

APL NEWS

NUMBER 8

April 1982

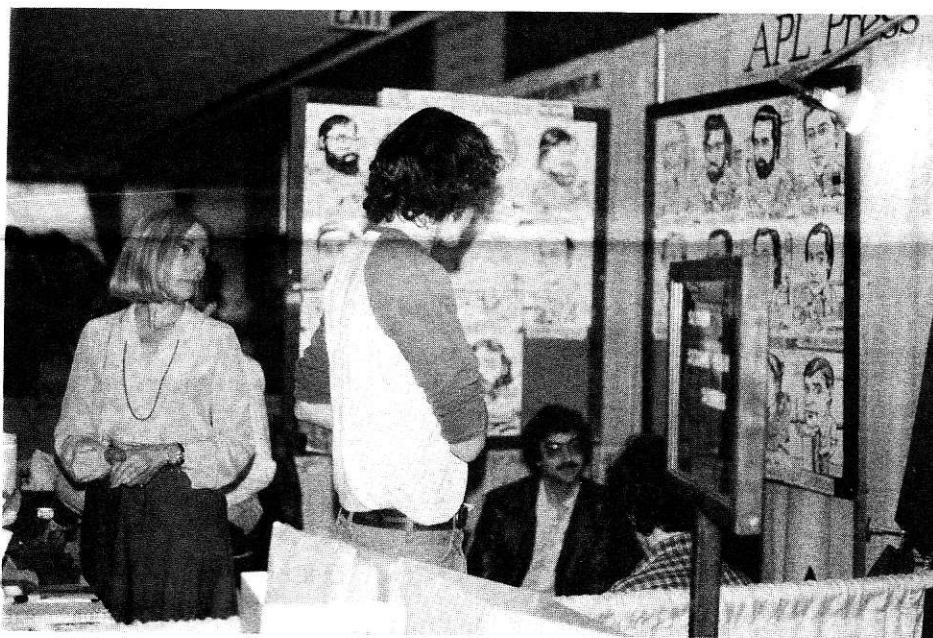


Photo by Arlene Azzarello

APL PRESS features APL Rogues' Gallery at APL 81 Mollie O. Patrick (APL PRESS) and Al McDonnell (left) look on as Pete McDonnell (right) sketches Leslie Goldsmith's (I. P. Sharp Associates) caricature at the APL PRESS booth. Leslie's likeness joined the ranks of the burgeoning "APL character set" visible in the background.

APL PRESS GOES WEST

APL PRESS has moved again and is now alive and well in Palo Alto. APL PRESS continues to offer books and pamphlets on APL—including two new publications, *A Source Book in APL* and *The Four Cube Problem* issued in 1981.

Having survived the trip across the Rockies, we're reviving *APL NEWS*, our occasional publication devoted to announcements and summaries of our publications, information about APL meetings, and brief articles of interest to the APL community. We welcome contributions for *APL NEWS* as well as comments and suggestions regarding APL PRESS publications.

In this issue: Jeff Shallit's *APL PLAY* explores *Slowly Shrinking Squares*. And, as usual, Jeff issues an APL challenge. A new feature—the **GUEST COLUMN**—reveals the wit and wisdom of J. C. L. Guest. **APL CHARACTERS** gives members of the APL community an opportunity to submit photographs of "Great Moments in APL," and **WHAT'S IN A NAME?** challenges you to contribute interesting or amusing alternative uses of the acronym APL. In addition, **APL ANNOUNCEMENTS** details upcoming APL gatherings. Finally, **APL PRESS PUBLICATIONS** provides a description of all current APL PRESS publications and their prices. Enjoy!

NEW FROM APL PRESS

A Source Book in APL—Papers by Adin D. Falkoff · Kenneth E. Iverson 139 pages, ISBN 0-917326-10-5, (paper) \$10.35

This collection of fundamental papers by Adin Falkoff and Ken Iverson provides background material for teachers and students of APL. In a course on APL, the focus is necessarily on the details of the language and its use. Often, there is not enough time to give the purpose for any given rule, nor how one piece of the language relates to the whole. The articles in *A Source Book in APL* deal with the more fundamental issues of the language. These papers appeared in widely scattered sources, over a period of many years, and many are not at all easy to find.

