Dcn. EDWARD G. KOVACH, Ph.D.

OFFICE

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SUMMARY

Over 28 years teaching experience in both classroom and individualized settings at post-secondary institutions. Developed seven upper level CS courses at Franciscan. Has led two major revisions of the introductory CS/CIS course sequences and eight revisions involving the addition and deletion of upper level courses to meet the needs of the students and the CS field. Developed academically oriented and/or commercially used software in C, C++, LISP, PROLOG, Java, Pascal, Python, Clojure, and BASIC. Developed a morphological parser written in LISP with a rule compiler written in C for the basis of doctoral dissertation. Worked in Windows, MAC, UNIX, and VMS environments. Was a Fulbright Grantee at the Pázmány Péter Catholic University in Budapest, Hungary.

EDUCATION

University of Illinois at Urbana-Champaign, Urbana, Illinois, 1986-1993
- Dissertation topic: Finite State Morphological Parsing Using Register Vector Grammars.
- 5 graduate units in Computer Science and Computational Linguistics.
- M.A., General Linguistics, 1988.
- Ph.D., Computational Linguistics, 1998.

Kent State University, Kent, Ohio, 1999
- Computer Science, 3 semester hours, graduate level.

University of Wisconsin-Oshkosh, Oshkosh, Wisconsin, 1985-1986.
- Computer Science, 12 semester hours.

University of Wisconsin Center-Fox Valley, Menasha, Wisconsin, 1980, 1984-1985.
- Computer Science, 18 semester hours.

Ohio State University, Columbus, Ohio, 1976-1977.
- Graduate Work in Mathematics, 31 quarter hours.

Heidelberg University, Tiffin, Ohio, 1972-1976.
- B.A., Mathematics and Latin. Secondary certification in Mathematics and Latin.

Columbus Diaconate School of Theology, Columbus, Ohio, 2013 to 2016
- Theology and Pastoral Courses. 18 course.

ACADEMIC/WORK EXPERIENCE

Department of Mathematics and Computer Science, Franciscan University of Steubenville. 1993 to present. Professor of Computer Science. Granted tenure fall of 2000. Promoted to full professor fall of 2017.

Teach all levels of CS courses. Developed seven of the courses, revised eight of them. Incorporated OOP, C++, and Java into the curriculum. Continually revising curriculum to conform to the current ACM-IEEE curricular guidelines for small liberal arts universities (Curriculum 2013), teach Mathematics courses as needed. Advise CS majors. Advised the CS Club. Served on the following committees: Admissions Committee, Computer Planning Committee, Internet Committee, Library Committee, Faculty Standards, Faith and Science Committee, Pre-Engineering Planning Committee, Franciscan Fulbright Committee.

Faculty of Information Technology, Pázmany Péter Catholic University (PPCU), Hungary, 2001-2002, 2005-2006.

Taught Discrete Mathematics, Theory of Complexity (graduate level), Introduction to Java Programing, Software patterns in Java (developed this course). Supervised four Italian Masters students at PPCU on an Eramus Exchange Program. Did research in Complexity Theory. My second visit to the PPCU was as a Fulbright Grantee.

Computing and Communications Services Office, University of Illinois at Urbana-Champaign, 1991-1993.

Consultant for the Computing in the Humanities project: Aid faculty members and graduate students in gaining access to computer technology and solving computer problems related to their research. Work with DOS, MAC, UNIX, and VMS applications.

Language Learning Laboratory (LLL), University of Illinois at Urbana-Champaign, 1987-1991.

Research Assistant: Implemented the KIMMO morphological parser in LISP. Developed a module for a language authoring system in PASCAL. Assisted students in using IBMs and Macs in the LLL Microcomputer laboratory. Functioned as the backup coordinator for the LLL Microcomputer Laboratory. Coordinated the operations of the LLL PLATO Laboratory. Other computer-related projects.

English As An International Language, University of Illinois at Urbana-Champaign, 1990-1991.

Research Assistant: Developed and documented BASIC software for analyzing perception test data. Was offered an appointment for the following year.

Department of Linguistics, University of Illinois at Urbana-Champaign, 1992-1993, 1989-1990.

