CURRICULUM VITAE
FOR CONSULTING WORK

Last revised May 10, 2013

Michael A. Covington, Ph.D.
Senior Research Scientist Emeritus
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doing business as
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Consultancy

Areas: **Computational linguistics and natural language processing**

I can develop software that understands English. For example, in a recent demonstration I developed a web page that answered questions in English to help the user choose the right pair of binoculars from a large catalogue. A more common task, which I've tackled several times, is to extract information from natural-language text, or to classify texts according to their content.

I am a widely recognized expert on the Prolog programming language and also use other programming languages to fit the task.

User-friendly software for any application

I specialize in creating user-friendly Windows software to meet a client's needs. Recent projects range from business information management to video editing. I normally program in C# using the Microsoft .NET Framework, but numerous other programming languages and methodologies are available.

Seminars

I have given seminars to business groups on "How to Write More Clearly, Think More Clearly, and Learn Complex Material More Easily" (applying

artificial intelligence discoveries to the efficient use of the human mind); on computer security and ethics; and on topics related to my University teaching.

Microcontrollers and electronics

I have developed microcontroller firmware, microprocessor-controlled equipment, and unusual PC interfaces. My "NOPPP" programmer for the PIC16F84 (www.covingtoninnovations.com/noppp) has resulted in two manufactured products, several magazine articles, and about 100,000 web site visits.

Scientific imaging, photography, and optics

I have been doing astronomical photography for over 30 years and my books about it are well known. This has given me valuable experience in digital and film imaging of all sorts of unusual targets, as well as image processing, which I can apply for other purposes. This includes interfacing digital cameras to optical instruments of all types. If the human eye can see something, and maybe even if it can't, I can photograph it.

Recent projects:

Strategic Analysis Enterprises, Inc., Williamsburg, Virginia
Software to extract information and sentiment from news media

FormFree, Inc., Athens, Georgia
Application of artificial intelligence to credit scoring and other financial domains

Confidential client, U.S. west coast
Refinement of patent claims

Coraid, Inc., Athens, Georgia
Documentation writing, research, and development

JTB Communications, Danielsville, Georgia
Windows software development project

GlaxoSmithKline Plc, Cambridge, England
Confidential research project

Webtone Inc., Atlanta
Confidential software development project

Terms and policies:

See page 14.

Academic Credentials

Degrees:

B.A. 1977 summa cum laude, University of Georgia.
M.Phil. 1978, Cambridge University.
Ph.D. 1982, Yale University.

Last academic position:

Retired June 2013 from:
Associate Director, Institute for Artificial Intelligence
Senior Research Scientist
Adjunct Professor of Computer Science
The University of Georgia

Research areas:
Natural language understanding
Information extraction and retrieval
Computational psycholinguistics
Logic modeling of electronic commerce
Artificial intelligence and logic programming on microcontrollers
Computer security and ethics

Positions held:
University of Georgia:
Senior Research Scientist Emeritus, since 2013.
Senior Research Scientist, 2000–2013.
Adjunct Professor of Computer Science, since 2001.
Associate Research Scientist, 1990–2000.
Adjunct Associate Professor of Computer Science, 1996–2001.
Member of the Linguistics Faculty, since 1994.
Adjunct Member of the Linguistics Faculty, 1993–1994.
Adjunct Assistant Professor of Computer Science, 1988–1996.
Adjunct Assistant Professor of Linguistics, 1988–92.
Adjunct Fellow, Institute of Behavioral Research, since 1988.
Assistant Research Scientist, 1986–90.
Research Associate, 1984–86.

University of Southern California:
Postdoctoral Fellow in Linguistics, 1982–84.

Yale University:
Teaching Fellow, 1981.

Other employment:
University of Tübingen (West Germany).
Research associate (Mitarbeiter), Seminar für natürlich–sprachliche Systeme, November 1987.
(Associated with LILOG Project, IBM Stuttgart.)

PC Tech Journal.
Contributing editor, 1985–1987.

PC Techniques (later *Visual Developer*) Magazine.
Contributing editor, 1990–2000.

