




# The 50 Year History of SACLA and Computer Science Departments in South Africa

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**Abstract.** The Southern African Computer Lecturers' Association (SACLA) is a formal association of academics involved in education, lecturing and teaching of Computer Science (CS), Information Systems (IS) and related Information Technology (IT) subjects at universities and other Higher Education Institutions throughout Southern Africa. SACLA celebrated 50 years of existence in 2021. The main activity of SACLA is an annual conference, where issues relating to CS, IS and IT education, teaching and research in Southern Africa are presented and discussed. Departments of Computer Science were established at several universities in South Africa during the period 1969 to 1970. SACLA started in 1971 as an initiative of IBM to "Teach the Teacher". The 50-year history of SACLA is presented in this paper, and academics involved in the first SACLA 4-day conferences shared memories and documentation. The paper presents an overview of the 50 conferences hosted, related activities at conferences and the future of SACLA.

**Keywords:** SACLA History · TECLA · CSLA · Computer Science Departments

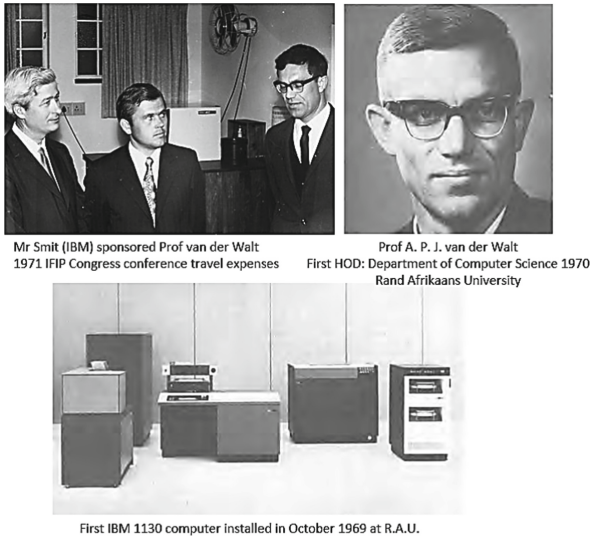
## 1 South African Computer Science Departments

Computer Science as a discipline began in the 1950s and early 1960s. The world's first Computer Science degree programme, namely The Cambridge Diploma in Computer Science, began at the University of Cambridge Computer Laboratory in the United Kingdom in 1953. The term Computer Science was created by George Forsythe, a numerical analyst. The first Department of Computer Science was formed at Purdue University in 1962 [16]. The first person to receive a PhD from a Computer Science department was Richard Wexelblat, at the University of Pennsylvania in December 1965.

The first FORTRAN compiler was developed in April 1957. LISP, a list-processing language for artificial intelligence programming, was invented in 1958 [16]. New programming languages, such as BASIC was invented in the 1960s, and during this time, we saw the rise of automata theory and the theory of formal languages. A rigorous mathematical basis for the analysis of algorithms began with the work of Donald E. Knuth, author of a 3-volume treatise entitled *The Art of Computer Programming* [16]. The 1970s saw advances in databases' theory, and Edgar F. Codd made significant contributions to relational databases.

In South Africa, several Computer Science departments were established during the late 1960s and early 1970s. At the University of Stellenbosch, the Department of Mathematics in 1969 introduced a one year course in Computer Science and in 1970, the Department of Computer Science was established with Professor George Murray as its first head of department (HOD) [6]. Professor D. G. Parkyn was head of the Applied Mathematics department at the University of Cape Town (UCT) until 1970 when he became acting head of the newly formed Computer Science Department. The computer hardware in 1970 at UCT consisted of an IBM 1130 with 16k memory, two 512k disk drives and a graph plotter. The first Computer Science I course at UCT included modules on machine organisation, Assembler and FORTRAN programming techniques and Information Structures and applications. The Computer Science II in 1971 included modules on Systems analysis, COBOL, ALGOL, Operating systems, Compiler construction and Formal languages. A lecturer at Glasgow University, Professor Ken MacGregor was appointed as Senior Lecturer at UCT in 1973. Professor Sonia Berman joined the department in 1982, and Professor Pieter Kritzinger joined in 1986 and became HOD in 1988 [17].

Professor A.P.J. der Walt was appointed in 1970 as Chairman of the Department of Computer Science at the Rand Afrikaans University (RAU) (Fig. 1). The Rand Afrikaans University, today called the University of Johannesburg (UJ), installed an IBM 1130 in October 1969, shown in Fig. 1.



**Fig. 1.** RAU first HOD and the IBM 1130.

In 1971, IBM sponsored Professor van der Walt's travelling expenses to attend two international conferences related to Computer Science. The first was the "International Symposium on the Theory of Machines and Computations", which took place in Haifa, Israel and the second, the "IFIP Congress 71", was held in Ljubljana, Yugoslavia. It was

the first time a representative of a South African university participated in one of three annual computer conferences [5].

In 1967, the University of South Africa (UNISA) was the first South African university to offer Human-Computer Interaction (HCI) courses at the under-graduate and post-graduate levels. It instituted a course to train students in the field of Computer Science. The Department of Computer Science in 1970 included Prof R.H. Venter (HOD), Prof C.H. Bornman and Mr G. de V. de Kock and Dr G.J. Joubert as Senior Lecturers. In 1970, UNISA received a grant of R40,000 from International Computers South Africa PTY. Ltd. (ICL) to establish a fellowship scheme to alleviate the country's severe shortage of computer scientists [9]. During 1973, the number of first-year Computer Science students grew to 1,821. At his inaugural lecture in 1975, Prof Chris Borman stated that "The computing education provided by the universities is inadequate to the needs of industry. The Computer Science graduates had learned too much about Numerical Methods Theories of computation, and they were fluent in every computer language except English. However, they did not know how to apply the concepts they had learned to the typical commercial environment" [9]. In 1980 a new course, COBOL (Commercial Programming Course), was introduced to produce professional, well-trained programmers ready to enter the job market.