A Source Book in APL contains Iverson's "Formalism in Programming Languages," "Conventions Governing Order of Evaluation," "Algebra as a Language," "Programming Style in APL," "Notation as a Tool of Thought," and "The Inductive Method of Introducing APL." Also included are "The Design of APL" and "The Evolution of APL" by A. D. Falkoff and K. E. Iverson.

E. E. McDonnell's introduction puts the papers in perspective, and also gives some fascinating early history of APL, including how it got its name and having got it, how it almost lost it.


The Four Cube Problem E. E. McDonnell, 27 pages, ISBN 0-917326-11-3, (paper) \$2.25

Some years before Rubik came along with his intriguing cube, there was another cube puzzle—not so difficult to solve, but challenging nonetheless. *The Four Cube Problem* presents two variations of computer solutions to this puzzle.

Our languages influence the way we think, and this is no doubt as

true for programming languages as for natural ones. *The Four Cube Problem* shows how BASIC and APL give different shapes to our perceptions of problem solving. The booklet includes complete and well-documented programs for both solutions, and then provides an analysis of the differences between them.

The BASIC solution won first prize in a programming contest. (The APL program wasn't an entry.) The BASIC solution can't help exemplifying what John Backus calls *the von Neumann bottleneck*. The APL solution, on the other hand, uses no loops, no recursion, and no variables!

The APL solution is written in the style Backus calls *functional programming*. Backus devised functional programming as a way out of the problems he sees with contemporary programming languages. When used with the *direct definition* form devised by Kenneth E. Iverson, functional programming leads to a highly articulated method of program writing. This new kind of programming technology finds a natural home in an APL environment. 

APL PRESS Publications

Starmap P. C. Berry and J. C. Thorstensen, 41 pages, ISBN 0-917326-07-5, (paper) \$3.45

Starmap provides a simple APL model of the solar system. The functions are written so as to make clear the structure of the underlying model by providing formal definitions for a vocabulary of terms and concepts familiar in astronomy. Star tables are included so that the APL functions, together with standard plotting functions, permit a user at an APL terminal to produce a map of the sky as it should appear above any place on Earth, at any time of day, over a considerable range of dates.

APL NEWS

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APL PLAY: Jeff Shallit

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Business Mgr: MollieO Patrick

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Quantity	Title	Each	Total
_____	<i>Algebra—An Algorithmic Treatment</i> , Iverson	\$10.75	_____
_____	<i>Solutions for Algebra</i>	1.75	_____
_____	<i>APL and Insight</i> , Berry et al	5.25	_____
_____	<i>APL in Exposition</i> , Iverson	1.15	_____
_____	<i>Calculus in a New Key</i> , Orth	9.25	_____
_____	<i>Elementary Analysis</i> , Iverson	7.25	_____
_____	<i>The Four Cube Problem</i> , McDonnell	2.25	_____
_____	<i>Introducing APL to Teachers</i> , Iverson	.95	_____
_____	<i>An Introduction to APL for Scientists and Engineers</i> , Iverson	.95	_____
_____	<i>Reference Card</i>	.35	_____
_____	<i>Resistive Circuit Theory</i> , Spence	13.95	_____
_____	<i>A Source Book in APL</i> , Falkoff & Iverson	10.35	_____
_____	<i>Starmap</i> , Berry & Thorstensen	3.45	_____
_____	<i>1980 APL Users Meeting</i> , I. P. Sharp Associates	20.75	_____
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		Sales Tax (California residents only)	_____
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Introducing APL to Teachers Kenneth E. Iverson, 25 pages, ISBN 0-917326-03-2, (paper) \$.95

In introducing the use of a computer to teachers, it is desirable to start as soon as possible with material which they can see is relevant to their topic and their students, and to avoid digressions concerning the computer and computer language. This book presents such an introduction to APL for teachers of high school mathematics. Much of this material should also be suitable for teachers of other topics at other levels, although they would benefit from auxiliary material specifically addressed to the topic of interest.

