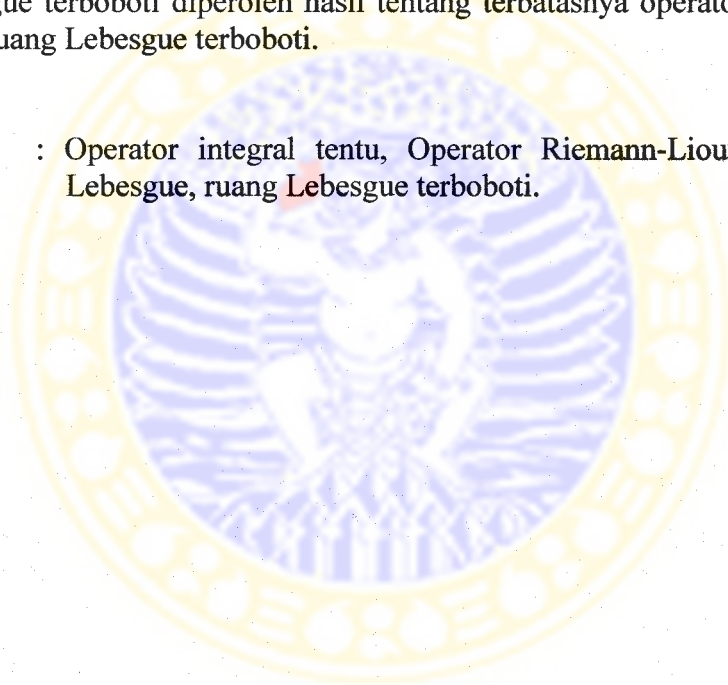Cicik Alfiniyah. 2007. Keterbatasan Operator Integral Tentu dan Operator Riemann-Liouville di Ruang Lebesgue Terboboti. Skripsi ini dibawah bimbingan Dr. Eridani, M.Si. dan Drs. Moh. Imam Utoyo, M.Si. Jurusan Matematika Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Airlangga.

ABSTRAK

Skripsi ini membahas keterbatasan operator integral tentu dan perumumannya yang kemudian disebut operator Riemann-Liouville di ruang Lebesgue terboboti. Dalam skripsi ini, pembuktian keterbatasan operator-operator tersebut menggunakan ketaksamaan Hölder dan Minkowski. Dengan menggunakan fakta bahwa operator integral tentu adalah operator yang terbatas di ruang Lebesgue terboboti diperoleh hasil tentang terbatasnya operator Riemann-Liouville di ruang Lebesgue terboboti.

Kata kunci : Operator integral tentu, Operator Riemann-Liouville, ruang Lebesgue, ruang Lebesgue terboboti.

Cicik Alfiniyah. 2007. On The Boundedness of Definite Integral Operator and Riemann-Liouville Operator on Weighted Lebesgue Spaces. This *skripsi* is supervised by Dr. Eridani, M.Si. and Drs. Moh. Imam Utoyo, M.Si. Department of Mathematics, Mathematics and Natural Science Faculty, Airlangga University.

ABSTRACT

In this paper we discuss about the boundedness of definite integral operators and its generalization called Riemann-Liouville operators on weighted Lebesgue spaces. Since definite integral operators is bounded on weighted Lebesgue spaces, we also discuss and obtain some other results about the boundedness of Riemann-Liouville operators. To prove the results, we use various classical approach to this subject, including Hölder's inequality, Minkowski's inequality and Hardy's theorem.

Key words   : Definite integral operators, Riemann-Liouville operators, Lebesgue spaces, Weighted Lebesgue spaces.