Poptronics (formerly *Electronics Now*) Magazine.
Contributing editor, 1995–2000.

Personal data:
Born 14 September 1957, Valdosta, Georgia.
U.S. citizen.
Married to Melody Mauldin Covington since 1982.
Two children, Catherine (born 1985) and Sharon (born 1988).

Languages:
Full reading knowledge of Latin, Greek, French, Spanish, German.
Working knowledge of Italian, Biblical Hebrew.

Programming languages:
Prolog, LISP, Pascal, Delphi, C, C++, C#, Java, PL/I, FORTRAN, BASIC, Visual Basic, 8086/8088/80286 assembly, PIC assembly, 8051 assembly, AVR assembly, 68HC11 assembly, others.

Main courses taught:
CSCI/ARTI 4540/6540
Artificial Intelligence Programming Techniques
(Symbolic Programming)

Every 2 years

CSCI/LING 8570
Natural Language Processing Techniques
Every year

LING 6570
Applied Natural Language Processing
As needed, formerly every 2 years

ENGR 4250
Advanced Microcontrollers
As needed in 2005 and 2006

Numerous directed independent studies

Direction of master's and Ph.D. theses

Published Work

* = publications with stringent editorial review
** = invited publications indicating scholarly recognition

Michael A. Covington is sole author of all publications unless otherwise indicated.

Non-research publications:

Over 250 magazine articles not listed individually here, including the entire "Q&A" column in *Electronics Now,* 1995–2000 and numerous technical articles in computer magazines since 1983.

Dictionary of computer terms, by Douglas Downing and Michael A. Covington. Woodbury, New York: Barron's Educational Series, 1986; second edition, 1989; third edition, 1992; fourth edition, by Douglas Downing, Michael A. Covington, and Melody M. Covington, 1995; fifth edition, retitled *Dictionary of computer and Internet terms,* 1996; sixth edition, 1998; seventh edition, 2000; eighth edition, 2003; ninth edition, 2006; tenth edition, 2009; eleventh edition, 2013.

Computer science study keys. Barron's Educational Series, 1991.

Astrophotography for the Amateur, by Michael A. Covington. Cambridge University Press. First edition, 1985; revised edition, 1991; second edition, 1999.

Cambridge Eclipse Photography Guide, by Michael A. Covington and Jay M. Pasachoff. Cambridge University Press, 1993.

How to Use a Computerized Telescope, by Michael A. Covington. Cambridge University Press, 2002.

Celestial Objects for Modern Telescopes, by Michael A. Covington. Cambridge University Press, 2002.

Digital SLR Astrophotography, by Michael A. Covington. Cambridge University Press, 2007.

Scholarly books:

* *Syntactic theory in the High Middle Ages: modistic models of sentence structure.* Dissertation, Ph.D., Yale University, 1982. Published by Cambridge

University Press, 1984.

* *Prolog programming in depth,* by M. Covington, D. Nute, and A. Vellino. Chicago: Scott, Foresman, 1988. Second edition published by Prentice-Hall, 1997.

* *Natural language processing for Prolog programmers.* Prentice-Hall, 1993.

Chapters in books:

** Prospects for automated reasoning on the CYBERPLUS. *Proceedings from the 1985 Parallel Processing Executive Seminar,* ed. Martin W. Ferrante. Minneapolis: Control Data Corporation, 1986.

** Universal grammar in the Middle Ages. In *Studies in the history of linguistic science: a festschrift for R. H. Robins,* ed. F. R. Palmer and Theodora Bynon, pp. 23–42. Cambridge University Press, 1986.

** Medieval scholastic grammar. *Oxford International Encyclopedia of Linguistics.* Oxford University Press, 1991.

** C. S. Lewis as a Student of Words. In: P. J. Schakel and C. A. Huttar, eds., *Word and Story in C. S. Lewis,* Columbia, Mo.: U. of Missouri Press, 1991, pp. 29–41.

* A dependency parser for variable-word-order languages. *Computer assisted modeling on the IBM 3090: The 1989 IBM contest prize papers,* ed. Keith R. Billingsley, Hilton U. Brown III, and Ed Derohanes, vol. 2, 799–845. Athens, Georgia: Baldwin Press, 1992.