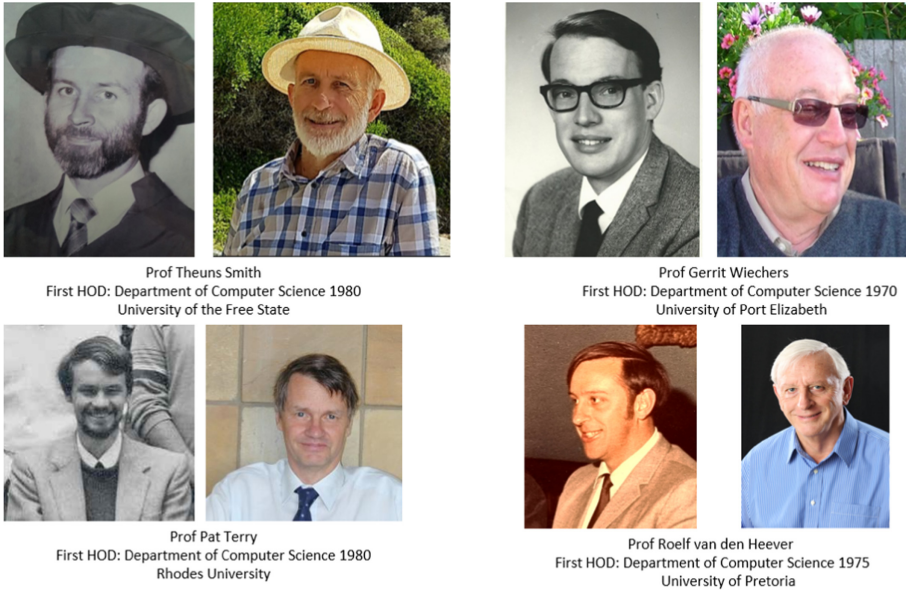
Rhodes University (RU) acquired its first computer in 1966, and Computer Science was first introduced as a major subject under the auspices of the Department of Applied Mathematics in 1970, and a separate Computer Science department was established in 1980 [20]. Professor Pat Terry was the first HOD for the Computer Science department (Fig. 2).

At the University of the Free State (UFS), Computer Science was first presented in 1973 as a course in the Department of Statistics. In 1980, The Department of Computer Science and Information Systems was established with Professor T.H.C. Smith appointed as HOD (Fig. 2). In 1983, the HOD was Professor Theo Mc Donald until 1987 when Professor Hans Messerschmidt was appointed HOD [7].

In 1969, after completing his PhD at the University of California, Berkeley, Professor Roelf van den Heever (Fig. 2) returned to South Africa to establish what has grown into the Department of Computer Science at the University of Pretoria (UP) [12]. In those days, Computer Science was presented under the auspices of the Department of Statistics. However, in 1975 it broke away to form an independent entity within the Faculty of Natural and Agricultural Sciences. Professor van der Heever was HOD from 1969 to 1997. The first graduates received their BSc Honours degrees in Computer Science in 1971 [10].

The North-West University (NWU), formerly known as the Potchefstroom University for Christian Higher Education, installed an IBM 1130 in September 1967 in the Computer Center. A second IBM 1130 was purchased in 1970/1971, and the Department of Computing Science was established. The first Computer Science courses at the second-year level were presented in 1971, with Professor Hannes de Beer appointed as HOD. In 1973 a Computer Science Honours degree was introduced, followed by MSc and PhD degrees in 1974 [18].

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**Fig. 2.** Departments of Computer Science HODs

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The first call for establishing a Computer Science department at the University of Port Elizabeth (UPE), now known as the Nelson Mandela University (NMU), was made in 1968 by Professor Gerrit Wiechers, Head of the Department of Applied Mathematics, in a speech during a Senate meeting (Fig. 2). In 1969, the Council of UPE agreed to establish a Computer Center; after that, a Computer Science Department was approved for subsidy purposes. A contract was signed for the lease of an ICL 1901A mainframe computer at R1200 per month. This computer was used for administrative, research and teaching purposes [13]. The first HOD of Computer Science was Professor Gerrit Wiechers. He was the only lecturer, teaching 18 first-year students and two honours students in 1970. In 1975, Professor Gideon de Kock was appointed as HOD and remained for 30 years.

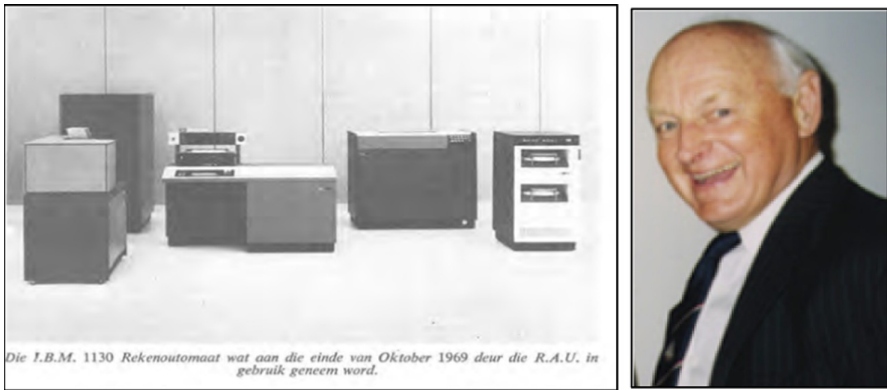
## 2 SACLA First Meetings

International seminars on the teaching of Computer Science were an initiative that arose from an initiative by the then Director of the Computing Laboratory at Newcastle University [11], Professor Ewan Page, who had attended a similar, but once-off event organised by IBM in Paris in 1968. These annual four-day seminars continued for 34-years at the University of Newcastle [11]. They brought together an invited audience of senior UK and European computing academics to hear a series of presentations from distinguished



international speakers. Each seminar concentrated on a particular theme (Fig. 4), usually a major Computer Science research domain. A small group of speakers each gave one or more lectures reviewing their own and other contributions to the development of the Computer Science curricula. The 4-day seminars at the Newcastle University, 1968–1971 included speakers, such as Niklaus Wirth, Ed Coffman, Don Knuth and Edsger Dijkstra. The topics covered by different presenters mainly focused on the teaching of Computer Science (Fig. 4). Links to the seminar topics, presenters and the papers for the period 1968 to 2001 are provided on the University of Newcastle website [11].

The Southern African Computer Lecturers' Association (SACLA) [14] was established 50 years ago by academics and IBM, an industry computer mainframe supplier. Initially, the association was called the Computer Science Lecturers' Association (CSLA). The CSLA documents published in 1982 and 1983 (Fig. 7) displayed the CSLA name; however, in 1984, the conference was called SACLA.



**Fig. 3.** IBM 1130 mainframe and Ewan Page, guest speaker and lecturer 1970–1973.

The South African academics involved with the first CSLA meetings were Roelf van den Heever [19] and the late Dewald Roode. CSLA was initially an informal association of academics involved in education, lecturing, and teaching Computer Science. The main activity of CSLA was an annual conference, which started in 1973.

