

1052-35-241

**Shahla Molahajloo\*** ([smollaha@mathstat.yorku.ca](mailto:smollaha@mathstat.yorku.ca)), Department of Mathematics, York University, 4700 Keele Street, Toronto, Ontario M3J 1P3, Canada. *Pseudo-differential operators on the unit circle.*

We give the basic properties of pseudo-differential operators with symbols in  $S_{1,0}^m(\mathbb{S}^1 \times \mathbb{Z})$ ,  $-\infty < m < \infty$ , on  $L^p(\mathbb{S}^1)$ ,  $1 < p < \infty$ . Ellipticity is then defined and the equivalence of Fredholmness on  $L^p(\mathbb{S}^1)$  and ellipticity is established. (Received August 28, 2009)