CONTENTS: *Introduction, Experimentation, Systematic Experimentation, Multiplication and Other Function Tables, Graphs and Bar Charts, Indexing and Characters, Exploring Functions of One Argument, Defining New Functions, Inverse Functions, Summation and Other Functions over a List, Factoring, Linear Expressions, Linear Equations, Tables and Graphs of Linear Functions, Polynomials, Generalizing a Function by Use of Patterns, The Positive Integers, Summation of Series, Power Series, Differencing a Function, Combinations and Binomial Coefficients, Iteration, References to Other Topics, References, Summary of Notation*

An Introduction to APL for Scientists and Engineers Kenneth E. Iverson, 26 pages, ISBN 0-917326-04-0, (paper) \$.95

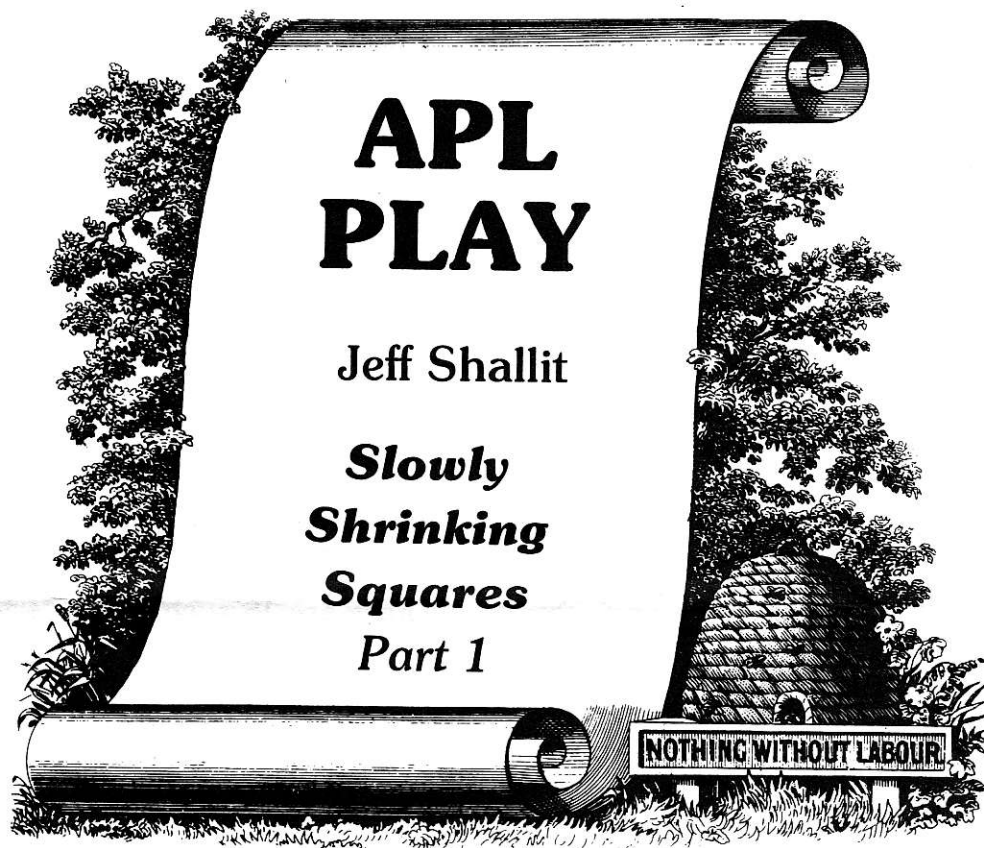
This is an introduction to APL addressed to the scientist or engineer and is designed to exploit any previous acquaintance with the very similar notation of vector algebra. A careful study of these pages should bring readers to the point where they can begin to make serious use of APL in some topic of interest to them. An APL terminal, while not absolutely essential, adds greatly to the depth and interest of the work.

The pleasure and efficiency of learning by experimentation is not sufficiently appreciated, and the first six pages are designed to encourage this type of use of a terminal in learning APL. Two pages are devoted to a variety of identities and proofs expressed in APL.

APL in Exposition Kenneth E. Iverson, 61 pages, ISBN 0-917326-02-4, (paper) \$1.15

This book illustrates the use of APL for exposition in the teaching of various topics. The first section presents the characteristics of the language, and each of the other sections illustrates its use in some discipline.

