

## IACIS: A DECADE IN REVIEW (1991-2000)

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### ABSTRACT

*This study examines conference programs of the International Association for Computer Information Systems from 1991-2000. Program data is extracted from conference proceedings and entered into a database. Profiles of papers, institutions, and participants are generated using database queries. Results of the study provide a point of reflection on the development of an organization as well as a discipline.*

**Keywords:** IACIS, information systems discipline, research trends, professional organization

### INTRODUCTION

Margaret Fairless Barber said that to “look backward for a while is to refresh the eye, to restore it, and to render it more fit for its prime function of looking forward.” The purpose of the current paper is to take a brief pause and look backward on a decade in the life of the International Association for Computer Information Systems (IACIS). The study examines conference programs from 1991-2000 and presents a profile of the papers, institutions, and participants. Results of the study provide a point of reflection on the development of an organization as well as a discipline.

Results presented in the paper will be of interest to newcomers and established members alike. Many of the current IACIS members have attended meetings for more than ten years and have observed first-hand the organization’s maturation process. Other members have joined more recently and will benefit from learning about the organization’s history.

### RESEARCH QUESTIONS AND METHODOLOGY

The authors examined IACIS conference proceedings for years 1991-2000 ([1] – [10]). Answers were sought to the following questions:

- To what degree have the number of papers and number of institutions grown over the ten-year period?
- Are trends evident in the orientation of papers and length of papers presented?
- What institutions frequently appear on conference programs?
- How has authorship changed over the decade? Are changes evident in the number of authors per paper? Origin of authors?
- What patterns in content focus can be observed?

A relational database was created using MS-Access to capture data about papers, authors, and institutions for each conference year. The general design of the tables is shown in Figure 1.

**Figure 1. General Design of Database**

Paper Table					
Year	Paper Number	Title	Content Area	Paper Orientation	Paper Length
Author Table					
Year	Paper Number	Last Name	First Initial	Institution ID	
Institution Table					
Institution ID	Institution Name	Type	Location		

Each paper was assigned a paper orientation, paper length, and content area. The orientation simply identifies the paper as being research or pedagogical in nature. The research classification includes both basic and applied papers; the pedagogical classification includes papers directed at teaching methodology, classroom practices, or curriculum. The two classifications reflect the IACIS practice of presenting a conference award to the best research and best pedagogy papers.

The paper length reflects whether a paper is full (complete) or an abstract. In some cases, a paper appeared in the conference program, but no hardcopy was available in the proceedings. In these situations, the length was categorized as NA (not available).

Content area was the most difficult attribute to assign to a paper. An initial list of content areas was developed using session titles from the conference programs. The initial list was inadequate for several reasons. First, session titles do not always accurately reflect the focus of a paper, nor are they necessarily useful for content categorization (e.g. the session title “milieu”). Additionally, session titles are not consistent from year to year. As each paper was coded for entry in the database, a content area was assigned from the initial list when possible. However, if several papers emerged with the same theme for which no content area was available, a new content areas was added to the list.

The table of institutions was built based upon author affiliations. As authors were added to the author table, their corresponding institutions were added to the institution table. Institutions were coded by type (educational or non-educational) and location. An institution’s location was not always evident from an author’s affiliation listed in the program. An Internet search was used whenever needed to complete the location field for an institution. For some non-educational institutions, the location could not be reconciled.

The authors each coded half the data independently. They then reviewed each other’s entries to identify differences in how to code data. Whenever there were differences in coding choices,

the authors worked together to make a final choice. The most frequent resolutions were the content area choices since papers could often fit in more than one category.

After entering the paper, author, and institution data, MS-Access queries were used to obtain answers to the research questions.

## DATA ANALYSIS

Table 1 provides a summary of the conference location, number of papers, and paper length (full or abstract) for each year of the decade in review. Notable years include 1995, the first international conference in Toronto, and 2000, the first publication of *Issues in Information Systems*. It is probably no surprise that the peak year for paper presentations was 1998 in Cancun. While there is no steady upward trend, clearly the number of papers presented at IACIS conferences increased from the start to the end of the decade.

Table 2 shows the distribution of papers by focus (pedagogical vs. research) for full papers only. For example, of the 43 full papers in 1991, 22 were pedagogical. The percentage of pedagogical papers ranges anywhere from about one-fourth to one-half of papers presented, with no clear trend in direction.

