Backward shift and nearly invariant subspaces of Fock-type spaces.

The talk concerns the structure of backward shift-invariant and nearly invariant subspaces in weighted Fock-type spaces whose weight is not necessarily radial. Under some conditions it turns out that if polynomials are dense in such a space, the only nontrivial (closed) backward shift invariant subspaces are the polynnomials whose degree does not exceed a fixed integer. On the other hand, the structure of nearly invariant subspaces is much more complicated. In the case of spaces of slow growth (zero exponential type) an analogue of de Branges' Ordering Theorem holds for such subspaces. Finally, in spaces of large growth I am going to discuss some examples which reveal a very interesting structure and, in particular, show that the ordering result fails. This is a report on joint work with A. Baranov, Y. Belov and Håkan Hedenmalm