TOPICS: *Elementary Algebra, Coordinate Geometry and Statics, Finite Differences and the Calculus, Logic, Sets, Electric Circuits, The Computer*



APL PLAY

Jeff Shallit

Slowly Shrinking Squares Part 1

Consider a 2-by-2 matrix M with nonnegative integer entries. We can form a new matrix by taking the absolute values of the difference between adjacent elements. For example:

$T: |w - \theta \text{ } \text{ } \text{ } \omega$
 M

```
13  7
30 21
      T M
  6 14
17  9
```

You may be surprised to find that successive applications of T seem to reduce any matrix very quickly to 2 2p0. For the matrix M above, it takes only four applications of T .

```
      T T T T M
0  0
0  0
```

Why do repeated applications of T eventually "annihilate" (send to 0) any matrix? Let's look at what happens to the maximum element of the matrix M when we apply T . We can assume that the maximum element is $M[1;1]$ (why?). Then after $M \leftarrow T M$, we see that $M[1;1]$ has been replaced by $|M[1;1] - M[1;2]|$. If $M[1;2] \neq 0$, then the maximum element has *decreased* in value.

But what if $M[1;2] = 0$? In that case, if $M[2;2] \neq 0$, it will take two applications of T to decrease $M[1;1]$. In fact, if $M[1;1]$ is nonzero and all the other elements of M are 0, it may require four applications of T to decrease the maximum element. H. Karloff and D. Shmoys have suggested this approach.

```
M ← 2 2p1 0 0 0
```


MATHEMATICS

A coherent sequence in the central topics of elementary mathematics, bridging the years from high school through first year college:

Algebra: An Algorithmic Treatment K. E. Iverson, 361 pages, ISBN 0-917326-09-1, (paper) \$10.75

Solutions to Iverson's Algebra J. A. Iverson, 42 pages, ISBN 0-917326-06-7, (paper) \$1.75

Elementary Analysis K. E. Iverson, 218 pages, ISBN 0-917326-01-6, (paper) \$7.25

Calculus in a New Key D. L. Orth, 286 pages, ISBN 0-917326-05-9, (paper) \$9.25

APL is used as the exclusive mathematical notation throughout—in exposition, in proofs, and in exercises. This notation is very close to conventional algebra but is simpler and more general, and is directly executable on an APL computer exactly as written. Although an APL computer is in no way essential, it is a useful adjunct, encouraging an experimental approach to the exploration of mathematical topics.

The simplicity and precision of APL makes possible an algorithmic treatment—every function introduced is defined in terms of at least one explicit construction. Even if a computer is not available, the algorithmic treatment presents the essentials of computer programming in a mathematical light, i.e., as the precise definition and application of functions.

Since APL is a straightforward and precise notation, it has been possible to place a greater than normal burden on the exercises. This is reflected in their number and variety, and in the fact that interesting and nontrivial results are developed in them. The extensive exercises make it possible to foster a great deal of independent work on the part of the students. Finally, the exercises can be used effectively in courses devoted to teaching the APL language itself.

Because APL applies to vectors and matrices (or *lists* and *tables*, as they are called in the algebra text) in a simple and uniform manner, tables are used extensively to give a graphic view of functions by displaying the patterns produced by applying them to vectors. They are also used to clarify topics which use vectors directly, such as linear functions and polynomials.

The notation provides a simple explicit means for function definition, and the notion of *function* is emphasized in all three texts. The *Elementary Analysis* and *Calculus in a New Key* texts employ a particularly simple and effective form (that covers recursive definition) called *direct definition*.

$T \ M$

1 0
1 0

$T \ T \ M$

1 0
0 1

$T \ T \ T \ M$

1 1
1 1

$T \ T \ T \ T \ M$

0 0
0 0

Four applications of T suffice to decrease the maximum element in value. Suppose the matrix we start with, M , has a maximum element of N . Then, after at most $4 \times N$ applications of T , we will have annihilated M .

Actually, far fewer applications of T are usually needed. Consider the 2-by-2 matrices with each entry less than 10. There are 16 such matrices for which 8 applications of T are needed. If we consider matrices that are rotations or reversals of each other to be the same, then there are only 2 such matrices. One is

0 1
9 4

Can you find the other one?

To show how few applications of T are usually needed, 50,000 2-by-2 matrices were examined with elements having randomly chosen values between 1 and $1E16$. Here are the results:

Applications of T required	Number of occurrences	Percent
4	24893	49.8
5	8898	17.8
6	11436	22.9
7	3139	6.3
8	1175	2.3
9	307	.6
10	108	.2
11	34	.1
12	6	<.1
13	3	<.1
15	1	<.1

You should now try to find matrices that require many applications of T to be annihilated. Let's call them "slowly shrinking squares."