In the 1970s, IBM in South Africa started an initiative called “Teach the Teachers”, where they brought out lecturers from the UK to give a week’s classes to everyone who was embarking at that time on teaching Computer Science. In 1970, RAU, NWU and UCT were using an IBM 1130 mainframe computer with punch cards (Fig. 3). The first CSLA Conferences (4-day meetings) focused on Computer Science curricula, presentation methods and practical work [2].

The first three CSLA seminars were held in the Engineering building of Stellenbosch University, where the Department of Computer Science is now housed [2]. The CSLA seminars followed a similar format as the “Teach the Teachers” initiative presented at Newcastle University and was sponsored by IBM. The four-day conference consisted mainly of lectures presented by Professor Ewan Page and other academics from the UK,

including Professor David Barron from Southampton University. He spoke on programming languages PL360, a system programming language designed by Nicklaus Wirth in the 1960s [2]. The conference delegates were “everyone who was embarking at that time on teaching Computer Science” [2].

Newcastle International Seminars - On The Teaching Of Computing Science: 1968—2001			
1968 — Computer Science		1970 — The Teaching of Programming at University Level	
D. T. Ross	Data Structure and Storage Management	E. W. Dijkstra	The Art of Programming
N. Wirth	Teaching Compiler Design — Outline of a Proposed Course	D. E. Knuth	The Analysis of Algorithms
D. N. Freeman	A Study of Stack Architecture in Control Program Design	K. E. Iverson	The Use of APL in Teaching
J. du Masle	Software Teaching and Research at the University of Grenoble	M. A. Jackson	The Construction of Algorithms in a Commercial Programming Environment
E. S. Page	Constraints on Teaching in Computing Science	W. C. Lynch	The Creation of Systems Programmers
1969 — On the Teaching of the Design of Large Software Systems		1975 — Computers and the Educated Individual	
B. W. Arden	Multi-Processing Systems	W. A. Clark	The Basis of Present Computer Design
A. B. Cleaver	Systems Evaluation	P. C. Goldberg	The Future of Programming for Non-Programmers
C. J. Bell	Information Systems	F. J. M. Laver	Computers and Society
E. G. Coffman Jr	Formalism in Computer System Design — Models of Parallelism and Concurrency	P. Naur	An Adaptable course of Elementary, University Level, Computer Science
K. I. McKenzie	The Problem of Debugging the Large On-Line System	A. W. Holt	Formal Methods in System Analysis

Fig. 4. Speakers and topics presented 1968–1975.

Figure 5, supplied by Professor Judith Bishop [2], shows the 1972 CSLA conference representatives. First, seated in front are Professor Page and other IBM representatives. Next, standing sideways, Professor Judith Bishop and Professor Basie von Solms are to the right in the picture. Forty-eight delegates attended the 1972 conference.




The first 15 years of CSLA conference organisers are shown in Fig. 6. Professor Page was the guest speaker at the first three seminars that focused on Computer Science curricula, teaching programming and computer design. The sponsors of the first SACLA conferences were mainly IBM; however, in later years, other sponsors were Burroughs, ICL, NCR and Univac (Fig. 6). The late Professor Dewald Rhoode and Professor Roelf van den Heever from the University of Pretoria were responsible for organising the conferences at Golden Gate from 1974 to 1976 [8].

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Professor Roelf van den Heever [19] indicated that many SA universities started Computer Science programs in the early 1970s. Computer Science was a brand-new



**Fig. 5.** Attendees at CSLA meeting in 1972 (Source: Judith Bishop).

HISTORY OF SACLA						
	Year	University	Chair(S)	Guest Speaker	Sponsor(S)	Venue
 Ewan Page	1971			Ewan Page	IBM	Jan Smuts
	1972			Ewan Page	IBM	Senator, Bellville
	1972			Ewan Page	IBM	
	1974		R Venter		IBM	Golden Gate
			D Roode			
 Don Cowan IBM	1975		R Venter		Burroughs	Golden Gate
			D Roode			
	1976		John Shochot		Univac	Golden Gate
	1977		John Shochot	David Barron	ICL	Hunter's Rest, Rustenburg
	1978		Ken MacGregor	B Mittman	CDC	Hunter's Rest, Rustenburg
	1979		Judy Bishop		Univac	Golden Gate
	1980		Judy Bishop		Univac	Golden Gate
	1981				Burroughs	Gordon's Bay
	1982		Dennis Rordan	Henry Lucas	ICL	Wigwam, Rustenburg
	1983		Edwin Anderson	C Wogrin	CDC	Transkei Holiday Inn
 Henry Lucas Prof IS: MIT	1984		Alan Sartori-Angus		Univac	Hluhluwe
	1985		Stef Postma		NCR	Kimberley

**Fig. 6.** First SACLA conferences and organisers 1970–1985.

field, as witnessed by introducing the first model curriculum, called “CURRICULUM 68 Recommendations for Academic Programs in Computer Science”. This was a report of the ACM curriculum committee on Computer Science. The workshops organised by IBM during 1970, 1971, and the start of 1973 were well received and significant interest in cooperation and collaboration amongst SA computer scientists was a natural consequence. In 1973, Roelf van den Heever approached IBM for financial assistance for the Golden Gate gathering of 26 interested CS leaders from all SA universities. Roelf got in touch with Dewald Roode (RAU) and Gerrit Wiechers (UNISA) to form a coordinating committee [19].

The final session at the 1974 Golden Gate conference was under the chairmanship of Derek Henderson [19]. The purpose was to plan further activities. The following decisions were made:

- Dewald Roode, Roelf van den Heever and Gerrit Wiechers were elected to form an Executive Committee;
- George Murray (US) was given the task of determining the minimum requirements for Computer Science education and verifying that these agreed with what the outside world was expecting;
- Rolf Braae (Rhodes) was tasked with putting forward proposals for new topics that should be covered in the Computer Science curriculum; and
- Gerrit Wiechers (UNISA) was tasked with taking care of the general duties of liaison, including the investigation of extension courses, liaison with colleges of advanced technology and liaison with the Department of Education.

Here are some quotes from notes that were taken during the concluding session [19]:

- “Will teaching staff, as well as heads of Computer Centres at Universities, be eligible for membership of our group?”
- “The executive committee will give more details on who will be eligible for membership. We ought to give attention to giving the group a name but must be careful so that nobody would be excluded from future enhancement of the group.”

The meeting decided to postpone a decision on a name for the Group until the third sub-committee had met with the Computer Society. For the time being, the Group will go under the name of “Work Group for Computer Education” – Afrikaans: “Werkgroep vir Rekenaaropleiding”. Concluding remarks by chairman Henderson: “I should like very much to express on behalf of all of us our enormous appreciation of IBM’s willingness to sponsor this conference we have had at Golden Gate. Secondly, I should like to thank Professors Wiechers, Roode and van den Heever for their initiative, enthusiasm and work. We owe an enormous amount of gratitude to these people.”

