Subject index for papers in Volume 30

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. Communications are identified by (C).

Author

Cytron

Stone

Arbab

Agarwal

Agarwal

Efrat

Cioffi

Barbosa

Driscoll

Ching

Fargues

Ennis

Diel

Page

603

242

294

145

126

184

310

321

583

594

70

14

102

interpreter using conceptual graphs	Sowa	57
Interfaces for knowledge-base builders' control knowledge and application-specific procedures	Hirsch	29
Knowledge systems: Principles and practice	Walker	2
Storing and evaluating Horn-clause rules in a relational database Structures of rule-based belief	van Emde Boas	80
functions	Eddy	93
Theory for the representation of knowledge	Guenthner	39
Belief functions Structures of rule-based belief functions	Eddy	93
Biology Application to biology and technology of the scanning tunneling microscope operated in air at ambient pressure	Baró	380
Catalysis Defects on the Pt(100) surface and their influence on surface reactions—A scanning tunneling microscopy study	Hösler	403
Channel subsystem architecture Least-squares storage-channel identification	Cioffi	310
Chemistry Chemical and mechanical performance of flexible magnetic tape containing chromium dioxide	Bradshaw	203
Coding theory On-the-fly decoder for multiple byte errors	Patel	259
Communications and communication networks Maximum-energy-concentration spectral window	Barbosa	321

Implementing a semantic

666

Subject

Algorithms

cutoff

370

Analytical methods

identification

spectral window

APL translator Program analysis and code generation in an APL/370

compiler

Artificial intelligence

Automatic overlay generator

Compiling circular attribute

grammars into Prolog

Vector Facility

Average complexity of depth-first search with backtracking and

Fourier transform and convolution subroutines for the IBM 3090

New scalar and vector elementary

Parallel iterative linear solvers for oil reservoir models

Least-squares storage-channel

APL translation and compilation Compiling APL: The Yorktown

Maximum-energy-concentration

Conceptual graphs for semantics

system for computer operations

architecture supporting expert

systems and logic programming

and knowledge processing

Continuous real-time expert

Experimental computer

functions for the IBM System/

Compilers and interpreters Compiling APL: The Yorktown	Driscoll	583	Error detection and correction Early error detection in syntax- driven parsers	Moura	617
APL translator Compiling circular attribute grammars into Prolog	Arbab	294	On-the-fly decoder for multiple byte errors	Patel	259
Early error detection in syntax-			Error recovery	Tatel	23)
driven parsers Microtasking on IBM	Moura	617	Key-sequence data sets on	Easter	230
multiprocessors Program analysis and code	Carnevali	574	indelible storage	Easton	230
generation in an APL/370 compiler	Ching	594	Expert systems Conceptual graphs for semantics		
Vectorizing Fortran compiler	Scarborough	163	and knowledge processing Continuous real-time expert	Fargues	70
Computational complexity Average complexity of depth-first			system for computer operations Experimental computer architecture supporting expert	Ennis	14
search with backtracking and cutoff	Stone	242	systems and logic programming Implementing a semantic	Diel	102
Computational methods Average complexity of depth-first search with backtracking and			interpreter using conceptual graphs Interfaces for knowledge-base	Sowa	57
cutoff New scalar and vector elementary	Stone	242	builders' control knowledge and application-specific procedures	Hirsch	29
functions for the IBM System/	Agarwal	126	Knowledge systems: Principles and practice	Walker	2
Parallel iterative linear solvers for oil reservoir models	Efrat	184	Storing and evaluating Horn- Clause rules in a relational	vi dikci	-
Computer applications	Liiat	104	database Structures of rule-based belief	van Emde Boas	80
Computer automation for scanning tunneling microscopy	Schroer	541	functions Theory for the representation of	Eddy	93
Computerized autoradiographic technique for the simultaneous	Semoci	311	knowledge	Guenthner	39
high-resolution mapping of myocardial blood flow and	I 'Akhata	627	Functional programming Execution architecture for FP	Huynh	609
metabolism Scanning tunneling microscope	L'Abbate	027	Geophysics		
automation	Aguilar	523	Parallel iterative linear solvers for oil reservoir models	Efrat	184
Computer architecture Execution architecture for FP Experimental computer	Huynh	609	Seismic migration on the IBM 3090 Vector Facility	Gazdag	172
architecture supporting expert systems and logic programming	Diel	102	Graphics Computer automation for		
Computer-controlled manipulators			scanning tunneling microscopy Scanning tunneling microscope	Schroer	541
Computer automation for scanning tunneling microscopy	Schroer	541	automation	Aguilar	523
Scanning tunneling microscope automation	Aguilar	523	Image processing Computer automation for		
Computer operation			scanning tunneling microscopy Computerized autoradiographic	Schroer	541
Continuous real-time expert system for computer operations	Ennis	14	technique for the simultaneous high-resolution mapping of		
Contamination technology			myocardial blood flow and metabolism	L'Abbate	627
Yield, fault distributions, and clustering of particles	Stapper	326	Scanning tunneling microscope automation	Aguilar	523
Data structure and accessing			Scanning tunneling microscope for surface science studies	Demuth	396
Computer automation for scanning tunneling microscopy	Schroer	541	Scanning tunneling microscopy	Binnig	355
Key-sequence data sets on indelible storage	Easton	230	Interfaces Interfaces for knowledge-base		
Scanning tunneling microscope automation	Aguilar	523	builders' control knowledge and application-specific procedures	Hirsch	29
Display technology			I/O technologies		
Computer automation for scanning tunneling microscopy	Schroer	541	Key-sequence data sets on indelible storage	Easton	230
Scanning tunneling microscope automation	Aguilar	523	Least-squares storage-channel identification	Cioffi	310