In the next installment of APL PLAY, we will exhibit a 2-by-2 matrix with elements having values of less than 400 which is annihilated by 17 applications of T . We'll also show a clever solution by Elwyn Berlekamp, and we'll discuss other approaches to slowly shrinking squares.

Thanks to Blair Gibb for suggesting this problem.

Please send your APL PLAY answers to Jeff Shallit at Department of Mathematics, Evans Hall, University of California, Berkeley, CA 94720.

NOTE FROM THE PUBLISHER:

It is with a mixture of embarrassment and relief that we report on the results of the APL PLAY item that appeared in

the special edition of *APL NEWS* distributed at APL 81 in San Francisco.

The embarrassment comes about as follows: as the special edition was being put together at the last minute, I received a message from Jeff Shallit, our APL PLAY editor. (By the way, Jeff was at APL 81. If you were there, you may have seen him when he gave his paper on "Infinite Arrays and Diagonalization," although more likely you saw him as he ran the T-shirt concession.) This is the way we printed the contents of Jeff's "message":

APL PLAY: Our *APL Play* editor asks you to find two expressions, each six characters or less, the first to produce the vector 0 0 1 0 1, and the second to produce the vector 0 1 0 0 1.

When I saw Jeff at the conference, I thanked him for having submitted this puzzle at the last minute. Jeff's face dropped, and he said, "What do you mean? That was no contribution! I was looking for help! I was trying to build a list of expressions for all possible 5-bit Boolean patterns, and those two had me stumped!"

Well, the relief I feel is because several readers submitted solutions to the puzzle. The keen contestants are Bob Wolfson, of Upjohn Co. in Kalamazoo, MI, Tom Springall, of Southport, CT, Stephen D. Lewis and Alan Sharpe, of the University of Alberta, and Gerald W. Hoencke of Lockheed Missiles and Space Co., Sunnyvale, CA. We now have many solutions to the problems, in both 0-origin and 1-origin. Here they are:

0 0 1 0 1 in 0-origin: 0,2|14 [Wolfson]
 0<-15 [Springall]
 1≤-15 [Hoencke]
 2|4φ15 [Hoencke]

0 0 1 0 1 in 1-origin:
 φ>15 [Wolfson, Lewis & Sharpe, Hoencke]
 1<-15 [Springall, Lewis & Sharpe]
 2≤-15 [Lewis & Sharpe]
 1<÷15 [Lewis & Sharpe]

0 1 0 0 1 in 0-origin: 1=3|15 [Wolfson]
 2|3|15 [Springall]
 1=5p13 [Lewis & Sharpe]
 2|5p13 [Lewis & Sharpe]
 2|2φ15 [Lewis & Sharpe]
 2T3T15 [Lewis & Sharpe]
 1=3T15 [Lewis & Sharpe]

The last two really don't differ significantly from the first two. Springall's is particularly nice.

0 1 0 0 1 in 1-origin:
 1φ>15 [Wolfson, Lewis & Sharpe]
 2=3|15 [Springall, Hoencke]
 2=5p13 [Lewis & Sharpe, Hoencke]
 2=3T15 [Lewis & Sharpe]

The last isn't essentially different from the second.

Congratulations to all the contestants, and thanks for extricating us from our embarrassing hole.

APL PRESS Publications

1980 APL Users Meeting Sponsored by I. P. Sharp Associates Limited, 648 pages, (paper) \$20.75

These proceedings of the conference in Toronto include more than fifty papers covering topics in each of the following sessions: *Managing APL Resources; APL for Financial Applications; Applications in the Aviation Industry; International Networks for Corporate Communications; APL for Planning, Forecasting, and Economics; Personnel and Record Handling Systems; In-house APL Time-sharing Services; APL for Decision Support Systems; Private Data Bases; A Derivative Algorithm for APL; APL Techniques and Programming Tools; Specialized APL Applications; Applications in the Energy Industry; Teaching APL; Data Manipulation and Display Techniques; Arrays; Electronic Mail; Event Handling; Forecasting and Econometric Modeling; Shared Variables; Record Handling Systems; The Package Data-Type.*

Resistive Circuit Theory R. L. Spence, 279 pages, (paper) \$13.95

This freshman level introduction to circuit theory is limited to resistive circuits (linear and nonlinear) and employs APL as the mathematical notation. The executability of APL permits a student to experiment with a wide variety of circuits, and thereby gain insight into circuit behavior and the structures of circuit theory. Circuit topology is described by the node-branch incidence matrix; APL makes possible simple explicit expressions for conductance and impedance matrices, and for Kirchhoff's laws.