**Table 1. Paper Profile by Year**

Year	Conference Location	No. of Papers	Length		
			Full	Abs	NA
1991	San Francisco	46	43	1	2
1992	New Orleans	48	43	4	1
1993	Las Vegas	54	48	5	1
1994	Washington D.C.	56	33	14	9
1995	Toronto	80	66	9	5
1996	Las Vegas	88	76	12	0
1997	St. Louis	59	50	7	2
1998	Cancun	108	91	17	0
1999	San Antonio	60	51	9	0
2000	Las Vegas	76	75	1	0
<b>Decade Totals</b>		<b>675</b>	<b>576</b>	<b>79</b>	<b>20</b>

**Table 2. Paper Focus (Full only)**

Year	No. Full	Pedagogical	Research
1991	43	22 (51%)	21 (49%)
1992	43	16 (37%)	27 (63%)
1993	48	11 (23%)	37 (77%)
1994	33	9 (27%)	24 (73%)
1995	66	16 (24%)	50 (76%)
1996	76	29 (38%)	47 (62%)
1997	50	17 (34%)	33 (66%)
1998	91	38 (42%)	53 (58%)
1999	51	20 (40%)	31 (60%)
2000	75	20 (26%)	55 (74%)

## Institutional Data

Table 3 shows the total number of institutions represented by authors each year along with the distribution by origin (US or non-US) and type (educational or non-educational). The first four years show a consistent number of institutions participating in IACIS; starting in 1995 (Toronto), the numbers increase, with dips in 1997 (St. Louis) and 1999 (San Antonio). While location will always impact levels of participation, clearly the number of institutions represented at IACIS has increased over the decade.

Beginning in 1995, with the exception of 1997, the number of non-US institutions represents 10% or more of the total institutions. The "I" in IACIS truly became a reality in the latter half of the decade examined.

**Table 3. Institutional Profile**

Year	No. of Institutions Represented	Origin			Type		
		US	Non US	NA	Educ	Non Educ	NA
1991	50	48	2 (4%)	0	49	1	0
1992	45	44	1 (2%)	0	42	3	0
1993	48	47	1 (2%)	0	45	3	0
1994	48	45	2 (4%)	1	47	1	0
1995	77	55	22 (28%)	0	74	3	0
1996	79	66	13 (16%)	0	73	6	0
1997	57	52	4 (7%)	1	52	4	1
1998	93	77	15 (16%)	1	87	6	0
1999	49	43	6 (12%)	0	47	2	0
2000	73	65	7 (10%)	1	64	9	0

Table 4 contains the names of institutions that frequently appeared on IACIS programs in the 1990s for full papers only. The second column identifies the number of papers with an institution's name over the ten-year period. The last column identifies the number of times an institution was associated with an author; if a paper has co-authors from the same institution, both are included in the count.

**Table 4. Institutions Frequently on Program (Full Papers Only)**

Institution	No. of Papers with Institution	Institution	No. of Authors with Institution
James Madison University	27	James Madison University	53
U of Wisconsin, Eau Claire	24	Central Michigan University	42
Central Michigan University	21	U of Wisconsin, Eau Claire	37
Purdue University	19	Oklahoma State University	36
Bryant College	19	Bryant College	30
Oklahoma State University	16	Robert Morris College	29
Utah State University	15	Purdue University	24
Bradley University	13	Utah State University	22
U of Northern Colorado	10	Nicholls State University	22
Minot State University	10	Bradley University	19
Nicholls State University	10	U of South Alabama	19

With the exception of two institutions, all schools appearing in the left-hand side of the table also appear on the right.

### Authorship Analysis

Table 5 summarizes the number of authors per paper for full papers only. In parentheses, the percentage of the total papers is included. Single-authored papers range from 29% to 46% of IACIS conference papers, with no clear trend over the ten-year period. Perhaps the one noticeable pattern is an upward trend in the percentage of papers with three, four, or five authors. Combined percentages for the last three columns in Table 5 show that papers with three or more authors ranged from 14-21% through 1996. The combined percentage was higher for years 1997 through 2000 at 29%, 27%, 35%, and 31% respectively.

**Table 5. Number of Authors Per Paper (Full Papers)**

Year	No. Papers	1	2	3	4	5
1991	43	15 (35%)	19 (44%)	4 (9%)	5 (12%)	0
1992	43	14 (33%)	20 (47%)	9 (21%)	0	0
1993	48	22 (46%)	18 (38%)	7 (15%)	1 (2%)	0
1994	33	13 (39%)	15 (45%)	5 (15%)	0	0
1995	66	24 (36%)	30 (45%)	8 (12%)	3 (5%)	1 (2%)
1996	76	30 (41%)	34 (46%)	10 (14%)	0	0
1997	50	15 (31%)	20 (41%)	13 (27%)	1 (2%)	0
1998	91	31 (34%)	35 (38%)	20 (22%)	4 (4%)	1 (1%)
1999	51	15 (29%)	18 (35%)	16 (31%)	1 (2%)	1 (2%)
2000	75	26 (35%)	26 (35%)	16 (21%)	5 (7%)	2 (3%)

Table 6 shows the distribution of international authors by country. Twenty-one countries outside of the US are represented by authors during the decade. The years of 1995 (Toronto), 1996 (Las Vegas), and 1998 (Cancun) are particularly noteworthy in terms of international participation.

