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# Guest Editorial

## Computer Science and Information Systems: The Future?

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### 1 Introduction

As president of the South African Institute for Computer Scientists and Information Technologists (SAIC-SIT), I have visited a number of campuses and companies, in an attempt at arriving at a general assessment of the state of our subjects in South Africa.

An issue which I consistently pick up is that while everyone seems to think that computer-related skills are extremely important and in short supply, our academic departments are also extremely under-resourced.

At the last Southern African Computer Lecturers Association (SACLA) conference (28-29 June, Golden Gate), I had the opportunity to discuss the problems other academics see. This editorial lists some of the problems reported at SACLA, and proposes a way forward.

### 2 Problems

At SACLA, I led a discussion of problems seen in our academic departments.

There was wide agreement that both Computer Science (CS) and Information Systems (IS) departments were under pressure to increase student numbers (massification), and were seen as cash cows to prop up less popular subjects. It was broadly agreed that staffing was a critical issue: too few posts for the workload, salaries way out of line with industry (half or less, as compared to the US, where an academic salary may be 80% of an industry salary). Recent graduates often make more than professors which makes it hard to persuade our students to become academics (even to do higher degrees). Attracting a recent PhD with a sense of adventure is may be possible, but attracting experienced people used to earning a salary in a strong currency is hard. IS jobs are worse than CS, as the skills required are more like those in business. Support staff salaries are an even harder issue: their skills relate even more directly to job descriptions in industry.

A problem in addressing our concerns is that we are so overworked that we don't have time for "politics": academics with no students have time on their hands, but we don't. More industry support not only with directly addressing problems but with taking on

university administrations would be useful, but they too have major problems and don't have free time.

### 3 Solutions?

Solutions are harder to identify than problems.

The SACLA session ended with a proposal that we conduct surveys of our institutions and businesses, to find out what the problems are, as a starting point for going to university administrations, government and business.

Another idea was to attempt to find common cause with business in taking on problems they have in common with academia, including the skills shortage, the insufficient capacity of our education system, and dealing with employment equity.

One of our biggest difficulties is to free up time to deal with issues such as resource allocation within our universities. The "competition" is frequently other academics with time on their hands, since they have too few students, and therefore are in a position to spend time looking after their interests.

What is needed now is some thought about how to pull ourselves out of the mess we are in. In particular, we need strategies to exploit our strengths: our high demand among students, the high demand for the skills we produce and the ubiquitous applicability of computer technology.

Given the wide use of computers, it would seem obvious that our areas should be strongly supported by a range of role players, yet the fact that so many different groups are interested in computer technology in one way or another has tended to fragment efforts to enhance our industry and academic institutions.

Clearly, from conversations I have held, some departments are in much better shape than others. Even so, some kind of collective effort is likely to achieve more results than if we allow ourselves to be pushed around as individuals. Addressing the fragmentation of efforts seems a worthy goal in itself, to reduce duplication and contradictory goals.

I appeal to anyone who has constructive ideas on how to take our subjects forward to contact me. Let us work on building ourselves up. The economy depends on us, much more than on most other academic disciplines. It's time we made that point, and made it strongly.