The Chair of the 1978 CSLA conference was the late Professor Ken MacGregor from the University of Cape Town (Fig. 6). In 1979, Don Cowan was at Waterloo University, Canada, an expert on WatFOR – a fast Fortran compiler for IBMs. Professor Bishop states, “He was a great speaker and helped many students after that. However, the topic was slightly controversial as Wits was using Pascal!” [2]. In 1982 Professor Henry Lucas, a Professor in Information Systems at MIT was the guest speaker. The author contacted him via email. However, he indicated that after 50 years, he could not recall the topic. He remembered that Jonathan Miller from the UCT Business School invited him.

The conference chair in 1982 was Professor Denis Riordan from Rhodes University, the HOD from 1980 to 1981, who later left to go to Canada in the 1990s. Professor Alan Sartori-Angus, conference chair in 1984, was at Rhodes for several years in the 1990s [3].

### 3 CSLA News Publications 1982 and 1983

Edwin Anderson [1], the Chairman of the Computer Science Lecturers' Association (CSLA) in 1983, provided copies of the CSLA News published from 1982 to 1983, as shown in Fig. 7. The newsletters contained conference news, news relating to different departments, and the results of an annual survey of mainframe equipment used in one issue. In addition, student access to micro-computers and other facilities, such as scanners, etc., was included. The publication also included the conference programme and a list of all universities and technikons, including all personnel working in Computer Science and other related departments. The November 1982 edition focused on curriculum design and listed each university and the programmes offered. The March 1983 issue focused on the conference and included a list of the prescribed books used for different courses by universities and technikons.

The newsletter also contained information relating to departments; for example, the September 1982 letter indicated that Professor Judy Bishop from WITS Computer Science department reported an R100 000 donation to purchase a VAX-370 system with 12 terminals for use by personnel and senior students. Professor Trevor Crossman, WITS Business Information Systems Department, was promoted, and WITS changed their Business Information Systems course from two years to three years. Professor Theuns Smith returned after seven months of database research at the University of Pennsylvania; Professor Sartori-Angus from Rhodes joined the University of Natal. These four publications have been professionally scanned and placed on the SACLA website [14].

The newsletter provided a list of SACLA members, academics working in the different departments at various universities from 1983 to 1984. One hundred delegates attended the 1983 conference. Professor Sonja Bergman, conference chair in 1986, is listed as a Junior Lecturer at UCT, together with the late Professor Ken MacGregor and Professor Keith Mattison, then a Senior Lecturer. Staff were listed from universities, such as Fort Hare, Natal, University of the North, Potchefstroom, UPE, RAU, US, WITS and Rhodes. Professor Philip Machanick was a junior lecturer at WITS.

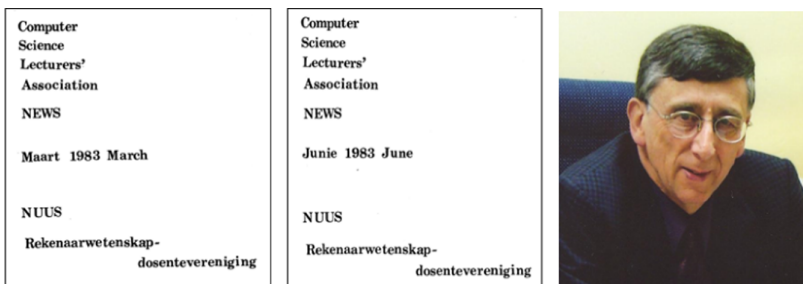


Fig. 7. CSLA 1983 news. Picture of Edwin Anderson.

## 4 TECLA and HEICTA

The CSLA March 1983 newsletter indicated that two topics would be discussed at the 1983 annual conference: each department's approach to research and the future development of Computer Science and the role of universities and technikons. The conference programme indicated that each department had to send a representative to present the department's research areas. Professor Roelf van den Heever and Professor Denis Riordan were the two speakers to summarise the research conducted in South Africa. The conference programme also indicated that Professor Dewald Roode (UP) would provide an overview of the role of Computer Science at universities, and Mr Hennie Groenewald (Pretoria Technikon) would lead the discussion from a Technikon viewpoint.

At the SACLA conference AGM in 1984, held in Hluhluwe, Natal, South Africa, a heated debate between academics from universities offering CS degree programmes and technikons offering IT diploma programmes. Professor Rossouw von Solms [23] indicated that the technikons at that time only had observer status at SACLA without any voting rights. This discussion at the AGM resulted in the academic members from the Technikons in South Africa being disassociated from SACLA.

Professor Rossouw von Solms initiated the formation of an independent body with similar aims to SACLA, namely the Technikon Computer Lecturers Association (TECLA), in 1989, and he was the first President of TECLA [4, 23]. The primary purpose of TECLA was to have an annual conference where the Technikon academics discussed the various IT diploma programmes and curriculum content in South Africa. However, TECLA ceased to exist when the South African Government introduced new university structures in 2005 and amalgamated six technikons and specific universities, forming six comprehensive universities and creating eight Universities of Technology.

A new body, Higher Education Information and Communication Technology Association (HEICTA), was established in 2006 and was also involved with industry liaison and diploma programme curriculum topics. For several years, it provided collaboration among IT departments offering IT diplomas and liaised with the industry. However, HEICTA gradually ceased to exist. Professor Bennett Alexander of CPUT was the president of HEICTA. Documentation on the functioning of HEICTA was found by the authors dating back to 2013 [4]. After then, HEICTA members have not met annually, and currently, all academics from all universities involved in IT education in Southern Africa are members of SACLA. All institutions offering IT diplomas are now responsible for registering their qualifications with the South African Qualifications Authority (SAQA).

The minutes of the SACLA AGM on 28 June 2002, organised by Rhodes University, indicated that "Kevin Johnston proposed that the current SACLA committee contact TECLA to initiate a merger. It was also proposed that the 2003 SACLA committee invite TECLA members to attend the conference in June 2003". The minutes of the AGM held at Pilanesberg National Park on 1 July 2003, Chaired by Tom Addison from WITS University, again indicated under point 9 - Technikon Considerations that "The idea of inviting technikons (and other institutions) needs to be explored. The changing status of technikons might negate the issue. After some discussion on the advantages and disadvantages of inviting technikons, it was decided that there would be no specific drive



to invite them, but that there would be no problem with their attending. The committee should look at universities more generally/holistically”. A discussion to invite TECLA members were again included at the 2006 AGM. A resolution was adopted at the 2014 AGM that Technikon staff were included in the membership body.

