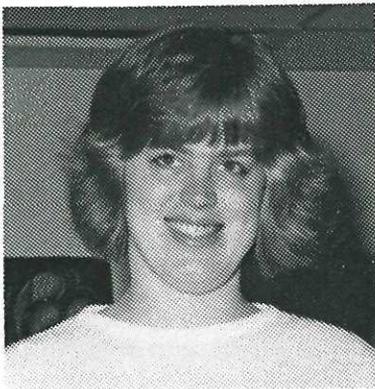


STV newsletter

Centre for Society, Technology and Values

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Amy Alfred Receives First Beynon Assistantship

Amy Alfred, a third year mechanical engineering student at UW, received the first Beynon Memorial Research Assistantship in the Spring '92 term.

The Assistantship, administered by CSTV, offers a UW undergraduate engineering student a chance to pursue and act on ideas involving engineering and society.

Ms. Alfred's project is a 15-minute illustrated presentation for engineering students. Now receiving its final touches for use this term, the presentation is designed to increase awareness of the applications of technology in rehabilitation and biotechnical engineering.

Ms. Alfred made the rounds of a number of professionals in such fields as rehabilitation engineering, nursing and physical therapy, asking them a simple question, "What do you want to tell engineers?"

Respondents urged engineers to design with adequate research on the context in which their designs will be applied, and to realize that they can't design and build for "everybody in general" because then no one with specific needs can really be satisfied.

Ms. Alfred cites examples uncovered in her off-campus research. At the Sunbeam Centre in Kitchener, for instance, staff found that the standard patient hoists sold on the market were not well-designed for patients who cannot support their own body weight. They appealed to the manufacturer and worked with its designers to produce a new model better suited to their needs.

"If we [designers and engineers] think twice, we can prevent modifications later on," Ms. Alfred says. She

visited industries as well, including a wheelchair manufacturing plant.

In talking with other engineering students about her project, she's found that they say things like "Rehab engineering? I never thought of that," but often come back later with real excitement and more questions.

She wants her presentation, scheduled for all first year engineers this fall--at least 400 students--plus STV's 202 E class, to help her peers "make the effort to ensure their designs are more accessible to all."

Her subject needs "a lot of exposure," and she wants to leave the slides and overheads at UW so that her presentation can be an integral part of engineering courses in future.

Ms. Alfred was an ideal candidate not only for the assistantship but for the project itself. She's had experience as a volunteer at Bloorview Children's Hospital in Toronto and a camp counsellor for "physically challenged" children. And she credits her brother, one of those children, with sparking her initial interest.

The Assistantship was set up by CSTV earlier this year in memory of chemical engineer William John Beynon (1911-88), an Imperial Oil refinery manager and noted humanitarian.

Applicants for the Assistantship submit a one page "action plan" outlining their proposal. The Assistantship is worth \$600 for the term and the recipient works five hours per week on the proposed project.

Applications are now being accepted for the winter 1993 term. For more details, contact the CSTV office, Davis Centre room 2608 or call ext. 6215.

Biomedical Rehabilitation Engineer Receives 1992 Wiegand Award

The Wiegand Foundation and the Centre for Society, Technology and Values at the University of Waterloo is proud to announce the selection of Morris (Mickey) Milner, PhD, PEng, CCE to receive the 1992 Wiegand Award for Canadian Excellence.

The \$2500 Award is given in recognition of "outstanding contributions to humanizing science, technology or engineering" by Canadians or permanent residents. Through this Award, the Wiegand Foundation hopes to encourage Canadians to aspire to leadership, worthy achievements and the courage to live out one's convictions. Dr. Milner is a modern day hero and an excellent role model.

Milner, 56, is a biomedical rehabilitation engineer and is vice-president of research and development for The Hugh MacMillan Rehabilitation Centre in Toronto. Building on his engineering skills, a deep love of humanity and understanding of the need for dignity in daily life, he has dedicated his professional career to improving the quality of life of the physically disabled.

Dr. Milner was nominated for his work on "postural support and seating systems, mobility systems, powered upper limb prosthetics, and applications of computer-based technology in areas such as communications, functional assessments and education." Although his work centres mainly on assistive devices for children with cerebral palsy it has wider applications.

In addition to his engineering talents, Milner is an inspiring teacher and speaker, renowned for stimulating students and colleagues from various disciplines in rehabilitation research. He is also recognized for his achievements in cultivating broad partnerships which bring industry, clinical and educational institutions, and consumers together in the common cause of making better, more imaginative use of resources.