* GB theory as dependency grammar. Proceedings, International Congress of Linguists, Québec, 1992.

* Toward a new type of language for electronic commerce. Proceedings, Hawaii International Conference on System Sciences, 1996.

* Speech acts in electronic commerce, with special reference to KQML and ANSI X.12. Proceedings, Hawaii International Conference on System Sciences, 1997.

* Defeasible logic on an embedded microcontroller. Proceedings, IEA-AIE, 1997.

* Alignment of multiple languages for historical comparison. Proceedings, ACL/COLING-98, Montréal.

A 750-year-old argument for a syntactic transformation. Published in the online festschrift for Noam Chomsky's 70th birthday, organized by MIT Press, at http://mitpress.mit.edu/chomskydisc/Covington.html. (No printed edition.)

* A fundamental algorithm for dependency parsing. Proceedings, SEACM 2001.

** The technological relevance of natural language pragmatics. In *Cognitive Systems: Human Cognitive Models in Systems Design,* ed. by Michael L. Bernard and J. Chris Forsythe. Hillsdale, N.J.: Erlbaum, 2005.

* Uchiyama, Hajime; Covington, Michael A.; and Potter, W. D. (2008) Vibrotactile glove guidance for semi-autonomous wheelchair operations. Proceedings, 46th Annual SCM Southeast Conference (ACMSE), Auburn, Alabama.

** Uchiyama, H., W. D. Potter, M. A. Covington, J. Tarver, and R. Eunice, "Perceptual Navigation for Semi-Autonomous Wheelchair Operations," in Yoshihiko Takahashi, ed., *Service Robotics,* pp. 71–94. Vienna, Austria: I-Tech Education and Publishing, 2008.

Thai, C. N.; Covington, M. A.; Haidekker, M. A.; and McCully, K. (2008) Evaluation of body sensor networks for instruction in embedded systems and wireless sensor networks. Proceedings, 2008 ASABE Annual International Meeting, Providence, Rhode Island.

* Idea density: a potentially useful characteristic of retrieved documents. Proceedings, IEEE SoutheastCon 2009.

* How to make a lumpy random-number generator. Proceedings, 4th International Workshop on Plan 9, 2009.

* Stephen M. Shellman, Michael A. Covington, and Marcia Zangrilli, "State of the Practice and Art in Sentiment Analysis," Proceedings, 4th International Conference on Applied Human Factors and Ergonomics (AHFE 2012), San Francisco.

Monographs:

* *Evidence for lexicalism: a critical review.* Bloomington, Indiana: Indiana University Linguistics Club, 1981.

Journal articles:

* Conflation of *bought* and *brought*. *American Speech* 53:239–240, 1978.

* The syntactic theory of Thomas of Erfurt. *Linguistics* 17:465–496 (new series), 1979.

* Albert Schultens on language relationship. *Linguistics* 17:707–708 (new series), 1979.

* De modis significandi: introductio brevis in grammaticam speculativam medii aevi. *Latinitas* 28:185–191, 1980.

* Computer terminology: words for new meanings. *American Speech* 56:64–71, 1981.

* Antialiasing on the IBM PS/2 VGA by treating color bits as subpixels. *Journal of Microcomputer Applications* 12 (1989), 253–257.

* Parsing discontinuous constituents in dependency grammar. *Computational Linguistics* 16:234–236 (1990).

* Unification–based diagnosis of language learners' syntax errors, by M. Covington and K. Weinrich. *Literary and Linguistic Computing* 6 (1991) 149–154. (Co-author is student of candidate.)

* Efficient Prolog: a practical tutorial. *Artificial Intelligence Review* 5 (1991) 273–287.

* The Master of Science in Artificial Intelligence program at the University of Georgia, by W. D. Potter, D. E. Nute, and M. A. Covington. *Expert Systems with Applications* 4:185–193 (1992).

* Computer languages in type. *Journal of Scholarly Publishing* 26.1:34–41 (1994).

* Design and implementation of a campus computer ethics policy. *Internet Research* 5.4 (1995) 31–41.