## 5 SACLA Hosting Universities 1980 to Present

The Chair of the 1985 SACLA conference, held in Kimberley, South Africa, was Professor Stef Postma. Professor Sonja Bergman from the Department of Computer Science at the University of Cape Town was the conference chair for the 1986 conference held at the Amatola Sun, close to Bisho in the Eastern Cape, shown in Fig. 8. The 1988 SACLA conference chair was Professor Peter Warren from the University of Port Elizabeth, now the Nelson Mandela University and the 1992 conference chair was Professor Judith Bishop. The conference was held in Rustenburg, South Africa, and this was the third time Judith acted as conference chair. The sponsors during these years included ISM (IBM in SA), Unisys and Persetel.

Year	University/ Dept	Chair(S)	Guest Speaker	Sponsor(S)	Venue
1984		Alan Sartori-Angus		Univac	Hluhluwe
1985		Stef Postma		NCR	Kimberley
1986		Sonja Berman		Persetel	Amatola Sun, Bisho
1987		Gavin Finnie	Niklaus Wirth	IBM	Palms, Pretoria
1988		Peter Warren		Unisys	Wilderness
1989		P J Bruwer		NCR	Dikhololo
1990		J P du Plessis		Siltek	Thaba Nchu
1991		Mike Linck	Ed Koffman	ISM	Overberg, Caledon
1992		Judy Bishop	Vint Cerf, Austin Melton	Persetel	Safari, Rustenburg
1993		Martha Pistorius		Unidata	Hunter's Rest, Rustenburg
1994		Hiemie Ossthuizen		Olivetti and Digital SA	Magoebaskloof
1995	Rhodes, Dept of Computer Science	Peter Clayton, Peter Wentworth	Tim Fossum	Dexel and Digital SA	Katberg, Eastern Cape

Fig. 8. SACLA hosting 1986 to 1995

In 1987, the guest speaker was Niklaus Wirth, a Swiss computer scientist. He has designed several programming languages, including Algol and Pascal. He also worked in the field of Software Engineering, and in 1984, he received the Association for Computing Machinery (ACM) Turing Award for the development of various computer programming languages. In 1991, the guest speaker was Ed Koffman from the Mathematics Research Center of Bell Laboratories. Ed was the author of various Computer Science textbooks and received the SIGCSE Outstanding Contribution Award in 2009, specifically for “helping to shape Computer Science education”. Finally, Tim Fossum from the Computer Science Department at the University of Wisconsin was the keynote speaker in 1995 (Fig. 8).





	Year	University/ Dept	Chair(S)	Guest Speaker	Sponsor(S)	Venue
 Peter Clayton	26	1996	J D Roode	U Ngwenyama, M De Rijke	Lybrand, Digital SA, Dexel	Bakubung, North West Province
	27	1997	UPE  Andre Calitz	Peter Clayton, Gregory Williams	UPE, Unisys, Intekom, Compustat, SAP, Maskew Millar Longman	Wilderness
	28	1998	US Regg Dodds			Stellenbosch
 Jan Paredaens	29	1999	UOFS T McDonald, P J Blignaut	Jan Paredaens	Sun, ABSA, Africa PQ	Golden Gate
	30	2000	Stan Shear		Microsoft, Oracle, ABSA	Golden Gate
	31	2001	UP Nicolet Ros	Sarah Douglas	Microsoft, Oracle, ABSA	Sizanani, Bronkhorstspuit
 Herman Venter	32	2002	Rhodes John McNeil	L Scott- Williams, W du Plessis, A Marais	Microsoft, Oracle, ABSA	Fish River, Eastern Cape
	33	2003	Wits Tom Addison	H Venter, M Coppin	Microsoft, Oracle, Gentron Computers, Wits	Manyane Camp, Pilansburg
					Microsoft, Antalis, CKB, Sechaba Technology Services, Pearson Education, Oracle	

Fig. 9. SACLA hosting 1996 to 2003.


The 1996 conference was chaired by the late Professor Dewald Rhooode, his third time as conference chair (Fig. 9). The author’s first time as conference chair was in 1997 when SACLA 1997 was held in the Wilderness. Professor Peter Clayton from Rhodes was the guest speaker, and Professor Reg Dodds chaired the 1998 conference. Professor Pieter Blignaut was conference chair in 1999, and the guest speaker was Professor Jan Paredaens from the University of Antwerp in Belgium. He was the author of various books on programming languages, data structures and relational databases.

The first AGM minutes stored on the SACLA website (Fig. 10) were the Minutes of the 2001 AGM. Professor Derrick Kourie from UP chaired the meeting. The financial report indicated that R160 000 was obtained in sponsorships from Microsoft, Oracle and ABSA. The treasurer for the conference was Dr Linda Marshall from the Department of Computer Science at UP.

The 2002 conference was held at the Fish River Sun and was organised by RU. One hundred and ten delegates attended the conference. Professor Herman Venter, formally an academic in the Department of CS&IS at UPE, was the guest speaker at the SACLA 2003 conference. Tim Addison was the conference chair, and the conference took place in Pilanesberg nature reserve, South Africa (Fig. 9).


UKZN hosted the 2004 conference. At the 2005 conference, the guest speaker at the Mowana Safari Lodge in Botswana was Professor Frank Youngman, who specialised in adult education. The AGM minutes dated 5 July 2005 indicated that 34 delegates attended the AGM. The AGM minutes indicated that the Technikons do not exist anymore and “SACLA has removed all impediments in the way of Technikons so that Technikon academics can submit any number of their papers”. It was further suggested that a body be formed to represent the interest of academia.

**Southern African Computer Lecturers' Association  
SACLA 2001**



**Minutes of the Annual General Meeting  
held at 14:30 on 29 June 2001 at Sizanani**

- Attendance**  
Roundabout forty delegates attended the AGM.
- Welcome**  
**Prof Derrick Kourie** from the Department of Computer Science, welcomed everyone present on behalf of the organising committee.
- Minutes of SACLA 2000 AGM**  
The minutes of the AGM for SACLA 2000 were distributed and adopted.
- Chairman's report**  
Prof Kourie thanked the organising committee for their hard work and the sponsors, Microsoft, Oracle and ABSA, for their generous contributions.  
  
A question was raised with regard to sponsorships. The organising committee did not need to ask for sponsors, since they were contacted by them well in advance. During December 2000, Microsoft had already committed to support SACLA 2001.