He has directed the MacMillan Centre's rehabilitation engineering department since 1978, a position which includes responsibility for Variety Ability Systems, a non-profit manufacturing facility which markets its products globally.

As a speaker much in demand, Dr. Milner frequently carries the image of Canada as a socially responsible country. Recently he was invited to Kobe, Japan where he addressed the 29th congress of the Japanese Association of Rehabilitation Medicine.

The Wiegand Foundation is pleased to honour the achievements of this South African born and educated electrical and rehabilitation engineer who has greatly enriched the lives of so many people and the image of Canada.

In giving Dr. Milner this Award we also honour his family, colleagues and many others who work quietly, perhaps more anonymously but just as enthusiastically, to use technology as a force to improve the quality and dignity of life.

Previous recipients of the Wiegand Award, which is named for Canadian automobile tire chemist-turned-classicist William B. Wiegand (1889-1976) were Dr. David Suzuki and Dr. Ursula Franklin.

The 1992 Award will be presented to Dr. Milner at a public ceremony and lecture at University of Waterloo on Thursday, October 22, 1992.

For more details, contact the Centre at (519) 885-1211, ext. 6215.

More Students--and More Courses --In Future

"It's going to come, so let's do it right!" That's what CSTV Director Norman Ball is saying about plans for the expansion of the Centre's undergraduate program. "The Centre has been looking to add to its offerings for quite some time. We are excited about the expansion and what it means for CSTV."

A significant increase in the number of students wanting to take STV courses is expected for several reasons, including Canadian Engineering Accreditation Board requirements and the growing recognition by students that STV courses cover issues they're interested in.

Ball wants the Centre to take a proactive approach to this expansion by offering a wider range of courses.

"We should have a course on women and technology, for instance," Ball explains. Courses taking an STV perspective on emerging areas of interest and concern--such as the environment, and the interaction of engineering and urban society--are also under consideration.

Whatever the topic, students will be exposed to a consistent STV approach. All new courses will be vehicles for communicating ideas about the interaction of technology and society.

"The Centre has always aimed for class situations which allow students to express and exchange ideas," says Bill, "and we want to retain this."

Although STV courses are expected to have wide appeal for engineering students, Ball wishes to stress that they are open to students in all faculties. "An interdisciplinary mix of students in our courses has been one of our consistent strengths," he adds.

The inaugural course in this series, STV 202 E *Design and Society*, is running this fall (see separate story) and in winter 1993.

Ball will be introducing a second new course slated for Winter '93, *Technology and Canadian Society* (STV 402 E). For more details, see story on page 3.

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STV 202 E Discusses Design -- Smart, Dumb and Otherwise

Why do smart people produce dumb designs?

That's one of the more provocative questions to be discussed in a new STV course offered in both the fall '92 and winter '93 terms.

Called *Design and Society*, (STV 202 E), it will be taught by its creator, CSTV Director Norman Ball, assisted (in the fall) by TA Gail MacCrimmon, a graduate student in Urban and Regional Planning.

The course will identify key factors and variables in the development of historical and contemporary design and will consider the impact of changing them.

"We'll look at design as a way of understanding the mutual interaction between technology and society," says Ball, "and we'll take design as including management and methods as well as products and processes. We need to look hard at what design reflects. It's not just the "product" in isolation."

He cites the simple example of an office secretarial chair such as those used at UW. Designing the chair is an ergonomic issue. Deciding who gets the good chair and who gets the poor one is a design and society or society, technology and values question.

Getting good design into the right area--that is, for society to get the greatest overall benefit from it--is crucial.

"Any given design is a solution to a problem," Ball says. But as the social context of a product or device changes over time, its design can become less of a solution and perhaps more of a (new) problem. Society's expectations about comfort, safety and access--to say nothing of changes in legislation--can create a serious mismatch between a formerly good design and current needs.

Students will explore relationships among the variables involved in design, especially the conditions of societal satisfaction on the one hand and design deterioration on the other.

They'll also hear from several professionals in the field. One of the guest speakers will be Mary Kotler of the Siemens Corporation in New Jersey. She'll talk about "manufacturing as if people mattered." Kotler has had considerable experience in reorganizing company units into teams for better, non-alienating use of technical expertise and greater overall effectiveness.

Another speaker will be Dr. Morris (Mickey) Milner, 1992 recipient of the Wiegand Award for Canadian Excellence.