* An algorithm to align words for historical comparison. *Computational Linguistics* 22:481–496 (1996).

* Natural language plurals in logic programming queries. *Applied Artificial Intelligence* 11:219–234 (1996).

** On designing a language for electronic commerce. *International Journal of Electronic Commerce* 1.4:31–47 (1997).

** Speech acts, electronic commerce, and KQML. *Decision Support Systems* 22:203-211 (1998).

** Electronics. Invited contribution to *Encyclopaedia Britannica Yearbook of Science and the Future,* 2000.

* Defeasible Logic on an Embedded Microcontroller. *Applied Intelligence* 13:259–264 (2000).

* Logical Control of an Elevator with Defeasible Logic. *IEEE Transactions on Automatic Control* 45:1347-1349.

* The number of distinct alignments of two strings. *Journal of Quantitative Linguistics* 11:173–182 (2004).

* Covington, Michael A.; Brown, Cati; He, Congzhou; Naçi, Lorina; Fjordbak, Bess Sirmon; Brown, John (2005) Schizophrenia and the structure of language: the linguist's view. *Schizophrenia Research* 77(1):85-98.

* Covington, Michael A.; Riedel, Wim J.; Brown, Cati; He, Congzhou; Morris, Eric; Weinstein, Sara; Semple, James; and Brown, John (2007) Does ketamine mimic aspects of schizophrenic speech? *Journal of Psychopharmacology* 21:338–346.

* Brown, Cati; Snodgrass, Tony; Kemper, Susan J.; Herman, Ruth; and Covington, Michael A. (2008) Automatic measurement of propositional idea density from part-of-speech tagging. *Behavior Research Methods* 40(2):540–545.

* Covington, Michael A.; Riedel, Wim J.; Brown, Cati; He, Congzhou; Morris, Eric; Weinstein, Sara; Semple, James; and Brown, John (2009) Ketamine and schizophrenic speech: more difference than originally reported. (Letter.) *Journal of Psychopharmacology* 23 (1) 111-112.

* Covington, Michael A., and McFall, Joe D. (2010) Cutting the Gordian knot: The moving-average type-token ratio (MATTR). *Journal of Quantitative Linguistics* 17.2:94–100.

Charles Hollingsworth, Stefaan Van Liefferinge, Rebecca A. Smith, Michael A. Covington, and Walter D. Potter (2011) The ARC Project: Creating logical models of Gothic cathedrals using natural language processing. Proceedings, 5th ACL-HLT Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities, pp. 63-68.

Stefaan Van Liefferinge, Charles Hollingsworth, Rebecca A. Smith, Michael A. Covington, and Walter D. Potter. Artificial Intelligence Techniques for Understanding Gothic Cathedrals. Proceedings, ICAI 2011.

* Elvevaag, Brita; Wynn, R.; and Covington, Michael A. (2011) Meaningful confusions and confusing meanings in communication in schizophrenia.

Psychiatry Research 186:461-464.

* Erin N. Colbert-White, Michael A. Covington, and Dorothy M. Fragaszy (2011) Social context influences the vocalizations of a home-raised African Grey parrot (*Psittacus erithacus erithacus*). *Journal of Comparative Psychology* 125:175–184.

* Covington, Michael A.; O'Keefe, R. A.; Bagnara, R.; Wielemaker, J.; and Price, S. (2012) Some coding guidelines for Prolog. *Theory and Practice of Logic Programming* 12:889–927.

Technical reports:

Eliminating unwanted loops in Prolog. ACMC Research Report 01–0001. Advanced Computational Methods Center, University of Georgia.

Current research in artificial intelligence at the University of Georgia. ACMC Research Report 01–0005. Advanced Computational Methods Center, University of Georgia.

A further note on looping in Prolog. ACMC Research Report 01–0006. Advanced Computational Methods Center, University of Georgia.

Expressing procedural algorithms in Prolog. ACMC Research Report 01–0012. Advanced Computational Methods Center, University of Georgia.

Implicature, disjunction, and non–monotonic logic, by Donald Nute and Michael Covington. ACMC Research Report 01–0015. Advanced Computational Methods Center, University of Georgia.

