9000 systems System cooling design for the water-cooled IBM Enterprise	Goth	805	A single-chip IBM System/390 floating-point processor in CMOS Simulation of IBM Enterprise	Dao-Trong	733
System/9000 processors	Delia	791	System/9000 Models 820 and 900	Ackerman	751
Image processing TDI charge-coupled devices: Design and applications	Wong	83	Logic programming Capturing the deep meaning of texts through deduction and inference Explaining SLDNF resolution with	Antonacci	333
Input/output systems The IBM Enterprise Systems			non-normal defaults Logic programming with typed	Casanova	347
Connection (ESCON) Architecture The IBM Enterprise Systems Connection (ESCON) channel—	Elliott	577	unification and its realization on an abstract machine STORK and PENGUIN: Logic	Beierle	375
A versatile building block The IBM Enterprise Systems Connection (ESCON) Director:	Flanagan	617	programming systems using general clauses and defaults Zephyr: Toward true compiler-based	Guerreiro	361
A dynamic switch for 200Mb/s fiber optic links	Georgiou	593	programming in Prolog	Asakawa	391
Integrated circuit design A single-chip IBM System/390			Manufacturing Equipment-related advances in the fabrication of glass-ceramic/		
floating-point processor in CMOS	Dao-Trong	733	copper/polyimide substrates	Kranik	905

SUBJECT INDEX

Mechanical design Equipment-related advances in the fabrication of glass-ceramic/ copper/polyimide substrates	Kranik	905	Oxidation-induced stress Stress-induced dislocations in silicon integrated circuits	Fahey	158
copper/polymnide substrates	Kianik	705	Packaging		
Microelectronics manufacturing Integrated processing for microelectronics science and technology	Rubloff	233	Aspects of the electrical design and analyses of the printed circuit boards of the IBM Enterprise System/9000 water-cooled		242
Module design Physical and electrical design features of the IBM Enterprise			processors Electrical connections to the thermal conduction modules of the IBM Enterprise System/9000 water-	Boone	943
System/9000 circuit module	Davidson	877	cooled processors Equipment-related advances in the fabrication of glass-ceramic/	Brofman	921
Module testing Functional testing of TFT/LCD arrays	Jenkins	59	copper/polyimide substrates High-performance glass-ceramic/ copper multilayer substrate with	Kranik	905
Multilevel interconnections A four-level VLSI bipolar metallization design with			thin-film redistribution Low-inductance decoupling capacitor for the thermal conduction	Tummala	889
chemical-mechanical planarization Advancing the state of the art in high-performance logic and array	Guthrie	845	modules of the IBM Enterprise System/9000 processors Physical and electrical design	Humenik	935
technology Physical and electrical design features of the IBM Enterprise	Brown	821	features of the IBM Enterprise System/9000 circuit module	Davidson	877
System/9000 circuit module Multiprocessing	Davidson	877	Parallel processing Architecture, design, and performance of Application		
Architecture, design, and performance of Application System/400 (AS/400)			System/400 (AS/400) multiprocessors Unique design concepts in GF11	Bahr	1001
multiprocessors	Bahr	1001	and their impact on performance	Kumar	990
Natural language processing			Performance measurement and prediction	ı	
Capturing the deep meaning of texts			Functional testing of TFT/LCD arrays	Jenkins	59
through deduction and inference Knowledge in operation Use of natural language for	Antonacci Bollinger	333 965	Simulation of IBM Enterprise System/9000 Models 820 and 900	Ackerman	751
knowledge acquisition: Strategies to cope with semantic and pragmatic variation	Wetter	435	Photodetectors TDI charge-coupled devices: Design and applications	Wong	83
Networks Fiber Distributed Data Interface attachment to System/390	Coleman	647	Plasma-based anisotropic etching Plasma-based dry etching techniques in the silicon integrated circuit	0.11:	140
Optical transmission Enterprise Systems Connection (ESCON) Architecture—			Power control system	Oehrlein	140
System overview IBM Enterprise Systems multimode	Calta	535	Three-loop feedback control of fault- tolerant power supplies in IBM Enterprise System/9000 processors	Covi	781
fiber optic technology	Aulet	553	Power supplies	COVI	701
Optoelectronic device technology Color filter for 10.4-indiagonal 4096-color thin-film-transistor liquid crystal displays	Koseki	43	Three-loop feedback control of fault- tolerant power supplies in IBM Enterprise System/9000 high-end		
Lateral field effect in twisted nematic			processors	Covi	781
cells	Lien	ור			
cells Thin-film-transistor/liquid crystal	Lien	51	Process-induced defects		
	Lien Howard	3	Process-induced defects Application of electron and ion beam analysis techniques to microelectronics	Kuan	183
Thin-film-transistor/liquid crystal display technology—			Application of electron and ion beam analysis techniques to	Kuan Liptay	183 713

