Upson's Familiar Quotations

Third Edition
(1974 - 1982)

Hugh Nicks, Editor-in-Chief
Al Gaulle, Historical Consultant

TR 82-518

September 1982

Computer Science Department
Cornell University
Ithaca, New York 14853

Upson's Familiar Quotations

Third Edition
(1974 - 1982)

Hugh Nicks, Editor-in-Chief
Al Gaulle, Historical Consultant

TR 82-518

September 1982

Abstract

This report is a compilation of several hundred examples of context-free language and very irregular expressions. Contributions were submitted over the past several years by numerous computer science graduate students who collected these now immortal words in classes and seminars. We wish to express our gratitude to the faculty, guest lecturers, and students who provided the bulk of this work.

This work entirely nonsupported by National Science Foundation grant UFQ-82-256-4934.

Table of Contents

Table of Contents

Table of Contents

Computer Science

Greg Andrews

75 Sep 03	(On the banker's algorithm:) There are parallel paths of confusion through it.
75 Oct 03	In six months people figure out how to use their machines until they're overused. That's called "enhancement."
75 Oct 08	(On the 613 project:) We've tried to make it as painless as possible, but it will be painful.
75 Oct 20	(On the midterm:) All I know is it's a 50 point exam, and McGraw got a 35 and beat me by 5 points.
75 Oct 31	This is a string of stack snack shops -- uhmm -- snap shots.
75 Nov 03	If the last page of the priority list is three, we take the threeth page.
75 Nov 03	Let's just throw up a few distinct partitions of memory.
75 Nov 07	(On queuing models:) I'm not going to go through all that crud -- I don't understand it anyway.
75 Dec 05	Everything has to be written down and not in my head, because I don't know my head from a hole in the wall.
76 Sep 20	There are two ways to share data. The first is that you don't. You either share it or you don't, if you know what I mean. No, you don't.
76 Nov 17	There's nothing profound here, and that may be true of the whole lecture.
76 Nov 19	This is important, but the stuff I understand is completely irrelevant.
77 Sep 05	... then there are idiots like myself who try to hang on.
77 Sep 23	The Dining Philosophers is an interesting problem posed by Dijkstra. Many interesting problems with no practical application were posed by Dijkstra.
77 Sep 30	I'll show you some syntax and you'll go "yuck" -- and that's the state of the art.
78 Sep 28	It would sure be nice to not need another mechanism for every problem.
78 Sep 28	This room is a monitor. One person is active and everybody else is asleep.
78 Oct 20	I had a nice clean solution in my paper until the referee told me it wasn't legal.
78 Oct 25	Gries, you're a sweet rat.
78 Nov 01	Student: Excuse me, I've been a little confused lately.
	Andrews: Like about 23 years?
78 Dec 01	There's no way I can hope to get done today, so I suspect I'll dribble over to Monday.
78 Dec 06	It's amazing how much you can do lecturing, when you realize how little there is.
78 Dec 08	There's a mistake in the notes from the last lecture -- all but the following line is incorrect.

Becky Bennett

81 Sep 09	The computer is getting constipated.

Corky Cartwright

76 Sep 22	This is ambiguous, but I'll try to resolve the ambiguity with more prose.
77 May 04	I sort of have the minimal knowledge of hardware you can have and come out of Stanford.
77 Sep 13	I shouldn't even mention keypunches in connection with LISP. That's heresy.
77 Sep 15	Can you put my obfuscation into words?
77 Sep 20	I claim that every other possibility is impossible.
77 Oct 11	Is that a question? I keep hearing these grunts.
77 Oct 13	Let's get on quickly to the handwaving we can do.
78 Sep 13	Computer scientists are so accustomed to reality that, when they are given the opportunity to create an illusion, they won't.
78 Sep 18	After we solve the reliable software problem, we must solve the reliable lecture problem.
78 Sep 18	Programming languages should not be subject to whimsical variations in semantics that depend on the mood of the person who wrote the compiler.
78 Sep 21	Gries: Why don't you just show us the whole slide?
	Corky: Can't quarrel with God.
78 Oct 25	We should come up with programming languages that don't require a telephone book to describe their little pathologies.
78 Nov 06	Outside this expression language, APL sucks.
78 Nov 22	A program is a comment, a means for getting from a precondition to what you want.
79 Oct 24	(On SNOBOL:) I'm just someone that looks on from the outside and grimaces.
79 Oct 29	It's hard to say what an elegant SNOBOL program is.
79 Oct 29	This is a real *whiz bang* program.
79 Oct 29	I would consider that obscene programming, even in SNOBOL.
79 Nov 12	Sound like NA? Let's get away from it and go on to another topic.

Bob Constable

75 Oct 15	If you read the proof in Hopcroft and Ullman, and you'll need to read it after this ...
77 Jan 26	The only way false can be true is if ...
77 Mar 28	Let me change the theorem to one I can actually prove.
78 Feb 17	Now we only have ten minutes left for hard science. But that's probably enough ...
78 Feb 22	... a really kinky semantics that would support the slickest proof rules ...
78 Mar 27	Student: Number 6 doesn't make sense to me.
	Constable: Well, let's write it out bigger.
78 Mar 31	What's going to be amazing is that next time I'll be able to prove -- that itself will be amazing -- ...
78 Apr 23	Let me back up to where I believed it.
78 Apr 25	This syntactic sugar is looking terrible -- syntactic pepper.

78 May 11 Stanford gobbled up the really good women.

79 Feb 09 We are experimenting with constructive set theory, and so may go wrong.

79 Feb 23 One reason that concept is peculiar is that in mathematics one always deals with extensional objects, and thus never discusses them, while in computer science one rarely deals with extensional objects, and thus never discusses them.