Prolog on the CYBERPLUS: a feasibility study, by R. E. Stearns and M. Covington. ACMC Research Report 01–0019. Advanced Computational Methods Center, University of Georgia.

GULP 1.1: an extension of Prolog for unification–based grammar. ACMC Research Report 01–0021. Advanced Computational Methods Center, University of Georgia.

Parsing variable–word–order languages with unification–based dependency grammar. ACMC Research Report 01–0022. Advanced Computational Methods Center, University of Georgia.

An implementation of discourse representation theory, by M. Covington and N. Schmitz. ACMC Research Report 01–0023. Advanced Computational Methods Center, University of Georgia.

From English to Prolog via discourse representation theory, by M. Covington, D. Nute, N. Schmitz, and D. Goodman. ACMC Research Report 01–0024. Advanced Computational Methods Center, University of Georgia.

GULP 2.0: An extension of Prolog for unification–based grammar. Research Report AI–1989–01, Artificial Intelligence Programs, The University of Georgia.

A numerical equation solver in Prolog. Research Report AI–1989–02, Artificial Intelligence Programs, The University of Georgia.

Efficient Prolog: a practical guide. Research report AI–1989–08, Artificial Intelligence Programs, University of Georgia.

A dependency parser for variable–word–order languages. Research report AI–1990–01, Artificial Intelligence Programs, University of Georgia.

GB theory as dependency grammar. Research report AI–1992–03, Artificial Intelligence Programs, University of Georgia.

An empirically motivated reinterpretation of dependency grammar. Research Report AI–1994–01, Artificial Intelligence Programs, The University of Georgia.

Discontinuous dependency parsing: work in progress. Research Report AI–1994–02, Artificial Intelligence Programs, The University of Georgia.

GULP 3.1: An extension of Prolog for unification–based grammar. Research Report AI–1994–06, Artificial Intelligence Center, The University of Georgia.

Covington, Michael A. (2003) ET the Efficient Tokenizer. ProNTo project (http://www.ai.uga.edu/mc/pronto), Artificial Intelligence Center, The University of Georgia.

Covington, Michael A. (2003) A Free-Word-Order Dependency Parser in Prolog. ProNTo project (http://www.ai.uga.edu/mc/pronto), Artificial Intelligence Center, The University of Georgia.

Covington, Michael A.; He, Congzhou; Brown, Cati; Na ci, Lorina; and Brown, John (2006) How complex is that sentence? A proposed revision of the Rosenberg and Abbeduto D-Level Scale. Research Report 2006-01, CASPR Project, Artificial Intelligence Center, The University of Georgia.

Covington, Michael A. (2007) CGI scripting in SWI-Prolog under Windows Server 2003. ProNTo project (http://www.ai.uga.edu/mc/pronto), Artificial Intelligence Center, The University of Georgia.

Covington, Michael A., and McFall, Joe D. (2007) Using MontyLingua with C# and Microsoft .NET. Research Report 2007-02, CASPR Project, Artificial Intelligence Center, The University of Georgia.

Covington, Michael A. (2007) CPIDR 3 User Manual. CASPR Research Report 2007-03 (http://www.ai.uga.edu/caspr), Artificial Intelligence Center, The University of Georgia.

Covington, Michael A. (2007) MATTR User Manual. CASPR Research Report 2007-05 (http://www.ai.uga.edu/caspr), Artificial Intelligence Center, The University of Georgia.

Charles Hollingsworth, Stefaan Van Liefferinge, Rebecca A. Smith, Michael A. Covington, and Walter D. Potter (2011) Progress report on the ARC Project: Creating logical models of Gothic cathedrals. Working paper, The University of Georgia (http://www.ai.uga.edu/arc).

Presentations: (Complete only since 1996.)

* = papers with a published counterpart
** = invited presentations

* Toward a new type of language for electronic commerce. Hawaii International Conference on System Sciences, January 1996.

* Speech acts in electronic commerce, with special reference to KQML and ANSI X.12. Hawaii International Conference on System Sciences, January 1997.

* Design and implementation of a campus computer security policy. SHARE (IBM mainframe users' group), Atlanta, 1997.