CHAPTERS: *Circuit Design; Measurement and Modeling of 2-Terminal Components; Component Interconnection; Sources and Power; Signals; Measurement and Modeling of 3-Terminal Components; Topology; Circuit Description; Linear Circuit Analysis; Linear Circuit Properties; Nonlinear Circuit Analysis; Small Signal Behavior of Nonlinear Circuits*

APL and Insight P. Berry, G. Bartoli, C. Dell'Aquila, V. Spadavecchia, 89 pages, ISBN 0-917326-08-3 \$5.25

This book discusses the use of APL to represent concepts in teaching. It includes examples drawn from elementary physics and computer science, and discusses the programming style appropriate to use in teaching. The main themes are that the key concepts of serious disciplines can be represented as functions; that APL permits a readable formal definition of a function and a means of executing it; and that it is possible to write programs so that they correspond directly to the functional concepts of a discipline.

GUEST COLUMN

The memories I wrote about in "APL Blossom Time" were stirred by the prospect of seeing, at APL 81, many friends that I hadn't seen for a long time. The melody was suggested by a song that was popular on KFAT, the stereo FM voice of Gilroy, Garlic Capital of the World. I put in a lot of grave-shift hours during the latter part of 1981, and KFAT was my early morning companion. (I work at IBM's Santa Teresa Laboratory which is within sniffing distance of Gilroy.)

One of the most popular songs on KFAT at the time was a takeoff on "The Battle of New Orleans" by Hank Williams, Jr. and a lead singer whose name I never learned. He had apparently worked for both Hank, Sr. and Hank, Jr., and the song was a hilarious account of his experiences. The combination of nostalgia, a catchy tune, and the discovery that Jim Brown was a guitar virtuoso did it. My memories took the form of the song we all sang at APL 81. I feel very grateful to the performers—whom some now call the APL Corral—who did such an outstanding job of presenting it on stage.

—J. C. L. Guest

MICRO APL

Both APL 81 and the 7th West Coast Computer Faire in San Francisco featured numerous demonstrations of full-blown APL systems on microcomputers. "Where can I get APL on a micro?" was the question visitors to the APL PRESS exhibit at the Computer Faire last month most frequently asked us.

There are too many manufacturers currently offering APL for personal computing for us to list them in *APL NEWS*. *APL Micro Report* by Mokurai Cherlin offers a directory of hardware and software manufacturers, and also reviews APL software systems for micros. *APL Micro Report* is available for \$26 U.S. from APL Market Place, P.O. Box 5314, Mt. Carmel, CT 06518.

APL PRESS Publications

Reference Card \$.35 • Complete summary of APLSV on a wallet-sized plastic card

APL Blossom Time

A nostalgic reminiscence of the early days of APL, remembered to the tune of *The Battle of New Orleans*.

Back in the old days, in 1962,
A feller named Ken Iverson decided what to do.
He gathered all the papers he'd been writing for a spell
And he put them in a little book and called it APL.

Well. . .

He got him a jot and he got him a ravel
And he revved his compression up as high as she could go
And he did some reduction and he did some expansion
And he sheltered all his numbers with a ceiling and a flo'.

Now Sussenguth and Falkoff, they thought it would be fine
To use the new notation to describe the product line.
They got with Dr. Iverson and went behind the scenes
And wrote a clear description of a batch of new machines.

Well. . .

They wrote down dots and they wrote down squiggles
And they wrote down symbols that they didn't even know
And they wrote down questions when they didn't know the answers
And they made the *Systems Journal* in nineteen sixty-fo'.

Now writing dots and squiggles is a mighty pleasant task
But it doesn't answer questions that a lot of people ask.
Ken needed an interpreter for folks who couldn't read
So he hiked to Californ-i-a to talk to Larry Breed.

Oh, he got Larry Breed and he got Phil Abrams
And they started coding FORTRAN just as fast as they could go
And they punched up cards and ran them through the reader
In Stanford, Palo Alto, on the seventy ninety oh.