80 Jan 28 This wealth of knowledge will get us confused.

80 Jan 30 We want to lift ourselves out of the primitive recursive muck.

80 Feb 08 (On the Axiom of Choice in constructive mathematics:) It has the same status as in classical math. You can worry about it.

80 Feb 08 Truth and computation are identical.

80 Feb 13 I don't think I've ever written a RAM program.

80 Feb 18 Sometimes the empty set causes me pause.

80 Feb 27 "To be or not to be" is not an algorithm.

80 Apr 07 Nothing makes sense in the last five minutes.

80 Apr 16 Let's do a pictorial proof again.

80 Oct 13 We are able to remove logic completely.

80 Nov 04 Student: I've never seen a computer that implements the integers.

Constable: Unfortunately, they're not building them the way they ought to.

81 May 15 Well, it looks like today's lecture is going to be more confused than normal.

Dick Conway

75 Feb 10 PL/19 might have this form, Dijkstra be damned,...

75 Sep 02 This is unreasonable, but I've been doing it that way for a long time.

75 Sep 23 (On relational data bases:) I don't know anything about the mathematical basis of it, but I've read it so many times I think I can reproduce it verbatim.

75 Oct 16 (On JCL:) I've always been able to find some grad student who has been able to understand all this, and I've never had to learn any of it.

75 Oct 21 This is all done for you by mirrors. I think it's kind of cute.

75 Oct 28 RPG is a shame.

76 Oct 07 For anybody else that'd be silly, but not for Dijkstra.

76 Oct 07 (To Gries:) You're cheating, but we still haven't figured out how.

77 Sep 13 This is instantaneous, which is pretty fast.

80 May 09 I am not a chronic dumper on IBM, but here they need it three colors.

80 May 12 I can't quit without telling you about the lunatic fringe of Information Retrieval.

80 May 12 I wouldn't want to be quoted, but I can cover all the interesting facts of 635 in 1/2-hour.

80 Sep 23 Don't be seduced by a lovely query language.

80 Oct 30 Undo is an abomination.

80 Oct 30 Try that on your old IMS system.

80 Nov 11 Ullman describes fourteen of the basic seven.

80 Nov 11	(On COBOL:) Its procedures are absolutely lousy.
80 Nov 13	(On IMS:) Protects against small children and honest men.
80 Nov 20	(On reading chapter 5 of Ullman:) If you're really masochistic, go ahead.

Alan Demers

77 Sep 28	The key to this is that -- is that -- oh, my ...
78 Feb 14	It's not as good a semi-colon as PL/I.
78 Mar 07	Student: Constants do matter in the real world.
	Demers: Well, especially since infinity here is 4800.
78 Mar 19	Jesus H. Bald Christ!
78 Apr 20	I don't want to sound like I'm avoiding answering your question; I just want to avoid answering your question.
78 Apr 20	Jesus! How do you give a talk like this with Reynolds in the audience?
78 Apr 27	One reason you might want to say, "Why not?", or rather one reason you might want to say, "Why?", or actually, a reason you'd say "not."
78 Sep 13	Let me suppose, and this is a big assumption -- it gets an asterisk --, ...
78 Sep 15	Student: Isn't that an inspired construction?
	Demers: Oh, it is. When I thought of it I was insufferably proud of myself for hours.
78 Sep 18	Let me say what I'm not going to do at the moment.
78 Sep 28	After looking at that for some time, the i and the i are not the same i, are they?
78 Sep 29	Not only is it not obvious, I claim in general it's false.
78 Oct 02	That's in Knuth, volume tree.
78 Oct 04	By the way, if all you people understand this proof it will all but double the number of people in the world that do.
78 Oct 04	When I do it, it comes out that way. When Tarjan does it, it comes out that way. So proof by intimidation.
78 Oct 16	Let's take this whole section of the board and write a big "dubito" over it.
78 Oct 16	The precise definition is motivated by that bow tie.
78 Oct 16	The reason I can't say that is because it's not true.
78 Nov 06	I sure wish I had a snappy comeback.
78 Nov 06	It's a commutative ring, so I can do a whole lot of cavalier things.
78 Nov 08	It's not in general obvious how to do it, but I was hoping that would slip by.
78 Nov 13	This may be impossible. At least it's hard. I don't know how to do it.
78 Nov 15	When I divide b by n what do I get? Well, I get b over n, obviously.
78 Nov 17	A k-tape non-deterministic Turing machine is this umpteen-tuple.
78 Nov 17	Demers: Here is the promised Fast Fourier Transform example. It worked for the two examples I tried, so I'm fairly sure it's correct.
	Student: Proof by exhaustive testing?
	Demers: Well, it sure exhausted me.
78 Nov 17	No, I did not prove it correct. I sat at a terminal at midnight and fiddled with it until it worked.