** same, invited presentation, Valdosta State University, 1998.

** Comparative reconstruction of ancient languages by computer. University of South Carolina, 1997.

* Defeasible logic on an embedded microcontroller. IEA–AIE (Industrial and Engineering Applications of Artificial Intelligence and Expert Systems), Atlanta, 1997.

** same, invited presentation, Cambridge University, 1998.

** same, invited presentation, University of Arizona, 1999.

* Alignment of multiple languages for historical comparison. COLING-98 (International Conference on Computational Linguistics), Montréal, 1998.

** same, invited presentation, University of Arizona, 1999.

** Natural language pragmatics applied to computing, invited presentation, Cambridge University, 2000.

* A fundamental algorithm for dependency parsing. SEACM, Athens, Georgia, 2001.

** same, PAIW-2002, Athens, Georgia.

** The technological relevance of natural language pragmatics. Invited presentation at Cognitive Systems Conference, sponsored by University of New Mexico and Sandia National Laboratories, Santa Fe, N.M., July 2003.

* Covington, Michael A.; Brown, Cati; He, Congzhou; Naçi, Lorina; Fjordbak, Bess Sirmon; Brown, John. Schizophrenia and the structure of language: the linguist's view. SANE-POWIC Meeting on the Origins of Language and Psychosis, Oxford, July 2004.

* He, Congzhou; Brown, Cati; Covington, Michael A.; and Naci, Lorina, How complex is that sentence? A proposed revision of the Rosenberg and Abbeduto D-Level scale, poster presented at the annual meeting of the Linguistic Society of America, Boston, January 2004.

* Brown, Cati; Covington, Michael A.; Semple, James; and Brown, John, Reduced idea density in speech as an indicator of schizophrenia and ketamine intoxication, poster presented at the International Congress on Schizophrenia Research, Savannah, April 2005.

* He, Congzhou; Covington, Michael A.; Semple, James; and Brown, John, Some linguistic signs of ketamine-induced cognitive impairment, poster presented at the International Congress on Schizophrenia Research, Savannah, April 2005.

** Can machines be polite? Invited presentation at Cognitive Systems Conference, sponsored by University of New Mexico and Sandia National Laboratories, Santa Fe, N.M., July 2005.

* He, Congzhou; Weinstein, Sara; and Covington, Michael A. Speech analysis software for psychiatric research: the case of D-Level Rater. Poster, First Annual GA/SC Neuroscience Colloquium, Charleston, April 2006.

* Brown, Cati; Snodgrass, Tony; Covington, Michael A.; Herman, Ruth; and Kemper, Susan J., Measuring propositional idea density through part-of-speech tagging. Poster, Linguistic Society of America Annual Meeting, Anaheim, California, January 2007.

* He, Congzhou; Weinstein, Sara; and Covington, Michael A. Using Text Analysis Software in Schizophrenia Research. Poster, International Congress on Schizophrenia Research (ICOSR), Colorado Springs, March 2007.

* Covington, Michael A., and McFall, Joe D. The moving-average type-token ratio (MATTR). Poster, Linguistic Society of America, Chicago, January 2008.

** Covington, Michael A. Studying terrorism with natural language processing and artificial intelligence. Conflict Processes Summit, Athens, Ga., January 2008.

** Uchiyama, Hajime; Covington, Michael A.; and Potter, W. D. (2008) Vibrotactile glove guidance for semi-autonomous wheelchair operations. 46th Annual SCM Southeast Conference (ACMSE), Auburn, Alabama.

** Thai, C. N.; Covington, M. A.; Haidekker, M. A.; and McCully, K. (2008) Evaluation of body sensor networks for instruction in embedded systems and wireless sensor networks. ASABE Annual International Meeting, Providence, Rhode Island.

** How to write more clearly, think more clearly, and learn complex material more easily. Presented at SEAALL (Southeast Chapter, American Association of Law Libraries), April 17, 2009, Athens, Ga.

* Idea density: a potentially useful characteristic of retrieved documents. Proceedings, IEEE SoutheastCon 2009.