Well a FORTRAN batch interpreter's a mighty awesome thing
But while it hums a pretty tune it doesn't really sing.
The thing that we all had to have to make our lives sublime
Was an interactive program that would let us share the time.

Oh, they got Roger Moore and they got Dick Lathwell,
And they got Gene McDonnell with his carets and his sticks,
And you should've heard the uproar in the Hudson River valley
When they saved the first *CLEANSPEACE* in 1966.

Well, when Al Rose saw this he took a little ride
In a big station wagon with a type ball by his side.
He did a lot of teaching and he had a lot of fun
With an old, bent, beat-up 2741.

Oh, it typed out stars and it typed out circles
And it twisted and it wiggled just like a living thing.
Al fed it a tape when he couldn't get a phone line
And it purred like a tiger with its trainer in the ring.

Now, there's much more to the story, but I just don't have the time
(And I doubt you have the patience) for an even longer rhyme.
So I'm ending this first chapter of the tale I hope to tell
Of how Iverson's notation blossomed into APL.

So. . .

Keep writing *nands* when you're not writing *neithers*,
And point with an arrow to the place you want to be,
But don't forget to bless those early APL sources
Who preserved the little seedling that became an APL tree.

Dedicated to the pioneers of APL with respect and affection by

J. C. L. Guest

APL ANNOUNCEMENTS

APL 82—Heidelberg
July 26-30, 1982

Sponsored by APL-Club-Germany and Deutsches Krebsforschungszentrum in cooperation with ACM's SIGAPL, the German Association for Informatics (GI), and the Gesellschaft für Mathematik, Ökonomie und Operations Research (GMOEOR), APL 82 will feature technical papers covering APL applications, implementations, education, interfaces, data bases, and APL's use in research.

For further information, contact: Ken Waller, APL 82 Conference General Chairman, Sybron Corporation, 1100 Midtown Tower, Rochester, NY 14604 or Dr. Wolfgang Janko, APL 82 Program Chairman, Universität Karlsruhe, Institut für Betriebswirtschaftslehre-Unternehmensführung, Postfach 6380, 7500 Karlsruhe 1, West Germany.

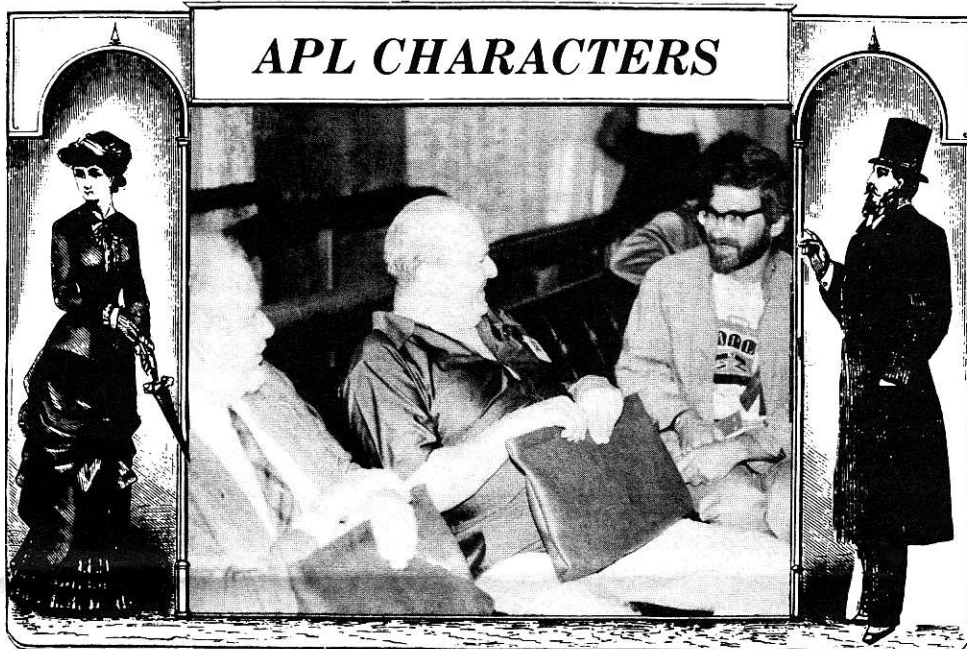
1982 APL Users Meeting—Toronto October 4-6, 1982

Hosted by I. P. Sharp Associates Limited, the 1982 APL Users Meeting will be held at the Westin Hotel in Toronto. The program features three days of workshops on introducing APL, managing APL, and APL training. There will also be technical sessions treating topics such as designing secure APL systems, measurement techniques, and efficiency. Application sessions will cover APL in international banking, budgeting systems, and decision support systems. In addition to the scheduled papers and workshops, Sunday, October 3, has been reserved for courses introducing APL to financial planners, statisticians, economists, managers, and actuaries.