667

V marriadas arretamas			A . 15		
Knowledge systems Conceptual graphs for semantics			Applications of a high-stability scanning tunneling microscope	van Kempen	507
and knowledge processing	Fargues	70	Behavior and calibration of some	van Kempen	307
Continuous real-time expert	-		piezoelectric ceramics used in		
system for computer operations	Ennis	14	the STM (C)	Vieira	551
Experimental computer architecture supporting expert			Chemical applications of scanning	***	40.4
systems and logic programming	Diel	102	tunneling microscopy Construction of a UHV scanning	West	484
Implementing a semantic	Dici	102	tunneling microscope	Chiang	513
interpreter using conceptual			Mono-atomic tips for scanning	Cinaing	313
graphs	Sowa	57	tunneling microscopy	Fink	460
Interfaces for knowledge-base			Near-field optical scanning		
builder's control knowledge and application-specific procedures	Hirsch	29	microscopy with tunnel-distance regulation	Domin	470
Knowledge systems: Principles and	11115011	29	Scanning tunneling microscope for	Dürig	478
practice	Walker	2	the investigation of the growth		
Storing and evaluating Horn-clause			of metal films on semiconductor		
rules in a relational database	van Emde Boas	80	surfaces	Berghaus	518
Structures of rule-based belief functions	Eddy	93	Scanning tunneling microscopy	Binnig	355
Theory for the representation of	Ludy	73	Scanning tunneling microscopy of cleaved semiconductor surfaces	Feenstra	466
knowledge	Guenthner	39	Scanning tunneling microscopy of	i censua	400
I ama and a summetime			surface microstructure on rough		
Large-scale computing Fourier transform and convolution			surfaces	Gimzewski	472
subroutines for the IBM 3090			STM activity at the University of	D.	400
Vector Facility	Agarwal	145	Basel Surface modification with the	Ringger	498
Monte Carlo photon transport on	-		scanning tunneling microscope	Abraham	492
a vector supercomputer	Martin	193	Theory of scanning tunneling		.,_
New scalar and vector elementary functions for the IBM System/			microscopy and spectroscopy:		
370	Agarwal	126	Resolution, image and field	.	
Parallel iterative linear solvers for	Bara.	120	states, and thin oxide layers Wide-range, low-operating-voltage,	Garcia	531
oil reservoir models	Efrat	184	bimorph STM: Application as		
Seismic migration on the IBM	~ .		potientiometer	Muralt	443
3090 Vector Facility Vectorizing Fortran compiler	Gazdag	172			
vectorizing Fortran compiler	Scarborough	163	Mathematical functions and techniques		
Logic design and technology			Fourier transform and convolution		
On-the-fly decoder for multiple	D . 1	•••	subroutines for the IBM 3090		
byte errors	Patel	259	Vector Facility	Agarwal	145
Logic programming			New scalar and vector elementary		
Compiling circular attribute			functions for the IBM System/	A comval	126
grammars into Prolog	Arbab	294	Parallel iterative linear solvers for	Agarwal	126
Knowledge systems: Principles and practice	Walker	2	oil reservoir models	Efrat	184
praetice	vv aikci	2			
Magnetic head design			Mechanical design		
Design and performance of a			Design criteria in scanning tunneling microscopy	Pohl	417
magnetic head for a high-density tape drive	Cannon	270	Mechanical design of the cartridge	rom	417
•	Calinon	270	and transport for the IBM 3480		
Magnetic head/disk interaction			Magnetic Tape Subsystem	Winarski	635
Least-squares storage-channel identification	C:-#	210	Scanning tunneling microscope for surface science studies		20.6
identification	Cioffi	310	Scanning tunneling microscopy	Demuth Binnig	396 355
Magnetic recording			Squeezable tunneling junctions	Hansma	370
Chemical and mechanical					2.0
performance of flexible magnetic tape containing chromium			Mechanics		
dioxide	Bradshaw	203	Chemical and mechanical performance of flexible magnetic		
Design and performance of a	Diadollaw	203	tape containing chromium		
magnetic head for a high-density			dioxide	Bradshaw	203
tape drive	Cannon	270			
Mechanical design of the cartridge and transport for the IBM 3480			Medical electronics Computerized autoradiographic		
Magnetic Tape Subsystem	Winarski	635	technique for simultaneous high-		
	·· IIIMADRI	033	resolution mapping of		
Materials			myocardial blood flow and		
Application to biology and technology of the scanning			metabolism	L'Abbate	627
tunneling microscope operated			Memory management		
in air at ambient pressure	Baró	380	Automatic overlay generator	Cytron	603
				-	-