**5. Financial report**

<b>Income</b>	
Sponsorship	R 160,000.00
From SACLA 2000	R 15,000.00
Conference Fees	R 10,420.00
Other	R 1,000.00
<b>TOTAL</b>	<b>R 186,420.00</b>
<b>Expenditure</b>	
Accommodation, meals and dinner	R 55,968.81
Printed Matter	R 10,598.89
Gifts, wine etc.	R 21,100.54
Entertainment	R 2,500.00
Transport	R 1,400.00
Support Staff	R 23,000.00
Donation to Sizanani Trust	R 10,000.00
Other	R 4,950.00
To SACLA 2002	R 15,000.00
<b>TOTAL</b>	<b>R 144,518.24</b>
<b>Difference (Income - Expenditure)</b>	<b>R 41,901.76</b>
<b>Current Balance</b>	<b>R 41,996.00</b>
<small>(No interest or service fees have been taken into account)</small>	
<small>Prepared by Linda Marshall - 21/06/2002</small>	

**6. General**  
All attendees supported a motion to especially thank the UP team for a very well-organised and successful conference.

**7. 2002 Conference and Organising Committee**  
Rhodes University will host the SACLA 2002 conference but John Roberts will first confirm this with his colleagues since he is the only Rhodes representative at SACLA 2001. The IS department of Wits will serve as "backup host".

**8. Closing**  
Prof Kourie wished everybody a safe journey home and declared the meeting closed.

Fig. 10. SACLA 2000 AGM minutes with Chair Professor Derrick Kourie.







	Year	University/ Dept	Chair(\$)	Guest Speaker	Sponsor(\$)	Venue	
 Prof F. Youngman Botswana Univ	34	2004 UKZN	Manoj Maharaaj	Simon Turner	Hewlett-Packard, Wiley Publishers, Eclipse Networks, Telkom, ETA Audiovisual	Rob Roy Hotel, Botha's Hill	
 Michael Luck	35	2005 Univ of Botswana	Sampson Asare	Prof F Youngman	Univ of Botswana, Botswana dept of IT, Ministry of Comm, Science, Tech, Air Botswana, ICL, Botswana Technology Centre, Microsoft, DCDM Consulting, Botswana dept of Tourism	Kasane, Botswana	
 Heikki Topi	36	2006 UCT	Jean-Paul van Belle	Viola Manuel	BULL, Microsoft, Oracle, NBN	Somerset West	
	37	2007 Univ Zimbabwe	Bayeza Mangena	Michael Luck	Microsoft	Elephant Hills, Zimbabwe	
	38	2008 UNISA				Berg-en-Dal	
	39	2009 Rhodes IS and CS	John MacNeil	Derek Smith	ABSA, Microsoft, Cengage Learning	Mpekwani Beach Resort	
	40	2010 UP IS	Pieter Joubert	Heikki Topi	Oracle, Microsoft and Cengage Learning	Zebra Country Lodge	
	41	2011 UKZN	I Govender			Fairmont Zimbali Resort	
	42	2012 UFS IS and CS	Eduan Kotze	Johannes Cronje	Microsoft, Dell, Oracle, UFS	Black Mountain Leisure & Conference centre	
	43	2013 Univ of Botswana				cancelled	

Fig. 11. SACLA hosting 2004 to 2013.

UCT and Professor Jean-Paul van Belle hosted the 2006 conference as the conference chair (Fig. 11). The minutes of the 2006 AGM included the agenda item "Establish a more permanent/formal SACLA body". Tom Addison initiated this discussion by highlighting the problems experienced with the current SACLA modus operandi. He mentioned that he had been observing problems with organising SACLA conferences over the last few years. Most of these were due to the lack of continuity when a new

host university assumed the role of Chairman and executive committee. The concerns raised included “Delays of 11 months in receiving the previous year’s minutes and seed money”, ignorance on hosting a conference, no forward plan for future hosting and “Every new host has to open a new bank account”.

Tom Addison proposed a three-person executive committee, Chair of the incoming host, a nominee of the outgoing committee and one other member. He informed the meeting that the constitution of SACLA stipulates a 3-person Exco, but this has never been implemented. It was agreed that an Exco was formed at the meeting, and the following members were elected unanimously: Tom Addison, Jean-Paul Van Belle (SACLA 2006) and Mthulisi Velimpini (SACLA 2007). A competition to create a standardised SACLA logo was also proposed, and a permanent SACLA bank account was created.

The 2007 conference at the Victoria Falls, Zimbabwe, was attended by 9 South African delegates, namely I. Brown, V. Midze, R. von Solms, B. von Solms, J. Greyling, V. Pieterse, L. Goosen, W. Nel and J. van Biljon. The guest speaker was Professor. Michael Luck, a computer scientist, based at the Department of Computer Science, King’s College London, England. His research includes intelligent agents and multi-agent systems, and he has over 300 publications.

The guest speaker at the 2009 conference held at the Mpekweni Beach Resort in the Eastern Cape was Professor Derek Smith from UCT. John McNeill was conference chair, and 50 delegates attended from 14 institutions. The theme of the conference was “Connecting Students to the Future”. Thirty-three members attended the AGM, and the discussions included the publication of the conference proceedings in a journal. It was agreed that the editor of SACJ, Lucas Venter, would be approached.

The UP Department of Informatics hosted the SACLA 2010 conference from 3 to 5 June 2010 at Zebra Country Lodge just north of Pretoria, and the theme of the conference was “Scoring IT Education Goals in 2010”. The keynote speaker was Professor Heikki Topi from Bentley University, who spoke on the newly published IS2010 Changing the Course for Undergraduate IS Model Curricula.

Professor Irene Govender chaired the 2011 SACLA conference from the University of Kwazulu Natal, and Professor Eduan Kotze (UFS) chaired the 2012 conference. The 2012 conference was held at the Black Mountain Leisure and Conference Hotel. Thirty-two delegates attended the AGM, and it was recommended that Botswana University host the 2013 conference. However, the sponsors indicated that they could not sponsor SACLA if it is situated outside the RSA borders, and Botswana will have to find their sponsors (Fig. 11).

The 2013 SACLA conference was cancelled; thus, no official handover was made to a 2014 organising committee, leaving the future of SACLA uncertain. Having realised the cancellation of the 2013 conference, Andre Calitz, Brenda Scholtz, and Clayton Burger from NMU decided to host the 2014 conference. Arrangements were made to obtain the seed money from the Botswana University, and steps were taken to start putting more formal structures in place.