* How to make a lumpy random-number generator. Proceedings, 4th International Workshop on Plan 9, 2009.

** Linguistics, schizophrenia, and computers. Emory University, November 3, 2009.

** Linguistics, schizophrenia, and computers. American Association for Applied Linguistics (AAAL), invited participant in organized session, March, 2010.

Covington, Michael A.; Potter, Iris; Snodgrass, Tony. Stylometric classification of translations of the same text. Southeastern Conference on Linguisics (SECOL), April, 2010.

* Charles Hollingsworth, Stefaan Van Liefferinge, Rebecca A. Smith, Michael A. Covington, and Walter D. Potter (2011) The ARC Project: Creating logical models of Gothic cathedrals using natural language processing. Proceedings, 5th ACL-HLT Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities (Portland, Oregon).

* Stefaan Van Liefferinge, Charles Hollingsworth, Rebecca A. Smith, Michael A. Covington, and Walter D. Potter. Artificial Intelligence Techniques for Understanding Gothic Cathedrals. ICAI 2011.

** Prolog coding standards (invited tutorial). International Conference on

Logic Programming, Lexington, Kentucky, July 2011.

** Linguistics, schizophrenia, and computers: work in progress. Emory University, November 2011.

Michael A. Covington, S. L. Anya Lunden, Sarah Cristofaro, Stephanie Johnson, Claire Ramsay, Beth Broussard, Shayi Zhang, C. Thomas Bailey, Robert Fogarty, and Michael T. Compton. Phonetic measurement of reduced facial muscle movement among young adults with first-episode schizophrenia-spectrum disorders. Georgetown University Round Table (GURT) on Languages and Linguistics, March 2012.

* Stephen M. Shellman, Michael A. Covington, and Marcia Zangrilli, "State of the Practice and Art in Sentiment Analysis," 4th International Conference on Applied Human Factors and Ergonomics (AHFE 2012), San Francisco.

Sessions chaired: Session on syntax (in French), International Congress of Linguists, Québec, 1992.

Session on syntax, Linguistic Society of America, Boston, 1994.

Session on dependency grammar (partly in French), COLING-98, Montréal, 1998.

Grants and Awards

Grants: *Grants and contracts to The University of Georgia:*

University of Maryland.
Subcontract of approximately $20,000 to improve an automated reasoning system, 2010.

National Science Foundation.
NSF MINERVA Grant No. BCS-0904669 of approximately $92,000 (to UGA) as part of a multi-institution study of terrorism and conflict processes, 2009–2011.

Strategic Analysis Enterprises, Inc.
Contract of approximately $65,000 spanning 9 months for research on computer analysis of news reports, 2009.

Strategic Analysis Enterprises, Inc. (subcontracting from DARPA).
Contract of approximately $108,000 spanning 6 months for research on computer analysis of news reports, 2008–2009.

GlaxoSmithKline Plc.
Contract of approximately $1,400,000 spanning 3 years for research on computational analysis of speech, 2003-2007. (Amended in 2005 because of key personnel leaving GlaxoSmithKline.)

Hewlett-Packard Corporation.
Grant of approximately $5,500 in equipment to support new microcontroller laboratory, 1999.

Byte Craft Limited (Waterloo, Ontario).
Grant of approximately $750 in software to support new microcontroller laboratory and to explore possible future contracts, 1999.

Inprise Corporation (Borland International).
Grant of approximately $600 in software to support new microcontroller laboratory, 1999.

National Science Foundation.
Grant IST-85-02477 to investigate computer modeling of discourse semantics (with Donald Nute), 1985–87 ($239,181).

Control Data Corporation.
PACER fellowship to implement a logic programming system on a CYBERPLUS multiparallel processor, 1985–87 ($50,000).

National Science Foundation.
Grant BNS-81-05359 to investigate medieval theories of syntax, 1981–82.

Awards: ANBAR Electronic Intelligence.
Citation of Excellence (for paper on KQML), 1999.

Institute of Electrical and Electronic Engineers.
Elected Senior Member, 1996.

IBM Supercomputing Competition.
First prize, humanities and social sciences ($25,000), with academic assistance award to University of Georgia ($10,000).