78 Nov 20	It depends on something that I really don't want to get into -- it depends on honesty.
78 Nov 20	It just wouldn't do you any good to apply the pumping lemma to the 168 -- it doesn't stay up that long.
78 Dec 01	It spaces me out every time I look at it.
78 Dec 06	I can write the expression down in polynomial space and time -- in fact, I'm going to write it down in about three seconds on the board here.
79 Feb 22	You put handcuffs on yourself and try to swim the English Channel or something.
79 Mar 27	Demers: Why did we switch from call-by-reference to call-by-value, when we switched from procedures to functions? Donahue: I don't know. Demers: I guess that's as good an answer as any.
79 Aug 02	I don't want to remove temptation from malicious people. I want them to be malicious and then have the pleasure of killing them.
80 Jan 21	You don't solve NP-complete problems in your compiler.
80 Jan 23	I think right linear.
80 Feb 06	PL/I is a disaster, right?
80 Feb 20	The Algol-68 phenomemon is a little bizarre.
80 Apr 02	(After Bowen's annual spring haircut:) That is really far out. I don't know if I should deliver a eulogy.
80 Apr 09	(After using both 'adr' and 'addr' to abbreviate 'address':) "d"s are idempotent.
80 Apr 16	People who generate self-modifying code are in a state of mortal sin.
80 Aug 06	In the back of my mind is an LSI-11.
80 Nov 17	You can't lose tenure. You can't get it either.
80 Nov 24	Bliss is frightening.
81 Sep 25	"I'm not married but I have a medical excuse."
81 Oct 14	Gee, bottoms are getting bigger and bigger...
82 Jan 30	I'm explaining this as though it were a well-known technique, but in fact I just invented it.
82 Feb 03	It would be a tremendous help if I could talk and write at the same time.
82 Feb 03	There exists an alpha such that ... God!
82 Feb 03	We are just about at the end, so I can bullshit now.
82 Feb 15	I'm not Bob Constable up here, I'm perfectly willing to consider functions as ordered pairs.
82 Feb 24	Can I erase this board? Obviously - I've just done it.
82 Mar 03	Demers: I *don't* say 'gack' in lecture all the time! Student: Yes you do, and 'sigh.' Demers: Oh, I do? Sigh...
82 Mar 24	This language also has garbage commands -- that is guarded commands...Oh no! I didn't say that.

John Dennis

74 Mar 27	Chebyshev, I'm sure, wouldn't do something false.
74 Apr 01	(On teaching induction to freshmen:) One year, one of the bachelor professors got a girl to understand it, and he married her.
74 Apr 03	(On the Remes algorithm:) I'm not sure if it's gonna be a math lecture or a religious experience.
74 Apr 03	I'm gonna say this -- I hope it's true.
74 Apr 19	... sequences that go off to hell in a wheelbarrow.
74 Apr 29	If that were clear, then I'd be very offended.
74 May 03	I guess I'm kind of a numerical analytic Eichmann. If the guy says "fit it with a line," I'll fit it with a line.
74 Sep 30	I'm just gonna, as my old Texas analysis teacher used to say, jump on it and ride it till it falls.
74 Dec 02	Suppose that God or someone high up in government told me ...

Jim Donahue

77 Feb 02	The proof took five blackboards, so the method is worthless.
77 Feb 14	I can fill up blackboards in a great hurry. If you can fill up blackboards very quickly, then it must be interesting.
77 Feb 16	Eventually we'll do more than just push bottoms around.
77 Mar 14	This is sort of denotational bootcamp.
77 Mar 16	After a while, if your mind gets warped enough, you tend to think in these terms.
78 Sep 28	Take a type -- now I'm real dumb in doing this ...
79 Jan 23	Why are we doing this? Because there are some neat theorems to be proved at the end of this course.
79 Jan 25	You really wouldn't want to work out the successor of 25.
79 Feb 01	I don't have a copy of this. I've never even read it, but it gets referenced a lot.
79 Feb 06	Why am I using complete lattices? Well, it's what I was brought up on.
79 Feb 08	It turns out that restricting yourself to continuous functions is no great act of heroism.
79 Feb 27	I'll call this phi and psi again just to be confusing.
79 Feb 27	You can easily show that any space you can imagine is buried within D-infinity somewhere.
79 Mar 01	There are infinitely many bottoms around.
79 Mar 01	This is probably the most influential paper in semantics that's never been published.
79 Mar 06	(On "Admissibility of Fixed Point Inductions in First Order Logic of Typed Theories," by S. Igarashi:) This report is about as impenetrable as its title.
79 Mar 13	By the time you read the details, you should either be completely lost, or completely understand what is going on.
79 Mar 13	We haven't said anything and we've said everything.
79 Mar 13	Well, I'm not going to talk about string quartets today.

79 Mar 27	He probably wanted to get to the point where he could define PL/I on one side of a 3x5 card.
79 Apr 17	I would like to say we've proven such a theorem for Russell, but Alan's been awfully slow about it.
79 Apr 24	It's got plus and times and all that other neat stuff.
79 May 03	If you spend a lot of time building up the mathematics of the model, by the time you're done, you're tired.
79 Oct 09	A terminal node is not one that is about to die.
79 Oct 09	Its predecessor is somewhere off in the great beyond.
81 Mar 02	Gads, this is ugly.

Diane Duke

78 Mar 01	The water's being shut off in an hour, so you'd better go now, or forever hold your, uh, piece.
78 Dec 13	We're trying very hard to make sure that this Christmas tree isn't anti-semantic.
81 May 21	(Referring to the fact that Becky and Geri had just finished their exams in CS100 and 101) All the little testies are now overies.
81 May 21	Every time Michelle gets drunk I have to wash her pants.
81 May 21	Michelle, get your hands off me!
81 Aug 23	Michelle, aren't your pants off yet?
81 Nov 13	(After reading the review of Yeoman:) I hope she [the reviewer] never tries to take any CS courses.

John Gilbert

81 May 21	Becky: Can you guarantee I'll get a B minus?
	Gilbert: What kind of an arrangement did you have in mind?

David Gries

76 Sep 23	(To Salton:) Gerry, when was the last time you wrote a program?
76 Sep 30	Hopefully -- I'm David Gries from Cornell.
76 Oct 07	Conway: Half a proof might be very long but not very helpful.
	Gries: Yes, and a whole proof might be wrong.
77 Mar 31	Yes. No. Not really. Probably there is, but I'd have to think about it.
77 Nov 03	Gries: Could you explain where the term "modal" comes from?
	Constable: No.
	Gries: Thank you.
78 Mar 03	(To first-year students:) The only reason we're here and you're there is that we're older than you.