Twenty-one full papers and four short papers were presented at the 2014 conference, held in the Summestrand Hotel, Port Elizabeth. Professor Steve Burges from the NMU Business School was the keynote speaker. Ten sponsors, including book publishers, supported the conference. The conference also awarded the first Best Paper Award. Professor







 Steve Burges	Year	University/ Dept	Chair(S)	Guest Speaker	Sponsor(S)	Venue	 Emma Coleman
 Martin Olivier	43	2014 NMMU Dept of Computing	Andre Calitz, Brenda Scholtz, Clayton Burger	Steve Burges	Microsoft, Oracle, SAP, Imbizo-events, Syspro, BcX, Telkom, Korbitek, Pearson, Wiley	Summerstrand Inn, Port Elizabeth	 Linda Marshall
 Lisa Seymore	44	2015 Wits Info Sys	Emma Coleman	Denise Wood	Microsoft, SAP, Universities Alliances, Oracle, KPMG, Deloitte, AOS, Wits School of Economic and Business Science	The Maboneng Precinct	 Estelle Taylor
	45	2016 UP Comp Science	Linda Marshall <b>First Journal publication</b>	Martin Olivier, Bob Travics	IITPSA, Univ Pretoria	Cullinan	
	46	2017 NWU Comp Science and Info Sys	Estelle Taylor	Garndon Gill	Adapt IT, IITPSA, IBM, Oracle, SAP	Magaliesberg	
	47	2018 UCT Comp Science and Info Sys	Lisa Seymour	Richard Baskerville, Mark Horner	Oracle, IITPSA, SAP	Gordon's Bay	

Fig. 12. SACLA hosting 2013 to 2018.

Janet Wesson from the Department of Computing Sciences at NMMU announced the SACLA 2014 Best Paper. The SACLA 2014 Best Paper Award went to Romeo Botes and Imelda Smit of North-West University for their paper titled “Renewal of a typical database systems module with NoSQL data stores”.

The first HOD Colloquium was organised, bringing HODs together for discussions regarding the running of departments, staffing and common challenges experienced. Eleven HODs attended the colloquium with the assistance of 3 facilitators (Fig. 13).

The WITS Department of Information Systems hosted the 2015 conference, and Dr Emma Coleman was the conference chair. Guillaume Nel and Liezel Nel won the CS best paper award with their paper titled “Improving Program Quality: The Role of Process Measurement Data”, and Thabang Serumola and Lisa F Seymour won the IS best paper award with their paper entitled “Factors Affecting Students Changing their Major to Information Systems”. Dr Linda Marshall was the 2016 conference chair, and the first papers were selected for the journal publication that year. Professor Stefan Gruner from Pretoria assisted with the first Springer journal publication.

Professor Estelle Taylor from NWU chaired the 2017 conference, and Professor Martin Olivier (UP) was the guest speaker at the conference, speaking about computer forensics. Professor Lisa Seymour from UCT chaired the 2018 conference, held in Gordon's Bay. Seventy-seven papers were submitted, and 47 papers were accepted. Douglas Parry and Daniel Le Roux from Stellenbosch University received the conference's Best Paper Award for their “Off-task Media Use in Lectures: Towards a Theory of Determinants”.

The 2019 conference took place at the Alpine Heath Resort in the Drakensberg, South Africa. Professor Mac van der Merwe was the conference chair [21]. The conference proceedings were compiled by Professor Bobby Tait and Professor Jan Kroeze. Three workshops were offered before the main conference, Academic Writing for Junior Informaticians and Computer Scientists, a South African Computer Accreditation Board





**Fig. 13.** First HOD Colloquium held in 2014

meeting and the Amazon Web Services- Educate and Academy Programs. Susan Campher, the previous SACLA Treasurer, facilitated registering SACLA as a non-profit organisation, which was why a Money Market account was opened as it was a requirement. SACLA is now a registered non-profit organisation with Registration No: 231-955 NPO.

SACLA 2020 was the first SACLA virtual conference, chaired by Professor Karen Bradshaw and Dr Ingrid Siebörger from RU. The 2020 conference had initially been planned from the 6th to 8 July at the Mpekweni Beach Resort in the Eastern Cape. However, in April 2020, the organisers realised that it would not be possible to hold an in-person conference due to the COVID-19 pandemic starting with arrangements for a virtual conference (Fig. 15). The conference organisers presented various awards at the end of the virtual conference, “Person who participated the most”, “Delegate who asked the most questions” and Kudzai Katsidzira and Professor Lisa Seymour (UCT) won the Best Paper Award, with their paper entitled “Factors Impacting Using the Internet for Learning: The Digital Divide in South African Secondary Schools” [3] (Fig. 14).

SACLA celebrated 50 years of existence in 2021. The Academy of Computer Science hosted the SACLA 50th virtual conference and Software Engineering from UJ. The conference co-chairs were Professor Marijke Coetzee and Professor Wai Sze (Grace) Leung from UJ. The conference theme was *Post Pandemic Pedagogy* and focused on paper submissions that provided practical experiences and successes in computing education at a tertiary level to help CS, IS, and IT academics overcome challenges faced during the



Year	University/ Dept	Chair(S)	Guest Speaker	Sponsor(S)	Venue
2019	UNISA	Mac van der Merwe	Dolf Steyn		Alphine Resort, Northern Drakensberg
2020	Rhodes Comp Science and Info Sys	Karen Bradshaw, Ingrid Sierborger	Helen Purchase, Charles Young	IITPSA, Rhodes Univ, Pearson	Online COVID-19 CORONAVIRUS zoom
2021	UJ Academy of Computer Science and Software Engineering	Wai Sze Leung, Marijke Coetzee	Basie von Solms, Andre Calitz	IITPSA, Univ of Johannesburg	Online COVID-19 CORONAVIRUS
2022	US	Richard Barnett			
2023	NWU	Estelle Taylor			
2024	NMMU	Jean Greyling			
2025	UFS	Eduan Kotze			

Fig. 14. SACLA hosting 2019 to 2025.

COVID-19 pandemic. Professor Basie von Solms presented the Keynote address entitled ‘Computer Science – from then till now and into the future [22]. The conference was sponsored by the Institute for Information Technology Professionals from South Africa (IITPSA). In the IITPSA address at the conference, a call was made that the IITPSA consider a membership category for academics, called Professional Academic Member.