668

			Pamata cansing		
Models and modeling Symmetric stochastic Petri nets	Prisgrove	278	Remote sensing Applications of a high-stability scanning tunneling microscope	van Kempen	507
Natural language processing Conceptual graphs for semantics			Chemical applications of scanning tunneling microscopy	West	484
and knowledge processing Implementing a semantic	Fargues	70	Construction of a UHV scanning tunneling microscope	Chiang	513
interpreter using conceptual graphs	Sowa	57	Mono-atomic tips for scanning tunneling microscopy	Fink	460
Theory for the representation of knowledge	Guenthner	39	Near-field optical scanning microscopy with tunnel-distance		
Optimization of programs Vectorizing Fortran compiler	Scarborough	163	regulation Scanning tunneling microscope for	Dürig	478
Overlay structures	-		the investigation of the growth of metal films on semiconductor	Danahassa	£10
Automatic overlay generator	Cytron	603	surfaces Scanning tunneling microscopy of	Berghaus	518
Parallel processing Microtasking on IBM multiprocessors	Carnevali	574	cleaved semiconductor surfaces Scanning tunneling microscopy of surface microstructure on rough	Feenstra	466
Parsers Early error detection in syntax-			surfaces STM activity at the University of	Gimzewski	472
driven parsers	Moura	617	Basel Surface modification with the	Ringger	498
Particle physics Monte Carlo photon transport on a vector supercomputer	Martin	193	scanning tunneling microscope Wide-range, low-operating-voltage, bimorph STM: Application as	Abraham	492
PC instrument automation	Martin	173	potientiometer	Muralt	443
Computer automation for scanning tunneling microscopy	Schroer	541	Scanning tunneling microscopy Application to biology and		
Scanning tunneling microscope automation	Aguilar	523	technology of the scanning tunneling microscope operated		
Polymers Chemical and mechanical			in air at ambient pressure Applications of a high-stability	Baró	380
performance of flexible magnetic tape containing chromium			scanning tunneling microscope Behavior and calibration of some	van Kempen	507
dioxide	Bradshaw	203	piezoelectric ceramics used in the STM (C)	Vieira	551
Programming and programming languages			Chemical applications of scanning tunneling microscopy	West	484
Automatic overlay generator Compiling APL: The Yorktown	Cytron	603	Computer automation for scanning tunneling microscopy	Schroer	541
APL translator Execution architecture for FP	Driscoll Huynh	583 609	Construction of a UHV scanning tunneling microscope	Chiang	513
Microtasking on IBM multiprocessors	Carnevali	574	Defects on the Pt(100) surface and their influence on surface reactions—A scanning tunneling		
Program analysis and code generation in an APL/370	a.	50.4	microscopy study Design criteria in scanning	Hösler	403
compiler Vectorizing Fortran compiler	Ching Scarborough	594 163	tunneling microscopy	Pohl	417
Quality control Yield, fault distributions, and			Electronic structure and tunneling current for chemisorbed atoms Mono-atomic tips for scanning	Lang	374
clustering of particles	Stapper	326	tunneling microscopy Near-field optical scanning	Fink	460
Quantum theory Properties of vacuum tunneling currents: Anomalous barrier			microscopy with tunnel-distance regulation Possible mechanisms of atom	Dürig	478
heights Theory of scanning tunneling microscopy and spectroscopy:	Coombs	455	transfer in scanning tunneling microscopy Properties of vacuum tunneling	Gomer	428
Resolution, image and field states, and thin oxide layers	Garcia	531	currents: Anomalous barrier heights	Coombs	455
Traversal time for tunneling	Büttiker	451	Scanning tunneling microscope automation	Aguilar	523
Relational databases Storing and evaluating Horn-clause rules in a relational database	van Emde Boas	80	Scanning tunneling microscope for the investigation of the growth of metal films on semiconductor	-	
Reliability Yield, fault distributions, and			surfaces Scanning tunneling microscope for	Berghaus	518
clustering of particles	Stapper	326	surface science studies	Demuth	396