For further information, or for a copy of the 1982 APL Users Meeting poster, contact: Rosanne Wild, I. P. Sharp Associates Limited, Box 418, Exchange Tower, 2 First Canadian Place, Toronto, Ontario M5X 1E3, Phone (416) 364-5361.

APL83—Washington, D.C. April 10-13, 1983

The Program Chairman for SIGAPL's APL83 has issued a call for papers in all aspects of APL including commercial and scientific applications, language features, implementations, interfaces with other systems, tutorials, using APL in education, teaching APL, interactions with other lan-



J. C. L. Guest at last! Caught in an unguarded moment at APL 81, Larry Breed (right), the elusive J. C. L. Guest (center), and Gene McDonnell (left) remember the halcyon days when Iverson notation blossomed into APL.*

**a.k.a. Mike Montalbano, IBM, Santa Teresa*

Photo by Arlene Azzarello

As all APL-nuts know, one of the things which distinguishes APL from other programming languages is its unique character set. There is another set of characters involved with APL—the people who've worked on the design and implementation of the language over the years. APL NEWS would like to feature "historic" photos of these APL characters in future issues.

We invite you to submit photos—the older the better—for our APL CHARACTERS column. We'd like to see black and white prints showing "great moments in APL." It would help if you identify the APL characters in the picture and provide a brief description of the story behind the photo (location, circumstances, date, photographer, and so on).

We'll return your photos whether or not we publish them.

To launch our feature, we offer a picture from recent APL history. Attendees of APL 81's banquet at the San Francisco Hilton will recall the enthusiastic rendering of a new tune from the pen of the legendary J. C. L. Guest. With the assistance of Peter Wooster's (I. P. Sharp Associates) overhead transparencies, Larry Breed, Jim Brown, John Bunda, Diana Dlouhy, Al O'Hara, and Rob Skinner (all currently with IBM) led the gathering in singing a new hit called "APL Blossom Time." The hall resounded with laughter during this reminiscence of the early days of APL, and J. C. L. Guest entertained us in style once again.



guages, programming, and APL as a tool for management.

Drafts of full papers (four copies) should be submitted to the Program Chairman for review according to the following schedule: drafts submitted for review, June 21, 1982; authors notified of acceptance, Sept. 27, 1982; camera-ready copy due for

proceedings, Dec. 6, 1982.

For further information contact: Tom Puckett, APL83 Program Chairman, 2000 Wyoming, Las Cruces, NM 88001, Phone (505) 522-6017 or Don Link, APL83 Conference General Chairman, STSC, 2115 East Jefferson Street, Rockville, MD 20852, Phone (301) 984-5333.



WHAT'S IN A NAME?

All APL aficionados know that APL is the acronym for **A Programming Language**. There have, of course, been rumors of a move afoot amongst the hardcore advocates of APL to change its name to TPL, or simply TL—as in **The Programming Language**, or just **The Language**. Nevertheless, APL continues to enjoy a name both within and without the computing community (pun[s] possibly intended).

As Eugene McDonnell's introduc-

tion to *A Source Book in APL* notes, APL has had a number of meanings in a number of fields. In addition to McDonnell's chronicling of APL's significance to Johns Hopkins University, George Dodd, and the shipping industry, we've lately become aware of some other uses of the acronym. Paul Berry discovered mention of the "American Patriots' League" in a *Wonder Woman* comic some time back. Jeff Shallit reports APL representing the Armenian Presbyterian League in Philadelphia. And, Arlene Azzarello was re-

cently surprised to find APL standing for **All-Purpose Linotype** in Marshall Lee's *Bookmaking*, a publishing industry reference having nothing to do with gambling.

We invite you to submit other current uses of "APL." The reward is that we'll print the first report we receive of each unique usage along with the name of the person who submits it. Watch for **WHAT'S IN A NAME?** in upcoming issues of *APL NEWS* to see just how pervasive APL really is!



APL EDUCATION

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