78 Oct 17 Student: In the recursive Towers of Hanoi program, how do you prove that you never put a disk on a smaller disk?

Gries: You prove it by recursion.

Student: You prove it by recursion?

Gries: Sure, you just say, "By recursion."

79 Mar 26 Student: Could you lower the blinds, please?

Gries: Are you sure it's not my brilliance that's blinding you?

79 Apr 25 Gries: ... "dereferencing" and "ref-referencing"? ... "anti-dereferencing"? ...

Student: How about "referencing"?

Gries: That's too simple.

79 Sep 06 (writing on the board) If I can't read it, tell me.

81 Feb 26 Schneider: Which DeWitt are we talking about?

Gries: I thought I was DeWitt around here.

81 Jun 01 *Research Summary 1980-81*

Well, I didn't get much done this year. I tried, but I wasn't too successful. Something always kept me from making the significant, creative advances I wanted to make. Maybe next year will be better, but this year was a washout.

I don't mean to offer these as excuses, but here are some of the things that interrupted my thinking and kept all those neat ideas from springing out of me (I know they're in me, somewhere). I was in charge of the United Way fund for our department. Three cases of sexual harassment (going both ways) were handled by me in my position as graduate field rep. One student hurt his head and was in the hospital for a week at Christmas time. *Somebody* had to look after him, so I visited him and read comics to him every day. Because I don't really have any opinions of my own, and can therefore be called neutral, I was called on to mediate in the usual political fights between faculty members, which we all know are ruining our department. The heat didn't work and the bathroom stunk and the traffic bureau wanted to revoke our VP sticker and a student's dog bit another student and an M.Eng. student failed the colloquium course and one student ate five doughnuts before one colloquium and we went 1 student over our quota and a student's lunch was stolen from the refrigerator. Each of these called for a careful 2-page letter. These are only a few of the incidents that I took care of.

I did write and prove correct a 20-line program in January, but I made the mistake of testing it on our VAX and it had an error, which two weeks of searching didn't uncover, so there went one publication out the window. I guess I could have slipped it into IPL anyway, since I'm an editor for it, but, since I have tenure already, I didn't feel right in doing that.

I did work on the four-color problem. The work at Illinois had convinced me that you didn't have to prove your programs correct to publish in math journals -- the messier the program, the more likelihood of acceptance. But, after a week, I had to draw maps with four colors and the secretaries were out of the non-permanent colored transparency pens and I lost interest.

Every once in a while I would try to get something done at home, but that, too, was a bomb. My Terak would act up, so I couldn't write, and my pen was broken. I was assistant to the assistant coach in both baseball and soccer for my son's team (that's the only way we could get him to play regularly), so I had to spend a lot of time at Cass Park. Then there was boy scouts and those awful camping trips in the rain, which would lay me up in bed for weeks at a time with fever and runny nose. *Something* always arose to stop me from working at home. To top it off, one evening two weeks ago, I was working hard at home trying to be creative so I would have something to say in this damn report, when a neighbor's dog ate the last of our guinea pigs, and that began a crisis that lasted for 3 days and ruined the few thoughts I had.

Well, so much for the research summary. Maybe next year will be better.

References

[1] Ithacating. Ithaca Journal Limerick Contest, April 1981. (Finalist)

Shih-Ping Han

75 Sep 22	Worst cases very rarely happen.
75 Nov 17	The numerical methods can always produce a number, but if the problem has no solution, the number will be meaningless.
76 Feb 25	Safety is better than the wrong answer.
76 May 05	He just found this matrix -- like it fell from the sky.

Juris Hartmanis

74 Apr 19	Student: What are you trying to prove?
	Hartmanis: I don't know, I never know when I start.
74 Sep 02	Clearly Turing machines, obviously.
74 Sep 02	I have good news and I have bad news. The good news is that I am not Hopcroft. The bad news is that Hopcroft will be back.
75 May 02	A polynomial is a goddamn big function.
75 May 02	But that's irrelevant -- I'm just stalling for time.
75 May 02	You can do brutal things in polynomial time.
75 Sep 10	Finite means you can stuff it in a box.
75 Sep 22	As long as I talk fast, wave arms vigorously, I'm going to be in good shape.
75 Sep 22	It's easy with arrows. But if you write "iff" I never know if I've proved the if or the only if.
75 Sep 24	I even put on a necktie today not to make any mistakes.
75 Sep 24	This is known, as of today, as the "Sticky Fingers Louie" method.
75 Oct 06	This may look to you like my chalk is faster than your eye.
75 Oct 10	Oh, I goofed -- no, I didn't -- yes, I didn't.
75 Oct 29	It just brutally stuffs it in the stack.
75 Nov 19	I choose r so fat and big that one won't make any difference.
75 Nov 21	Hopcroft would tell you that this is divide and conquer. To me, that seems like lots of fingers.
75 Nov 24	(On the date of the final exam:) Why don't I tell you it's on Wednesday, and on Wednesday tell you I lied.
75 Nov 24	Any comedian who tried to get away with the jokes I'm telling would get booed off the stage. People like me should not be flattered by my apparent wit.