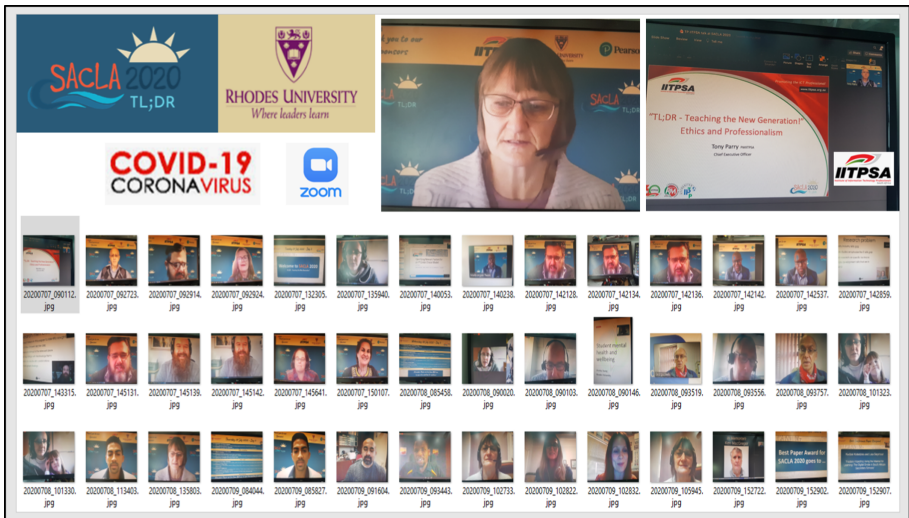


Fig. 15. SACLA 2020 virtual conference.

## 6 SACLA Paper Review Process, Publications and Conference Themes

The first call for papers for an annual SACLA conference usually takes place eight to nine months before the conference in the winter recess period in July each year. Full research papers and short papers are invited and are submitted using a double-blind peer-review process. Full papers and short papers, and position papers accepted after review are presented at the conference. SACLA conference proceedings with an ISBN number have been produced after the conference. At the 2009 conference AGM, delegates discussed the possibility of publishing selected papers in a journal and decided that the editor of SACJ, Professor Lukas Venter, would be approached. Since 2016, the SACLA conference organisers have produced two publications annually, namely:

- The SACLA Conference proceedings: Selected papers that are not included in the journal publication are published in the conference proceedings; and
- A Springer Journal publication: Communications in Computer and Information Science (CCIS Vol. 730) were selected top papers (up to 20%) presented at SACLA are published in the journal.

The themes of conferences are presented in Table 1, and the number of papers accepted and a number of attendees is presented in Table 2.

**Table 1.** SACLA conference themes

Year	University	Themes
2009	Rhodes	Connecting Students to the Future
2010	UP	Scoring IT education goals in 2010
2012	UFS	Educating in a changing environment
2014	NMU	ICT Education in the Cyber World
2015	WITS IS	Renewing ICT teaching and learning: Building on the past to create new energies
2016	UP CS	Achieving Brilliance in ICT Education
2017	NWU	Keeping Education Relevant: Infinite possibilities
2019	UNISA	Computing Matters of Course!
2020	Rhodes	TL; DR: Teaching the New Generation!
2021	UJ	Post-Pandemic Pedagogy

**Table 2.** Publications

Year	Total received	Accepted	Springer journal	Proceedings	Short	Attendees
2012	23	19 (83%)		9 (47%)	10	33 (AGM)
2014	30	25 (83%)		21 (84%)	4	56

(continued)

**Table 2.** (continued)

Year	Total received	Accepted	Springer journal	Proceedings	Short	Attendees
2017	63	40 (63%)	22 (35%)	18 (29%)	0	39 (AGM)
2018	77	47 (61%)	23 (30%)	24 (31%)	0	35 (AGM)
2019	59	27 (46%)	16 (27%)	11 (19%)	4	58
2020	53	20 (38%)	13 (24%)	8 (15%)	6	110 virtual
2021	23	10 (43%)	10 (43%)		0	72 virtual

## 7 SAICSIT and SACLA

The South African Institute for Computer Scientists and Information Technologists (SAICSIT) was established in 1982 [15]. The main aims of SAICSIT (2021) are to:

- Enhance research and development collaboration with other professional bodies;
- Support education and training;
- Seek solutions to technical and socio-economic problems in South Africa by means of research and development projects; and
- Strive for professionalism and excellence.

A primary strategic activity of SAICSIT has been the annual conference, which started in 1981 (predating the formation of the Institute). SAICSIT founded and managed the South African Computer Journal (SACJ). SACJ is an accredited specialist IT academic journal, publishing research articles, technical reports and communications in the Computer Science and Information Systems domains. A more significant number of academics belong both to SAICSIT and SACLA. The SACLA President is a member of the SAICSIT council. Both organisations request academics to support both conferences annually.

At the 2012 SACLA AGM, a proposal was discussed to host the SAICSIT and SACLA conferences at the same venue, one after the other, not in parallel. Delegates agreed that each conference must retain its own identity. The AGM minutes indicate, “We do not want to combine the conferences because the purposes are different”.

## 8 The Social Side of SACLA

The SACLA conferences included welcome functions and gala dinners. The gala dinners included the Best Paper Award and an auction, started in 2014, by Professor Jean Greyling from the Nelson Mandela University, called “Conference with a conscious”. The ‘Conference with a conscious’ idea was to identify a charity, obtain some sponsored and purchased artefacts, and have the delegates bid for an artefact. The proceeds would then be donated to the charity.

The late Professor Derick Smith was the guest speaker at SACLA 2009, and the delegates included Rhodes Chris Upfold, John McNeill and Karen Bagshaw (Fig. 16).



Fig. 16. SACLA 2009 attendees

In the top middle photo is Professor Jan Kroeze (UNISA), the late Pieter Joubert (Sr, UP), Sonja Visagie (neé Cloete, UP) and Riana Steyn (UP). Professor Mike Hart attended with UCT delegates. Delegates from NMU included Professors Jean Greyling, Brenda Scholtz and Charmain Cilliers.

SACLA 2019 was held in the Alpine Heath Resort, Drakensberg, Natal. The Best Paper Award was presented to Pakiso Khomokhoana and Liezel Nel from NWU (Fig. 17). The gala evening was well supported, with delegates supporting the *conference with a conscious* fundraiser and later group dancing.



Fig. 17. SACLA 2019 conference

## 9 Future of SACLA

The Covid-19 pandemic has changed the format of the past two SACLA conferences, the SACLA 2020 and SACLA 2021 conferences were both virtual conferences. Future SACLA conferences will have to cater for face-to-face presentations and possibly include virtual presentations. The pandemic has introduced a new era of on-line and hybrid teaching approaches, examining and research supervision challenges, which will shape the future trajectory of SACLA conference themes. The SACLA 2022 conference is being hosted by the University of Stellenbosch in July 2022 in Cape Town, followed by North-West University in 2023.

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