Quality control A statistical approach to quality control of non-normal lithographical overlay distributions	Booth	835	System cooling System cooling design for the water-cooled IBM Enterprise System/9000 processors	Delia	7 91
Robotics Topological reasoning about dextrous grasps	Nguyen	469	System timing analysis IBM Enterprise System/9000 clock system: A technology and system perspective	Chiu	867
Semiconductor device modeling Numerical modeling of advanced semiconductor devices Semiconductor device processing	Lee	208	Systems architecture and development Design of the IBM System/390 computer family for numerically intensive applications: An overview for engineers and		
Integrated processing for microelectronics science and technology	Rubloff	233	scientists Thermal conduction	Gibson	695
Plasma-based dry etching techniques in the silicon integrated circuit technology	Oehrlein	140	System cooling design for the water-cooled IBM Enterprise System/9000 processors	Delia	791
Semiconductor devices Application of electron and ion beam analysis techniques to			Thermal conduction analysis Dual-tapered-piston (DTP) module cooling for IBM Enterprise		
microelectronics Numerical modeling of advanced	Kuan	183 208	System/9000 systems Thermal conduction module	Goth	805
semiconductor devices Stress-induced dislocations in silicon integrated circuits	Lee Fahey	158	Dual-tapered-piston (DTP) module cooling for IBM Enterprise		
Study of the $V_{\rm th}$ shift of the thin-film transistor by the bias temperature	•	.	System/9000 systems	Goth	805
stress test Semiconductor technology	Fujimoto	76	Time-of-day clock Coordination of time-of-day clocks among multiple systems	Dhondy	655
A single-chip IBM System/390 floating-point processor in CMOS Advancing the state of the art in	Dao-Trong	733	Timing relationships IBM Enterprise System/9000 clock system: A technology and system		
high-performance logic and array technology Directory and Trace memory chip	Brown	821	perspective	Chiu	867
with active discharge cell Reactive ion etching technology in thin-film-transistor processing	Bunce Kuo	859 69	Vector computers Design of the IBM System/390 computer family for numerically		
Unique design concepts in GF11 and their impact on performance	Kumar	990	intensive applications: An overview for engineers and scientists	Gibson	695
Simulation Simulation of IBM Enterprise			Design of the IBM Enterprise System/9000 high-end processor	Liptay	713
System/9000 Models 820 and 900	Ackerman	751	VLSI A single-chip IBM System/390		
Substrates Physical and electrical design features of the IBM Enterprise			floating-point processor in CMOS Water cooling	Dao-Trong	733
System/9000 circuit module	Davidson	877	Dual-tapered-piston (DTP) module cooling for IBM Enterprise System/9000 systems	Goth	805
Surface analysis Application of electron and ion beam analysis techniques to	V	183	System cooling design for the water-cooled IBM Enterprise System/9000 processors	Delia	791
microelectronics Switches	Kuan	163	System/1000 processors	Dena	771
The IBM Enterprise Systems Connection (ESCON) Director: A dynamic switch for 200Mb/s fiber optic links	Georgiou	593			
Sysplex timer Coordination of time-of-day clocks among multiple systems	Dhondy	655			