76 Mar 13	It's a very cheap trick -- which works.
76 Oct 14	(To a seminar speaker who, unlike himself, spoke with an accent:) Will the rest of the talk be in English?
77 Feb 09	Student: Can you go over that again?
	Hartmanis: I hope it's still true.
77 Mar 04	I could have chosen another proof, but I don't know any other proof.
77 Oct 13	Gerry Salton is going to come back and he's going to ask me what I learned.
79 Nov 05	Formalize all the hell out of Mathematics.
79 Nov 07	I can write quintuples at high speed.
79 Nov 09	I really can't do it, but I'll do it.
79 Nov 12	Assume you talk Algol-68 for all I care.
79 Nov 12	Assume you behave like a programmer should, and don't believe in Turing Machines.
79 Nov 14	COBOL and APL - one language which I never learned, the other which I refused to learn for the fifth time.
79 Nov 14	Give me just a few seconds of ambiguity.
79 Nov 14	(About himself, getting mixed up in a proof:) Watch a man squirm.
79 Nov 14	Even my chalk refuses to write this.
79 Nov 14	Now the amusing claim (I'll make several)...
79 Nov 16	Be brave, take the complement of the language.
80 Feb 21	Perverse means nice.
80 Feb 28	I could show you my scars . . . psychological scars.
80 Feb 28	(On the nonconstructive gaps in the gap theorem:) Ergo, Constable can't see them.
80 Feb 28	That's not the only thing he can't see.
81 Mar 13	This department is run on the model of the Austrian empire: benevolent despotism moderated by incompetence.
81 Oct 15	Gary Levin is the guy David Gries tries to imitate.
82 Mar 01	While you're being interrupted, let me just comment ... .
82 Mar 01	The recursion theorem is just like tennis. Unless you're exposed to it at age five, you'll never become world class.
82 Jun 28	The books I should be writing are written by John Hopcroft.
82 Jun 28	This 'A' is skinny, as you see, so it is a sparse set.
82 Jun 28	If the polynomial hierarchy collapses, there'll be panic at some institutions in Washington.
82 Jun 28	Somebody once asked John Hopcroft about the problem of P and NP. He answered: "On Tuesdays, I try to prove that they are equal, on the rest of the week - that they are different." I believe that he has reduced the time to try to show that they are equal to Sunday afternoons.
82 Jun 28	I strongly suspect that this set is complete. I have not written yet a proof because none occurred to me. No, the correct statement is: "I have not written yet a proof because none occurred to my students."

John Hopcroft

74 Sep 09	(About the first 60 pages of Aho, Hopcroft and Ullman:) It's kind of leisure reading.
74 Oct 11	Everything in this class is a power of two.
74 Oct 11	I'd have to think about it; I'm not in the mood to think.
74 Oct 11	Not everything I say is correct. It's correct modulo the little details you're going to have to worry about.
75 Sep 10	Somebody should warn me when we get to the end of class by walking out, or I'll tend to keep on talking.
75 Nov 10	I have an n floating around, which I guess I haven't mentioned today.
75 Nov 10	Without loss of generality, for a reason that temporarily eludes me, ...
77 Sep 07	One thing I like to ignore is details.
77 Sep 07	Two sets of half size -- 1/4 being approximately 1/2.
77 Nov 14	Student: That means zero to the zero is zero.
	Hopcroft: Observations like that lead me to believe that you understand what I'm doing.
77 Nov 21	I suppose none of these algorithms are really useful.
79 Jan 24	Whenever it doesn't make sense, stop me, because there's a good chance it's wrong.
79 Mar 14	(After messing up a proof by forgetting how to use induction:) I should never do things carefully.
79 Mar 16	I'd hate to leave you for a vacation without showing you how to prove that a problem is NP-complete.
79 Mar 28	I'm going to call that a picture proof.
79 Apr 18	This is obvious to an educated person.
79 Apr 20	I'll have you know I spent 13 hours preparing this lecture -- so nobody had better sleep.
79 Apr 25	Let L_0 be your favorite NP-complete problem ...
79 Sep 24	Does everyone see the intuitive idea before we get into the details? Does anyone *want* to see the details?
79 Oct 19	How about a proof by example?
79 Oct 19	Now we can prove problems right and left to be NP-complete.
79 Oct 26	Let me show you how easy it is to show things P-space complete.
79 Oct 26	If me can't move, you win.
79 Nov 30	You can cube it if you don't like squaring it.
80 Oct 17	Do you mind if my prime is a power of two?
81 Oct 27	We have to figure out how to let interesting things happen.
82 Apr 23	(On the Hopcroft & Ullman book) I can't make sense of what's in the book.

Debbie Joseph

82 Feb 17	Joseph: If you go to MIT, at some point you should try to lose the audience.
	Hartmanis: If you don't, they feel insulted.

Daniel Leivant

80 Feb 13 You can grasp infinity easily, but how can you grasp 2^{45}?

80 Mar 26 If you have a cycle, you can spread truth anywhere.

Frank Luk

78 Sep 04 Of course we do not wait until i goes to infinity.

78 Oct 02 The accuracy should not be doubted, because numerical analysis sends people to the moon.

78 Oct 06 I won't give you a sketch of the proof because the sketch wouldn't be sketchy.

78 Oct 06 The proof of this is so simple that I'm going to give it.

78 Oct 09 It seems we have transformed a difficult problem into an impossible one.

78 Oct 11 So zero is strictly less than one.

78 Nov 08 If we do not know $f(x)$, its $(n+1)^{st}$ derivative is even harder to come by.

79 Jan 24 Usually, of course, you stop after a finite number of steps.

79 Feb 16 This is a very vague argument, but it's valid in practice.

79 Nov 16 You have seen more norms than you want to.

Gerry Salton

75 Feb 13 It's obviously obvious to you.

75 Mar 13 Incidently, I was Aiken's last Ph.D. student, if you can believe that.

76 Sep 23 Now what we were taught to do at Harvard ...

77 Mar 17 From where I sit, and it's total ignorance I'm sure,...

78 Sep 07 Business people, by definition, are not so smart.

78 Sep 28 (After a loud yawn from a student:) I feel the same way; I do this as a duty to the undergraduates in the class.