Some countries have appeared frequently on IACIS programs. Canada consistently appears on IACIS programs through most of the decade. Germany and Bahrain have a strong record of participation during the middle years from 1995 through 1998. China and Slovenia were active participants in the latter years of the decade.

### Program Content Analysis

Table 7 shows the distribution of papers by content area for each year. Twenty-two different categories emerged as part of the coding process. It is important to note that many of the papers examined could have been categorized in more than one area. The authors tried to select what they believed was the “first” area in these cases.

The large number of categories limits the content analysis to some extent. Most categories appear consistently across the ten-year period. Contemporary Issues and Distance Learning emerge as topics in the latter half of the decade. Contemporary Issues includes the Y2K papers that emerged as a hot topic as we moved toward the turn of the century. The appearance of Distance Learning as a category beginning in 1996 reflects the influence of Internet technology in instructional delivery.

**Table 6. International Representation**

Country	Number of Participants									
	91	92	93	94	95	96	97	98	99	00
Australia					4	8		2		
Bahrain					6	3	2	3		
Brazil								1		
Bulgaria					1	1				
Canada	2	2	1	1	2	6		5		
Chile						1				
China								3	5	6
Egypt					1					
France	3				3					
Germany					5	3	3	5	1	1
Latvia							1			
Mexico					2					
Netherlands					1					
Poland										
Russia					3					1
Slovenia						1		5	4	2
Taiwan				2		5		2		3
Turkey					1				3	
UK					2					
Venezuela					1					
Yugoslavia					4					
Total	5	2	1	3	36	28	6	26	13	13

**Table 7. Content Area Coverage (Full Papers Only)**

Content Area	Number of Papers										Tot
	91	92	93	94	95	96	97	98	99	00	
Analysis & Design	2	3	3		6	6		5	1	5	31
Business Processes/ERP				1	1	1	3	4	2	2	14
Communications/Networks	3	4	2	2	3		1	2	2	3	22
Contemporary Issues			1			5	4	1	4	4	19
Database	4	4	4	2	3	1	1	2	3	1	25
Distance Learning						2	3	10	3	8	26
DSS/Expert Systems	7	3	6	5	6	6	1	5	1	6	46
E-Commerce/EDI				1	1	2	2		1	2	9
End-User Computing	5	2	6		2	6		3	2	2	28
Ethics/Legal/Social	2	5	2	5	5	3	2	1	1	4	30
Globalization		1	4		8	3	4	3	1	3	27
Information Systems/Apps.	2	1	6	1	8	4	2	11		1	36
IT/IT Management	1	3	2		3	4	2	7	1	1	24
Instruction/Education	8	8	4	2	4	15	13	9	18	12	93
Internet/Web/Email	1			2	3		2	5	2	2	17
Multimedia/Presentation/Pub	3	1	1	2	3	1		5			16
Personnel/Professional	1		2	4	4	3	6	1	3	4	28
Programming/Language/Soft	3	5	2		2	7	2	9	1	5	36
Projects/Teams		1				5	1	5		3	15
Quality				2	1				1	1	5
Security/Crime		2	4	1			1	1	3	5	17
Software Engineering				3	2	2		2	1	1	11
Total Papers	43	43	48	33	66	76	50	91	51	75	576

Collapsing content areas might simplify presentation of the data, but the wide range of interests on the part of IACIS participants would be lost. While the data does not allow for any easily identifiable trends, it does demonstrate the diversity of interest that IACIS embraces.

## **SUMMARY AND CONCLUSIONS**

The current study examined IACIS conference programs from 1991 through 2000 to establish a profile of papers, institutions, and participants. From the beginning of the decade to the end, the number of program papers has increased as well as international representation. The percentage of papers with three, four, or five authors showed an upward trend in the latter part of the ten-year period. Conference papers demonstrate a wide-range of interests on the part of participants and reflect relevant issues of the times. The authors plan on extending this study to cover a longer time period as well as other program and participant characteristics.

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