National Science Foundation.
Graduate Fellowship, 1977–80.

Co-valedictorian, University of Georgia, 1977.

U. S. President's Australian Science Scholar, 1973.

Recognitions: Listed in *Who's Who in the World*, 2011, 2012.

Listed in *Who's Who in America*, beginning 2009, through 2013.

Listed in *Who's Who in Science and Engineering*, beginning 2000, through 2012.

Listed in *Who's Who in the South and Southwest*, beginning 1995.

Listed in other similar directories.

Other Relevant Work

Software: *AHED* and *PrEd*, full–screen editors for the IBM PC, used instructionally at Georgia and distributed as freeware (mid-1980s).

GULP (Graph Unification Logic Programming), natural language processing software package described in several technical reports and used at the Universities of Georgia, Koblenz, Tübingen, and Zürich.

Hardware: "NOPPP" circuit for programming PIC16F84 and related microcontrollers. Cover feature, *Electronics Now* Magazine, September 1998; now being manufactured by Ramsey Electronics (New York) and Oatley Electronics (Australia).

Contributing editor: *PC Tech Journal* (1985–1987).
PC Techniques (1990s).

Electronics Now (1995–2000).

Reviewer (since 2005) for:
Association for Computing Machinery (ACMSE Conference)
Agence Nationale de la Recherche (France)
Behavior Research Methods
Brain and Language
Cambridge University Press
Cognitive Neuropsychiatry
Computational Linguistics
Cortex
Historiographia Linguistica
IEA/AIE Conference
IEEE Transactions on Systems, Man, and Cybernetics
International Journal of Computational Methods
Journal of Cognitive Science
Journal of Logic and Computation
Journal of Logic Programming
Journal of Nervous and Mental Disease
National University of Singapore
Neuropsychologia
National Sciences and Engineering Research Council of Canada (NSERC)
Social Sciences and Humanities Research Council of Canada
Theory and Practice of Logic Programming
Wiley Publishing
Bipolar Disorders
Schizophrenia Research
Springer-Verlag

(This list may not be complete.)

Public service:
Member, ISO Prolog standards committee (WG17), since 1993.

Established an Internet mailing list for discussion of dependency grammar (beginning 1992). Volume of discussion initially averaged approximately 1 megabyte per year, and many eminent linguists became members.

Supplied invited comments to the Congressional Office of Technology Assessment on copyright reform.

Supplied comments to the Federal Communications Commission on a number of regulatory proposals.

Supplied information to members of Congress on various matters relating to computer ethics.

Usual Consulting Terms and Policies

These are subject to modification by individual agreement.

Before May, 2013, my first employment obligation was to The University of Georgia, which limited the amount of time I could spend consulting and could have prior claims to intellectual property. I have retired from The University of Georgia and am no longer under this restriction.

Billing:
Time is recorded in hours unless otherwise specified. No work or travel is done between midnight and 8 a.m. unless at my convenience. (This

includes travel between my home and the airport.) Work is not normally done on the day after an overnight flight, which is considered a travel day.

Travel: Client pays all travel expenses for work done outside Athens, Georgia. This requirement is often waived for clients in the Atlanta area when the travel arrangements are convenient to me.

Travel time is billed at half the normal hourly rate. Out-of-town work days are billed as 8 hours each, minimum, even if less than the full day is used. These requirements are sometimes waived when the travel is particularly convenient or useful to me.

Because of the distance to the airport, travel normally begins 3.5 hours before a flight leaving the Atlanta airport (ATL). Flights from Athens, Georgia (AHN) are preferred (if available!).

No double billing: Under no circumstance is the same block of time charged to more than one client. That is, I do not charge travel to one client while doing billable work for another.

Disclaimers: I am not a licensed Professional Engineer (P.E.) and my technical consultations are not presented as designs or certifications for which a P.E. is required by law or regulation.

My technical consultations do not include patent searches. Although I can often find relevant patents, I make no representation to be able to do so completely. Technology developed in my consulting work is presented in good faith as original inventions and/or obvious applications. I cannot determine whether anything that I develop may have previously been patented by someone else.