669

Scanning tunneling microscopy Scanning tunneling microscopy of	Binnig	355	Scanning tunneling microscopy	Binnig	355
cleaved semiconductor surfaces Scanning tunneling microscopy of	Feenstra	466	Scanning tunneling microscopy of cleaved semiconductor surfaces Scanning tunneling microscopy of	Feenstra	466
surface microstructure on rough			surface microstructure on rough		
surfaces	Gimzewski	472	surfaces	Gimzewski	472
Spectroscopy of electronic states of			Spectroscopy of electronic states of		
metals with a scanning tunneling	** .		metals with a scanning tunneling		
microscope	Kaiser	411	microscope	Kaiser	411
Squeezable tunneling junctions STM activity at the University of	Hansma	370	STM activity at the University of Basel	Ringger	498
Basel	Ringger	498	Surface modification with the	Kingger	470
Surface modification with the	11119801	170	scanning tunneling microscope	Abraham	492
scanning tunneling microscope	Abraham	492	Theory of scanning tunneling		.,_
Theory of scanning tunneling			microscopy and spectroscopy:		
microscopy and spectroscopy:			Resolution, image and field		
Resolution, image and field states, and thin oxide layers	Garcia	531	states, and thin oxide layers	Garcia	531
Traversal time for tunneling	Büttiker	451	Wide-range, low-operating-voltage, bimorph STM: Application as		
Tunneling microscopy from 300 to	Duttikei	431	potientiometer	Muralt	443
4.2 K	Elrod	387	Povolition		115
Wide-range, low-operating-voltage,			Solid state theory		
bimorph STM: Application as			Properties of vacuum tunneling		
potientiometer	Muralt	443	currents: Anomalous barrier	0 1	455
Semiconductor yield analysis			heights Theory of scanning tunneling	Coombs	455
Yield, fault distributions, and			microscopy and spectroscopy:		
clustering of particles	Stapper	326	Resolution, image and field		
Signal processing			states, and thin oxide layers	Garcia	531
Computer automation for			Traversal time for tunneling	Büttiker	451
scanning tunneling microscopy	Schroer	541			
Fourier transform and convolution			Statistics		
subroutines for the IBM 3090			Yield, fault distributions, and clustering of particles	Stapper	326
Vector Facility	Agarwal	145	crustering of particles	Stapper	320
Least-squares storage-channel identification	Cioffi	310	Storage devices		
Maximum-energy-concentration	Cioin	310	Key-sequence data sets on		
spectral window	Barbosa	321	indelible storage	Easton	230
Scanning tunneling microscope	2210000	5-1	Suparaanduativity		
automation	Aguilar	523	Superconductivity Squeezable tunneling junctions	Hansma	370
Simulation			Tunneling microscopy from 300 to	Hansina	370
Monte Carlo photon transport on			4.2 K	Elrod	387
a vector supercomputer	Martin	193			
Symmetric stochastic Petri nets	Prisgrove	278	Surface science		
Yield, fault distributions, and	_		Application to biology and		
clustering of particles	Stapper	326	technology of the scanning tunneling microscope operated		
Solid state physics			in air at ambient pressure	Baró	380
Applications of a high-stability			Applications of a high-stability	24.0	500
scanning tunneling microscope	van Kempen	507	scanning tunneling microscope	van Kempen	507
Behavior and calibration of some			Chemical applications of scanning		
piezoelectric ceramics used in	Wieiee	651	tunneling microscopy	West	484
the STM (C) Chemical applications of scanning	Vieira	551	Construction of a UHV scanning tunneling microscope	Chiang	513
tunneling microscopy	West	484	Defects on the Pt(100) surface and	Ciliang	313
Construction of a UHV scanning			their influence on surface		
tunneling microscope	Chiang	513	reactions—A scanning tunneling		
Electronic structure and tunneling	_		microscopy study	Hösler	403
current for chemisorbed atoms	Lang	374	Electronic structure and tunneling		
Mono-atomic tips for scanning tunneling microscopy	Fink	460	current for chemisorbed atoms	Lang	374
Near-field optical scanning	LIIK	400	Mono-atomic tips for scanning tunneling microscopy	Fink	460
microscopy with tunnel-distance			Near-field optical scanning	THIK	700
regulation	Dürig	478	microscopy with tunnel-distance		
Possible mechanisms of atom	-		regulation	Dürig	478
transfer in scanning tunneling			Possible mechanisms of atom	-	
microscopy	Gomer	428	transfer in scanning tunneling	Come	400
Scanning tunneling microscope for the investigation of the growth			microscopy Properties of vacuum tunneling	Gomer	428
of metal films on semiconductor			currents: Anomalous barrier		
surfaces	Berghaus	518	heights	Coombs	455
	-		-	-	