Research Assistant: Responsibilities include the computerization of Reading Room Library.
Teaching Assistant: Taught Introduction to Linguistics.

Department of English, University of Illinois at Urbana-Champaign, 1988-1989.

Teaching Assistant: Tutored Rhetoric to educationally disadvantaged students.

Fox Valley Technical College, Appleton, Wisconsin, 1984-1986.

Mathematics Instructor for Adult Basic Education program.

Advanced Information Management, Menesha, Wisconsin, 1980-1981.

Computer Programmer: Developed bookkeeping software in BASIC.

University of Wisconsin Center-Fox Valley, Menasha, Wisconsin, 1980.
Student Consultant: Aided Students in developing and debugging FORTRAN programs.
Was requested to remain an additional semester to assist in the teaching of the PASCAL class.

Kimberly High School, Kimberly, Wisconsin, 1977-1979.
Mathematics teacher: Algebra I, Algebra II, and Geometry.

Department of Mathematics, Ohio State University, Columbus, Ohio, 1976-1977.
Teaching Assistant: Algebra.

PROFESSIONAL AFFILIATIONS

Association for Computing Machines (ACM)
Special Interest Group – Artificial Intelligence (SIGART)
Special Interest Group – Computer Science Education (SIGCSE)
Special Interest Group – Algorithms and Computation Theory (SIGACT)
Fellowship of Catholic Scholars
National Council of Teachers of Mathematics (NCTM)

HONORS

University of Illinois Fellow, 1986-1988.
Fulbright Grantee, Hungary, 2005-2006.

DEGREES EARNED

Degree	Subject Area	Institution	City/State	Dates of Study
Ph.D.	Computational Linguistics	University of Illinois at Urbana-Champaign	Urbana, IL	5/88 to 5/98
M.A.	General Linguistics	University of Illinois at Urbana-Champaign	Urbana, IL	8/86 to 5/88
B.A.	Mathematics, Latin	Heidelberg College	Tiffin, OH	9/72 to 5/76

PROFESSIONAL CERTIFICATES AND LECENSES EARNED AND IN PROGRESS

Type	Subject and Level	State	Date Rec'd.
Approval Status	Mathematics for Goal Oriented Adult Learning	WI	2/84
5 Year License	Mathematics – Secondary	WI	7/83
3 Year License	Mathematics – Secondary	WI	7/77
3 Year License	Mathematics, Latin – Secondary	OH	5/76

ACADEMIC PREPARATION

Bachelor's Degree Area of Specialization: Mathematics

Courses in Major/Minor	Hours Qtr/Sem	Grade (by title)	Education Courses	Hours Qtr/Sem	Grade
Elementary Functions	3	A	General Psychology	3	A
Calculus I-IV	12	B	Human Growth & Development	3	A
Different Equations	3	A	Principles of Teaching	3	B
Abstract Algebra	3	B	Secondary School Curriculum	3	A
Statistics	3	B	Teaching of Mathematics	3	B
Matrix and Linear Algebra	3	A	Seminar in Secondary Education	2	B
College Geometry	3	A	Education in Society	3	A
Non-Euclidean Geometry (Independent Study)	3	B	Supervised Teaching	8	S

Master's Degree Area of Specialization: General Linguistics

Titles of Courses	Instructor	Institution	Hours Qtr/Sem	Grade
Introduction of Computational Linguistics	C. C. Cheng	UIUC	1	A
Topics in Computational Linguistics	C. C. Cheng	UIUC	1	A
Syntax I	P. Cole	UIUC	1	A
Syntax II	G. Green	UIUC	1	A
Phonology I	M. Kenstowicz	UIUC	1	B
History of Linguistics	L. Zgusta	UIUC	1	A
Historical Linguistics	L. Zgusta	UIUC	1	A
Introduction to General Phonetics	K. Johnson	UIUC	0.5	A

Graduate Work in Mathematics

Introduction to Real Analysis I	Bojanic	OSU	4	B
Introduction to Real Analysis II	Bojanic	OSU	4	B
Introduction to Real Analysis III	Freud	OSU	4	B
Algebra I	Lintzel	OSU	4	B
Algebra II	Lintzel	OSU	4	B
Algebra III	Lintzel	OSU	4	B
Group Studies – Analysis	Bojanic	OSU	3	B
Group Studies – Analysis	Bojanic	OSU	1	S
Group Studies – Algebra		OSU	3	B