"What we're really trying to do," says Ball, "is to get down to understanding why sometimes things don't work as well as they should and to consider what we should do when that happens."

STV 202 E meets on Thursdays from 7 - 10 p.m. in the fall term. In the winter term the class will meet Tuesday evenings.

Centre to Launch Occasional Paper Series

Research centres at UW and elsewhere typically attempt to find ways to disseminate at least some of the results of their activity. One way is through "refereed series of occasional papers" that are published periodically from conferences, in-house symposia or similar events.

CSTV has had a brush with this in the past. In 1989, the *Journal of Business Ethics* devoted an entire issue to the proceedings of a conference on professionals and social responsibility held at UW by the Centre in March 1988.

But the opportunity for the Centre to publish papers on its own has remained a remote possibility. Until now, that is. CSTV Director Norman Ball and former Director George Atkinson are turning the dream into reality this year.

The CSTV Occasional Papers Series represents a continuation of the Centre's growth in line with the three most important words guiding its corporate actions: interdisciplinary, teaching, research.

Any publisher hopes for wide and varied readership. However, the Centre's primary target audiences consist of students, teachers and working professionals --be they managers, engineers, journalists or others. Our aim is to provide brief but thoughtful introductions to issues facing society and individuals as they wrestle with the complex and varied ramifications of the relationships among society, technology and values.

Several potential authors have been contacted and design and format issues are now being finalized. The Centre hopes to have three papers published before the end of the Winter 1993 term.

Details regarding available titles and costs will be forthcoming in the next *Newsletter*.

Technology and Society Meet in New Winter '93 Course

Technology and Canadian Society (STV 402 E) is the name of a new course the Centre is mounting this year. It will be offered in the Winter 1993 term.

Like STV 202 E, the Centre's other new offering, it owes its existence to CSTV Director Norman Ball.

Ball will deal with technology as a "fundamental part of Canada and Canadian society from the years predating sustained European contact to the present."

The course will involve students in examining principles, patterns, factors, choices and consequences of the interaction of technology, engineering and society.

Among other things, Ball wants students to develop an appreciation of the roles that technology and engineering have played in "defining and expressing Canada."

The course is intended for third and fourth year students in any faculty but has no pre-requisite. It was originally listed as STV 401A in the UW undergraduate calendar.

Classes will meet on Monday evenings, beginning January 4. More details will be available from the CSTV office in late fall.

Centre Tackles Technology in Canadian Literature

Centre Director Norman Ball and researcher Stephen Jones are now assembling material arising from a CSTV project begun last summer on the subject of technology and Canadian literature.

They found that some topflight studies of technology and literature or technology and culture do exist but almost all are British or American. The work of Leo Marx (*The Machine in the Garden*) and the many studies by Lewis Mumford are perhaps the best-known American examples.

A significant amount of Canadian material was uncovered, mostly in the form of works of literature in which technology is prominent in some way but also in the form of scholarly studies of such material.

Tangible results of the project so far include the production of two extensive bibliographies, one on primary sources (mainly novels) that deal directly with technology, the other on analytical studies of these novels or related works.

The primary sources bibliography includes past and present Canadian mainstream and science fiction writers such as Frederick Philip Grove, Margaret Atwood, William Gibson and Elisabeth Vonarburg. The secondary one includes PhD theses on the portrayal of technology or the attitudes to it seen in work by E.J. Pratt, Robert Kroetsch, Alice Munro and others.

Ball and Jones hope to publish their findings shortly and want to invite others to participate in continuing the project.

Jones, formerly a staff member with CSTV (1986-90), has a background in Canadian Studies and Canadian literature.

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Two sections of STV 100 are being offered this fall. The course is taught by Daryl Pullman, long-time STV instructor with the help of teaching assistants Calvin Lantz, Sarah Arulanandam, Annabel Cathrall and Trevor Garrett. Lantz, a graduate student in philosophy, and Arulanandam, a mechanical engineering undergraduate, have assisted Pullman in the last three offerings of the course. Cathrall, a practising Professional Engineer and Garrett, a graduate student in systems design engineering, are new to the team.

STV 100 will be offered once again in the Winter 1993 term.

STV 400, the senior project course for STV option students completing their option requirements, continues to be offered on a term by term basis. Students work with a chosen supervisor on an independent research project related to some aspect of the interaction of society, technology and values.

For more information on the Centre's courses or on the STV Option, contact the STV office in Davis Centre, room 2608. Telephone (519) 885-1211, ext. 6215.

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