West Coast Operator Algebras Seminar 2005

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September 15–18, 2005

The theory of operator algebras originated with the work of F. J. Murray and J. von Neumann in the 1930s and 1940s. It has been an active—and still expanding—area of research ever since, which has manifold interactions with other areas of mathematics such as mathematical physics, algebraic topology, differential geometry, and even (quantum) computing.

The area is very well represented throughtout the North American West Coast. Berkeley—with Arveson, Jones, Rieffel, Voiculescu—and UCLA—with Effros, Ozawa, Popa, Shlyakhtenko—are probably the best known centers of high level research in operator algebras. In Canada, a strong group—Laca, Phillips, Putnam—exists at the university of Victoria. There are many more, albeit smaller, groups working on operator algebras throughout Western Canada and the Western United States.

The series of conferences now known as the West Coast Operator Algebras Seminar (WCOAS) started with a meeting at UCLA in 1991, and has been held almost every year since. It was held in Canada for the first time in 1996 (UNBC), then again in 1999 (Victoria), and finally twice at BIRS (2003 and 2005). In the years since its inception, the WCOAS has become a remarkably successful forum for the interaction of researchers that are spread out over a vast geographical area and otherwise have little opportunity to exchange ideas. In particular, it is of considerable value to graduate students and young researchers in the area.

The 2005 meeting in the series was the second one at BIRS. It had 32 participants, four of whom were graduate students and three postdocs. With two exceptions, all participants were affiliated with universities in Western Canada or in the Western United States. The two exceptions were George Elliot of Toronto and Hiroki Matui of Chiba (Japan) and currently visiting at Victoria.

The program consisted of twelve talks altogether. Three talks were one hour long:

- J. Phillips, *A survey of the analytic approach to spectral flow with some applications*;

- E. G. Effros, *On the free analogues of Hopf algebras associated with the Faà di Bruno algebra, and the Connes–Kreimer theory*;

- D. Blecher, *Dual operator algebras and non-commutative H^∞*.

Further talks of half hour length were given by D. R. Farenick, R. Floricel, K. Goodearl, A. Kumijan, H. Matui, I. Nikolaev, N. C. Phillips, D. Sherman and A. Sourour.

The talks were all of considerable mathematical quality and covered a wide range of topics, showing once again how diverse and lively the area of operator algebras has become. Even though the tight timeframe of a 2-day workshop did not leave as much time for interaction as may have been desirable, the workshop certainly accomplished its goal of bringing researchers together and providing a platform for the exchange of new mathematical ideas.

The next WCOAS will be—in all likelihood—be held at the University of Hawaii in early 2007.