78 Sep 28 (After 68 minutes of a 75 minute class:) I haven't told you yet anything of interest.

78 Oct 17 Student: Would you like to help grade the 211 exams?

Salton: No. I probably am not qualified.

78 Oct 24 In principle, you need to know nothing. In practice, you need to know something, but not much.

78 Oct 26 I could say that this is a non-subject, but then you would wonder why anybody was teaching it.

80 Sep 25 So I shift by either 2 or 2, so of course I shift by 2, and I have matched bananas.

80 Sep 25 Here is an algorithm that is really useful for a change.

80 Sep 25 We have come full circle -- we are back in the 1950's, which makes me very happy.

Fred Schneider

79 Sep 05	Programs don't execute, at least not in 613.
79 Sep 14	If you never have to use a machine but you need one to give pathological examples, then the 360 is my favorite machine.
79 Oct 10	(While discussing the Dining Philosophers:) This is known as the Law of Conservation of Forks.
79 Nov 02	We can talk about reality later.
79 Nov 12	I think Modula's about as close as you're going to get to reality in this course.
79 Dec 07	Let's warm up with deadlock.
80 Sep 06	Proof by Toyota -- you asked for it, you got it.
80 Sep 15	(On aliasing:) We've got enough problems without worrying about tricky naming.
80 Sep 15	(In a reprimanding tone:) You're thinking again!
80 Sep 25	I'm going to be a hacker when I grow up.
80 Oct 09	Prove your programs by means of Heisenberg's Uncertainty Principle.
80 Oct 24	If you can build semaphores, you can conquer the world.
80 Nov 03	This is my dirty joke of the day.
80 Nov 05	A rendez-vous monitor, a.k.a. a bordello...
80 Nov 07	God knows you forget half the things I tell you anyway. *Forget that.*
80 Nov 19	Truth . . . is impervious to hisses.
80 Nov 21	(On distributed processing:) It's a very sexy topic these days.
80 Dec 03	*Nice* in the sense it's pathological.
81 Feb 09	At ten o'clock you can laugh at the jokes.
81 Feb 23	(On chess:) Look, there's a lot of klugey rules.
81 Mar 13	Forks and monitors are really just the same thing.
81 Mar 13	You could always kill a philosopher.
81 Mar 23	Philosophers are degenerate forms of octopodes.
81 Apr 29	(On the next instruction after a disk head seek to track 1,000,000) You have to do a CALL(service repair person).
81 May 11	There are those who don't want to be impersonated by Dave Wright.
81 May 11	Some systems ask you personal questions. Not *that* kind!
81 May 11	There are just some things in the world you can't do. That's what 481 and 482 are about.
82 Feb 03	Euclid was a different disaster.
82 Apr 05	I've led a sheltered life.

Tim Teitelbaum

74 Apr 17	Everything I say is plus or minus one.
76 Jan 05	The last ten percent of your grade will be determined by other considerations, mainly sexual.
77 Mar 28	Why am I so goddamned lost?

78 Jun 23 I have a story to tell you which, besides from the fact that it has nothing to do with communication, is completely irrelevant.

78 Dec 05 Student: Tim, there was a blatant case of cheating on the program. What should we do?

Tim: What did she look like?

81 Feb 26 I'm running out of time, so I'm going to use very short variable names.

Charlie Van Loan

76 Sep 06 It's a trick. That's what separates NA from ordinary mathematics.

76 Sep 15 3/5 is a calm number.

76 Oct 04 A_{ij} is not A_{ij}. Don't quote me on that -- it sounds like a madman!

76 Nov 15 I have never presented this without getting it backwards. My solution this year is to leave it as a homework exercise.

79 Oct 11 In n-space you have a unit baseball. Under |A| you have a unit football.

80 Sep 19 This is the algorithm we are going to adulterate.

80 Sep 19 ...a delinquent set of matrices.

80 Sep 22 Positive definite matrices are beautiful.

80 Sep 24 Band solvers are dynamite.

80 Oct 06 I hate least squares.

80 Oct 10 Householder did his work in the fifties - he was one of the founders of Numerical Algebra. He is now retired in Malibu. This will happen one day to me too: the "Van-Loan Matrix" has two columns at the top and three at the bottom. For that they'll let me retire in Elmira.

80 Oct 17 If you can find a quadratic equation with three roots, come find me at my office hours, or even on my estate.

80 Oct 22 It's hard to differentiate FORTRAN subroutines.

80 Oct 22 This is crude, but, um, I'm that sort of guy.

80 Oct 31 Here's the theorem we are going to prove: it is fairly painless and the result is quite dramatic.

80 Oct 31 If you're a FORTRAN dude like me, ...

80 Oct 31 Write your matrix on a möbius strip.

80 Nov 03 So now whenever one mentions how smooth a spline is at a cocktail, you can prove it on the back of a napkin.

80 Nov 12 I think too much about matrices.

80 Nov 14 If you start thinking about reals, you get nervous.

80 Nov 17 Back row people are very hard to satisfy.

80 Nov 19 I am anxious to give you an example where Newton's method *really* works - a little result I proved a couple of years ago in my thesis.

80 Nov 19 How the hell did I get in these things?

80 Nov 24 Perhaps these are electron energies, and you know if it's 10 miles away it's > 0 and if it's on the palm of your hand it's < 0.

80 Nov 26 Let's have a post-algorithm chit-chat.

80 Nov 26 There exist three Newton brothers: Isaac, Quasi and Fig. The latter had the most impact on my life.

John Williams

75 Nov 24 I might be dumb, but I'm not that dumb.

76 Oct 07 There's apparently a lot of ad hoc-ery going on here.

77 Sep 19 That is clearly -- no, opaquely -- a call to a machine language subroutine.

77 Sep 29 Guarded commands are like flying buttresses.

77 Sep 29 There's something that should bother you in there. There's something that bothers me -- that nothing bothers you.

