

**CV for Erik Christensen**  
**Institute for Mathematical Sciences, U. Copenhagen.**

I am a Danish citizen and was born April 5, 1945, in Dandong China.

*Education:* I got my master degree in mathematics from the University of Copenhagen in 1970. From 1970 until 1975, I was supported by various stipends, temporary teaching assignments and a travel grant which I did spend in Oslo in 1973/74. In this period I was doing research on operator algebras. I was employed by the University of Copenhagen from 1975 until 2015. In 1984 I defended my thesis for the doctor of science degree.

*Research done:* Alone, or in collaboration with others, I have published 51 papers in international journals. Some of the articles have appeared in the top journals of mathematics and some have received good attention and have been quoted well. According to Google Scholar is my Hirsch index 23, and my score on ResearchGate is 26.89 with 79.24 impact points, which is not bad in mathematics.

Most of the papers are on operator algebras and mathematical physics. During the years the focus of my research has changed, but most of the articles fall into one of the following groups: *perturbations of algebras of operators, the similarity question for  $C^*$ -algebras, inclusions of finite von Neumann algebras, quantum logics, completely bounded multilinear mappings, Hochschild cohomology for operator algebras and noncommutative geometry.*

*Latest research:* With Cristina Ivan at the M. D. Anderson cancer center in Houston Texas, USA, I studied various aspects of noncommutative geometry, and we tried to construct operator algebraic invariants which can express geometric structures on sets of fractal nature. Such sets have no smooth structure so classical differential geometry does not apply. It turned out that the noncommutative replacements for differential operators may be applied to describe concepts like *distance, volume and dimension* for certain well known fractal sets. We also proposed a noncommutative version of geometric degeneration of a noncommutative object into a commutative one. This project is quite interesting to me, and I would like to make a continuation soon.

In collaboration with Jan Cameron, Vasar College, Allan Sinclair, Edinburgh, Roger Smith, Texas A&M, Stuart White, Glasgow, Allan Wiggins,

Michigan we have studied various aspects of perturbations of operator algebras. Basically we show that if 2  $C^*$ -algebras are sufficiently close and have certain extra structures then they are isomorphic. Here we have several problems we are trying to solve, and some results which are nearly publishable.

*Contacts:* Over the years I have given talks at several universities and conferences in Canada, China, Finland, France, Germany, Holland, Ireland, Japan, Norway, Poland, Romania, Sweden, UK, USA. I have given many talks in especially the USA and in the UK.

I have collaborated with 14 different co-authors and I know most of the senior people in my field quite well. I also have a reasonable good knowledge of many of the younger ones, too.

*Teaching:* As a teacher I have taught many different mathematics courses and on all levels - from service courses for biology or economics students to advanced graduate courses for phd-students and colleagues.

*Administrative work:* On the administrative side I have served on many boards and committees. I was head of the board for the studies from 1980 to 1982 and chairman for my department from 1990 to 1992.

*Grants:* I am a member of a group, which, for many years, has obtained a grant from the Danish research council for the natural sciences, to support the study of *operator algebras*. I am associated to the *Centre for Symmetry and Deformation*, which is established by a grant from *Danmarks Grundforskningsfond*.

Erik Christensen