Scanning tunneling microscope for the investigation of the growth of metal films on semiconductor			Token-passing rings Symmetric stochastic Petri nets	Prisgrove	278
surfaces Scanning tunneling microscope for	Berghaus	518	Tree search Average complexity of depth-first		
surface science studies Scanning tunneling microscopy	Demuth Binnig	396 355	search with backtracking and cutoff	Stone	242
Scanning tunneling microscopy of cleaved semiconductor surfaces Scanning tunneling microscopy of	Feenstra	466	Fourier transform and convolution		
surface microstructure on rough surfaces	Gimzewski	472	subroutines for the IBM 3090 Vector Facility Monte Carlo photon transport on	Agarwal	145
Spectroscopy of electronic states of metals with a scanning tunneling microscope	Kaiser	411	a vector supercomputer New scalar and vector elementary	Martin	193
Squeezable tunneling junctions STM activity at the University of	Hansma	370	functions for the IBM System/ 370 Parallel iterative linear solvers for	Agarwal	126
Basel Surface modification with the	Ringger	498	oil reservoir models	Efrat	184
scanning tunneling microscope Theory of scanning tunneling microscopy and spectroscopy: Resolution, image and field	Abraham	492	Seismic migration on the IBM 3090 Vector Facility Vectorizing Fortran compiler	Gazdag Scarborough	172 163
states, and thin oxide layers Traversal time for tunneling	Garcia Büttiker	531 451			
Tunneling microscopy from 300 to 4.2 K	Elrod	387			
Wide-range, low-operating-voltage, bimorph STM: Application as potientiometer	Muralt	443			
T1 / 0					
Thin films Application to biology and technology of the scanning					
tunneling microscope operated in air at ambient pressure	Baró	380			
Applications of a high-stability scanning tunneling microscope Chemical applications of scanning	van Kempen	507			
tunneling microscopy	West	484			
Construction of a UHV scanning tunneling microscope	Chiang	513			
Mono-atomic tips for scanning tunneling microscopy Near-field optical scanning	Fink	460			
microscopy with tunnel-distance regulation	Dürig	478			
Scanning tunneling microscope for the investigation of the growth of metal films on semiconductor					
surfaces Scanning tunneling microscopy of	Berghaus	518			
cleaved semiconductor surfaces Scanning tunneling microscopy of	Feenstra	466			
surface microstructure on rough surfaces	Gimzewski	472			
Squeezable tunneling junctions STM activity at the University of	Hansma	370			
Basel Surface modification with the	Ringger	498			
scanning tunneling microscope Theory of scanning tunneling microscopy and spectroscopy: Penaltrian image and fold	Abraham	492			
Resolution, image and field states, and thin oxide layers Tunneling microscopy from 300 to	Garcia	531			
4.2 K Wide-range, low-operating-voltage,	Elrod	387			
bimorph STM: Application as potientiometer	Muralt	443			