79 Nov 15 Functional programming is not NewSpeak. It is possible to utter ugly things.

81 Oct 23 And last year when I talked about it, Gries was opening his mail.

Mathematics

Kenneth Brown

76 Oct 08 The easiest way to assert that something is true is to state that it is clearly true.

Anil Nerode

79 Oct 25 I'm always one off, because I can never remember where I am.

79 Nov 15 I'm going mad.

80 Jan 21 The first homework assignment will be just garbage -- but you're supposed to know it anyway.

80 Feb 20 The bottoms become the tops and the tops become the bottoms.

Richard Platek

77 Feb 07 We want to talk about meaning -- syntax just leads you astray.

77 Mar 21 Syntax is the most dreary of subjects.

Alex Rosenberg

81 Sep 18 Just one more thing and we'll get all this garbage, and go on to other garbage.

81 Nov 06 Since it's harder, let's call it a theorem.

81 Dec 02 I want to go from the ridiculous to the sublime.

Richard Shore

76 Apr 30 Let's see if by the end of the semester we can cover everything we assumed at the beginning of the semester.

Operations Research

Bob Bland

79 Nov 05 Texts on graph theory don't treat linear programming very well. On the other hand, linear programming texts don't do very well on graph theory, which displays a nice symmetry.

79 Nov 30 I guess what I was saying over here is partially nonsense.

Mark Eisner

75 Feb 27 The second term vanishes, just as it has been doing all afternoon.

75 Mar 06 What I want to emphasize here is that it doesn't...what *do* I want to emphasize here?

75 Mar 20 Oh, oh, oh, oh, oh, of course, that means -- uh, no ...

75 Apr 10 ... which is a contradiction just in the nick of time.

75 Apr 10 Was it a parody of my lecture, or is my lecture a parody of itself?

75 Apr 22 Let's ride a little roughshod over the technicalities.

Ray Fulkerson

75 Sep 18 Counterexamples are always better than proofs.

75 Nov 13 We now use the Edmonds algorithm, which you don't know and I have forgotten.

75 Dec 02 That may sound like a tautology, but it sure as hell isn't.

John Muckstadt

77 Mar 07 — $(\mu_1 + \lambda)p_1$ is equal to a new piece of chalk.

George Nemhauser

74 Sep 16 — I haven't actually stated a theorem, but let's just concentrate on what we're trying to prove.

74 Oct 21 — There's a very explicit statement in the text -- here I'm just trying to confuse you...

Lee Schruben

78 Nov 29 — Is there anybody who's confused -- who shouldn't be?

80 Apr 14 — I don't remember this stuff; I have it written down.

Murad Taqqu

74 Feb 20 — What I want to compute is my posterior -- well, that's a funny way of saying it, but anyway...

74 Feb 20 — You see, it's much better not to use indices after a while, because if you use indices you get confused, while if you think a little you know what you're doing.

75 Feb 13 — The loss is infinite if you get knocked out, bankrupted, or die.

75 Apr 15 — I'm just going to reason heuristically, because heuristic reasoning always gives you the right thing in the first place.

Les Trotter

76 Jan 28 — This sounds like hocus pocus. It is.

76 Feb 27 — There aren't any A's or B's in it, except for the A and B that's there.

Albert Tucker

75 Apr 24 — (On Gauss:) He made his early reputation as a computer.

Jacob Zahavi

75 Dec 05 — (Addressing an Oriental student whose name he had forgotten:) Yes, Mr. uh, uh, -- yes, Mr. Hong Kong?

Electrical Engineering

Hwa Torng

78 Oct 04 I don't think this is misleading. If any mathematician wants to find fault, tough.

80 Mar 24 They are two different things, but they are two different things of the same thing.

Norman Vrana

76 Jan 30 That's correct. On the other hand, it could be incorrect.

1979 Messenger Lecture

Marvin Minsky

79 Apr 10 I cannot talk and write at the same time.

79 Apr 10 I usually use notes to remember what not to say.

79 Apr 10 It wasn't necessary for me to finish because you knew that the end of it was going to be about the end of it.

79 Apr 10 There's lots of ways of getting this information, if you're actually alive.

79 Apr 10 What's the relation between how I think and how I think I think?

79 Apr 10 You've heard these jokes about getting a doctorate for studying the use of semicolons. We're in that business.

79 Apr 11 "Is" is the verb for when you don't want a verb.

79 Apr 11 You can only understand a complicated thing by starting with a dumbell theory.

Invited Seminar Speakers

Ed Ashcroft

75 Oct 13 You might wonder, am I actually talking about anything?

John Backus

77 Dec 01 You write a program and diddle it all in the same language.

Edsger W. Dijkstra

80 Jan 15 Dijkstra: The Hopcroft-Tarjan algorithm on planarity -- was that ever executed?

Hopcroft: Yes, it was.

Dijkstra: Was that necessary?

Hopcroft: Yes, to get the bugs out of the algorithm.

80 Jan 15 It's good to write a program occassionally ... as long as you don't run them.

80 Jan 15 The major problem with many articles is not that they are wrong, but that they are ugly.

Allan George

80 Oct 30 The state of Florida tends to be very ill-conditioned for some reason.

Susan Gerhart

76 Jan 29 We can prove these are valid...I hope we can prove them all valid...I hope they're all valid.

Chris Goad

81 Apr 16 It's a little odd for me to use the word "proof" here, because it doesn't really serve to convince you of anything.