Other Undergraduate Work

Algebraic Language Programming	Fortran	UWC-FV	3	B
Algebraic Language Programming	Pascal	UWC-FV	3	A
Computer Programming II		UWO	3	A
Data Structures		UWC-FV	3	A
Special Topics – BASIC Programming		UWC-FV	3	A
COBOL Programming		UWC-FV	3	A
Assembly Programming		UWC-FV	3	A
Theory of Computing		UWO	3	A
Programming Languages		UWO	3	A

AREA OF SPECIALIZATION COMPUTATIONAL MORPHOLOGY

Titles of Courses	**Instructor**	**Institution**	**Hours Qtr/Sem**	**Grade**
Introduction to Mathematical Linguistics	J. Morgan	UIUC	1	A
Study of Meaning (Montague Grammar)	E. Hinrichs	UIUC	1	B
Formal Logic & Philosophy (PROLOG)	R. Wengart	UIUC	1	A
Seminar (PROLOG & Natural Language Processing)	E. Hinrichs	UIUC	1	A
Introduction to Artificial Intelligence	M. Harandi	UIUC	1	B
Special Topics (Computational Morphology)	J. Morgan	UIUC	1	A
Independent Study (Register Vector Grammars)	J. Morgan	UIUC	1	A
Topics in Syntax	G. Green	UIUC	1	B
Seminar (Head-Driven Phrase Structure Grammar)	G. Green	UIUC	1	A
Seminar (Tense & Aspect)	E. Hinrichs	UIUC	1	A
Practicum (General Phrase Structure Grammar)	J. Morgan	UIUC	1	A
Special Topics (Syntax)	G. Hermon	UIUC	1	A
Morphology	J. Morgan	UIUC	1	A
Special Topics (Hungarian & Parsing)	J. Morgan	UIUC	1	A
Topics in Phonology	C. Kisseberth	UIUC	1	A

Courses taught

Course Number	Semester Hours	Description
CSC 140	3	Survey of Computer - basic computer literacy and application programs.
CSC 141	3	Introduction to Computer Science. (initially CS 1). I initially taught this in C with the emphasis on structured programming techniques then changed to C++ and incorporated OOP into it. The language was changed to Java. To accommodate CIS and Communication Arts majors, the course was restructured as a structured language course with C, then Python, being the languages of instruction.
CSC 144	3	Introduction to Object Oriented Programming (presently CS 1) This was initially the OOP course, the second one of the 3 course introductory sequence. This was changed when the CS-CIS introductory sequence was split into two: CSC 144 and 245 for CS and CSC 141 and CSC 171 for CIS majors.
CSC 145	3	Data Structures, (CS2). I initially taught this in C with the emphasis on structured programming techniques then changed to C++ and incorporated OOP into it. Taught it in Java for several years, then return to teaching it in C++
CSC 232	3	Introduction to COBOL and Structured Programming - a CIS course
CSC 242	3	Advanced COBOL and File Processing - a CIS course
CSC 245	3	Was CS3 when we had the three course introductory sequence for CS/CIS majors. Was taught in C, C++ and Java. Has now been replace by CSC 145
CSC 280	3	Numeric Programming. Fortran, numeric technique, and Structured Programming.
CSC 310	3	Programming Languages. I developed this course for Franciscan
CSC 344	3	Algorithms and Complexity – I developed this course
CSC 352	3	Software Patterns – I developed this course at the PPCU and introduced it to FUS
CSC 361	3	Assembly Programming - Based on the assembly for the Intel 8088 family of microprocessors.
CSC 400	1-6	I have advised approximately 40 students doing internships in CS. This involves grading evaluating their internship accomplishments, their internship papers, and presentations
CSC 402	3	Hardware and Software Systems - a CIS course
CSC 403	3	Operating Systems.
CSC 404	3	Computer Architecture. I developed this course. It replaced CSC 361 and an early Computer Architecture sequence.
CSC 410	3	Introduction to Artificial Intelligence and Expert Systems. I developed this course and made several significant revisions from the original natural language processing class using Prolog, to a general AI course using LISP, then Clojure
CSC 430	3	Theory of Computing. I developed this course.
CSC 435	1	Coordinating Seminar - guide students as they write their senior theses in Computer Science.
CSC 436	3	Computer Architecture and Operating System. – New course to replace CSC 403 and CSC404 (Special topic)
CSC 436	3	Discrete Structures (Special topic)
CSC 465	1-3	I had supervised 6 students in directed studies during the past 5 years.
MTH 161	4	Analytic Geometry and Calculus I
MTH 220	3	Discrete Math. I taught a similar course at the PPCU
MTH 305	3	Introduction to Abstract Algebra - I volunteer to teach this and MTH 332 to cover for a faculty member on sabbatical.

