



***The 4th Krieger-Nelson Prize Lecture
Le 4ème Prix de conférence Krieger-Nelson***

Citation

Catherine Sulem of University of Toronto works in the area of partial differential equations arising in physical contexts such as fluid mechanics, nonlinear optics and plasma physics.

Her recent research has led to important breakthroughs in understanding of many nonlinear phenomena associated with the focusing nonlinear Schrödinger equation and the water wave problem.

***Catherine Sulem
University of Toronto***

Her work is of great interest because of the importance of the results and also of the techniques involved which include a mix of functional analytic methods, asymptotic expansions and numerical simulations.

Catherine Sulem de l'Université de Toronto travaille dans le domaine des équations à dérivées partielles provenant de contextes physiques, tels que la mécanique des fluides, l'optique non linéaire et la physique du plasma.

Sa recherche récente a entraîné des développements importants sur les phénomènes non linéaires associés aux équations de Schrödinger en plus du problème des vagues d'eau.

Son travail est d'un grand intérêt dû à l'importance des résultats et des techniques qui comportent un mélange de méthodes d'analyse fonctionnelle, d'expansions asymptotiques et de simulations numériques.

Biographical Information

Catherine Sulem was born in Birmandreis, Algeria and grew up in Nice. She received a Doctorat d'Etat from the Université de Paris-Nord in 1983 and held a CNRS position at the Ecole Normale Supérieure in Paris before coming to the University of Toronto in 1990. Professor Sulem works in nonlinear partial differential equations arising in physics. Her work uses both analytic and numerical methods and has contributed to our understanding of singularities in models of wave propagation. She has recently completed a monograph *Nonlinear Schrödinger Equation: Self-Focusing Instability and Wave Collapse* together with her brother Pierre-Louis Sulem, to appear in the Springer series, Applied Mathematical Sciences.

Catherine Sulem is also an accomplished musician. She received a Premier Prix de Violon du Conservatoire de Paris in 1975, and was principal violonist with the Israel Sinfonietta from 1982 to 1987.

The CMS Prize Lectureship for Distinguished Research by Women in Mathematics was instituted in 1995 in recognition of outstanding research by a female mathematician. This award is presented in conjunction with the Canadian Mathematical Society's Summer Meeting.

Le prix de conférence SMC pour la recherche féminine, créé en 1995, rend hommage aux mathématiciennes qui se sont distinguées par leur apport exceptionnel à la recherche en mathématiques. Elle est présentée dans le cadre de la réunion d'été de la Société mathématique du Canada.

Recipients / Récipiendaires

1995	Nancy Reid	1997	Cathleen Synge Morawetz	1998	Catherine Sulem
1996	Olga Kharlampovich				