John Guttag

77 Nov 10	Algebraic specifications are good. If I were Edsger Dijkstra, perhaps I would say they are great.
77 Nov 10	Teitelbaum: What are the prospects for an optimizer? Guttag: I'm not at all optimistic.

Michael Harrison

76 Sep 22	You don't need this there, I just put it in for the special case where it happens to work.

Harlan Mills

77 Apr 21	I am a finite man.

Sue Owicki

79 Nov 08	We are abstracting from all that is interesting.

John Reynolds

78 Apr 20	That is as far as I can go in general waffling.

William Waite

77 Mar 24	... mungy, grungy, and unstructured.

J. H. Wilkinson

82 Apr 08	I always felt it was a pity that computers *made* rounding errors.

Andrew Yao

77 Oct 13	I'll show you in a minute why this is a very stupid result.

John Zahorjan

80 Mar 13	It's hard to draw conclusions from only two examples, so I did a third.
80 Mar 13	Another enormous example limited by the number of balloons you can fit on a slide.

Computer Science Graduate Students

Stuart Allen

80 Oct 07	As long as we're splitting hairs, there are better hairs to split.

Bowen Alpern

80 Aug 06	Constructive logic is Trotskyist mathematics.
80 Sep 29	Student1: Where do I get the PRL handouts?
	Student2: Talk to Joe Bates. It's his PRL.
	Alpern: Does that make the rest of us swine?
80 Oct 08	All philosophers die while thinking.
82 Feb 26	Contractions are guaranteed to be cycle preserving under explosion, whatever that means.

Jim Archer

78 Feb 23	Aesthetics isn't one of my better suits.

Barry Bakalor

78 Sep 25	There seem to be no computer science grad students taking CS 100, for some reason.
77 Sep 20	I would guess infinity falls somewhere between 4 and 8.

Joe Bates

78 Oct 26	If you don't know what it's supposed to do, you can't tell whether or not it does it.
78 Oct 26	You say "Go!", and it goes "Boom!", and writes you a program.

Hans Boehm

81 Mar 03 There must be one on my desk somewhere. There's one of everything else on my desk.

Sandy Coe

78 Oct 31 For those of us who were little lost sheep, we just stuck with Constable, our little lost shepherd.

Richard Cole

82 Jul 29 Professor: You mean that graph doesn't exist?

Cole: That's right, and now I'm going to draw it.

Pavel Curtis

82 Apr 11 (On the London Bridge:) It just doesn't look the same when you can see it.

Bill Fischofer

78 Sep 26 1 is a generally happy number. It doesn't care what you do with it.

79 Apr 29 Max, as a unary function, isn't very interesting.

Merrick Furst

79 Oct 12 Student: Where's Hopcroft?

Furst: Aren't I Hopcroft?

Alan Gaulle

74 Feb 29 No one seems to have noticed that P $\neq$ NP follows immediately from Cook's theorem.

Sandor Halaasz

77 Jan 24 My feeling is that Salton is beginning to drip into the fire.

Mike Hammond

82 Mar 31 Secretary: Mike, did you do something on the paper?
Mike: Not recently.

Bob Harper

82 May 24 I have work to do this summer; I can't spend my time conquering the world!

Jim Hook

81 Nov 19 November times December is bottom.

82 Mar 22 I get years and weeks confused these days.

Neil Immerman

80 Oct 12 Time and space are not just engineering problems.

Dean Jacobs

80 Nov 03 (Commenting on Bowen's usefulness:) *Certainly* not the ties.

Ralph Johnson

79 Mar 01 If the program works you probably don't care.

79 Mar 01 This is a language for hackers -- I mean, it's a really neat language for hackers.

79 Mar 01 A good hacker's language is one in which you can do things the writer of the language never intended.

79 Mar 21 For many other people their lack of knowledge is much more obvious.

Scott Johnson

78 Apr 01 You know, I'll bet arrays of procedures are a lot less efficient than a case statement.

78 Jun 24 Maybe it's only as bad as it is, and not worse than it is.

80 Jan 31 If none of the faculty show up, this talk is going to be about Stellar Conquest.

80 Jan 31 I don't really care about the asymptotic running time of the algorithm; what I care about is how many blips it takes.

Jim Kadin

82 Mar 01 Kadin: I've made a monster.

Hartmanis: You've made a monster before.

Mark Krentel

81 Jan 20 A B-tree is a 2-3 tree, for large values of 2 and 3.

Sue Manning

81 Nov 19 I can't *afford* to have a good educational experience this summer!

Hal Perkins

78 Mar 16 It's just a small group of people instead of the Chinese army, and it works wonders.

78 Mar 16 This is where the little lines started to drive me crazy last night.

Ken Perry

81 Nov 04 A Liberal is a Conservative without money.

81 Nov 04 Don't shoot, I'm a Conservative.

Rich Reitman

77 Mar 09 What!? I'll give you a chance to retract that statement.

Jeff Savit

78 May 16 They use lotsa stuff from 712, which I haven't gotten to yet, but I saw lotsa bottoms in there.

Morrie Siegel

77 Apr 20 I think this is no worse than writing a LISP interpreter in LISP.

77 Sep 29 And even LISP is nothing like SNOBOL.

77 Sep 29 Actually, it's very difficult to explain this in ten words or less.

Ryan Stansifer

81 Jan 20 (On the A-exams:) That's the only thing that consoles me. They can't possibly ask everything I don't know.

Ellen Voorhees

81 Jan 21 But false *is* provable constructively...No, it's not!!

Dave Wright

81 Mar 09 I never worry about implementation.

81 Mar 09 Even IBM has built one, so it must be true.

Rick Schlichting

80 Feb 08 My goal in life is to *not* get into Upson's Familiar Quotations.