MTH 332 3 Linear Algebra.

Conferences and workshops attended

The Twenty-Sixth Annual Meeting of the Association for Computational Linguistics, Buffalo, NY, June 7 - 10, 1988

C++ Programming for C Programmers sponsored by the Hands On Technology Transfer group, Ceveland, OH, June 23 to 26, 1998

CS1/CS2 Workshop sponsored by the Reusable Software Group of the Ohio State University, Columbus, OH, June 29 to July2, 1998.

The Thirtieth SIGCSE Technical Symposium on Computer Science Education, New Orleans, LA , March 24 to 28, 1999.

CS1/CS2 Workshop sponsored by the Reusable Software Group of the Ohio State University, Columbus, OH, July 7 - 8, 1999.
I gave a presentation entitled, "Experiences with Active Learning."

The Fortieth SIGCSE Technical Symposium on Computer Science Education, Chattanooga, TN, March 4 to 7, 2009.

The Forty-Second SIGCSE Technical Symposium on Computer Science Education, Dallas, TX , March 9 to 12, 2011.

The 2018 SEI Software Engineering Educators Workshop, Carnegie Mellon University 7/31/2018 to 8/2/2018, Pittsburgh, PA.

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The Fifty SIGCSE Technical Symposium on Computer Science Education, Minneapolis, MN , February 27 to March 2, 2019.

Other Accomplishments

Ordained a permanent deacon by Bishop Jeffrey Monforton December 3, 2016. Assigned to serve at Holy Family Church in Steubenville, OH. 2016 to present.

Worked on Ad Hoc Committee to establish 2-2 and 3-2 programs in various Engineering degrees at Gannon University, Notre Dame University and University of Datyon. 2012 to 2013.

Chair of Faculty Standards. Worked on proposal for revising the evaluation of teaching effectiveness. 2009 to 2013

Service on the Ad-Hoc Faith and Science committee. Participate on the panel “Is Man a Machine” at Franciscan University of Steubenville. Help organize the Laudato Si Symposium. Recommend Dr. Keneth Kunkle for one of the keynote addresses. April 2016.

Evaluate Hungarian Mathematics and Computer Science Applicants for the Hungarian Fulbright Commission.

I attended two gatherings of former Fulbright Grantees to Hungary at the Hungarian Embassy in Washington, D.C. While there I met with the Hungarian Ambassador, a former Fulbright grantee to the US. March 2011, March 2015.

Led Recovery Self-Help Group at Franciscan University. 1999 to 2011, excluding years in Hungary

I gave two lunch and learn presentation on the Recovery International Self-Help group during March 2008 and March 2009.

I gave a talk on "Manhood" sponsored by the Apprentices of St Joseph household to men at FUS during Fall of 2007.

Seminar at Franciscan University. "Natural Limits to Computation," March 2007.

Presentation at Franciscan University, "Mathematics and the Classics." March 2007.

Presentation to the new Fulbright Grantee at the Hungarian Fulbright Commission, Budapest, "Family Life in Budapest – supports for your family here." February, 2006.

Seminar at Franciscan University. "Computability and the Limits to Logic," October 15, 2002.

Seminar at the Analogical and Neural Computing Laboratory, Budapest: " Program Size and Complexity, what the size of a program tells us about randomness and the limits of logic," July 10, 2002.

CS1/CS2 Workshop sponsored by the Reusable Software Research Group of the Ohio State University, Columbus, OH, July 7 - 8, 1999.