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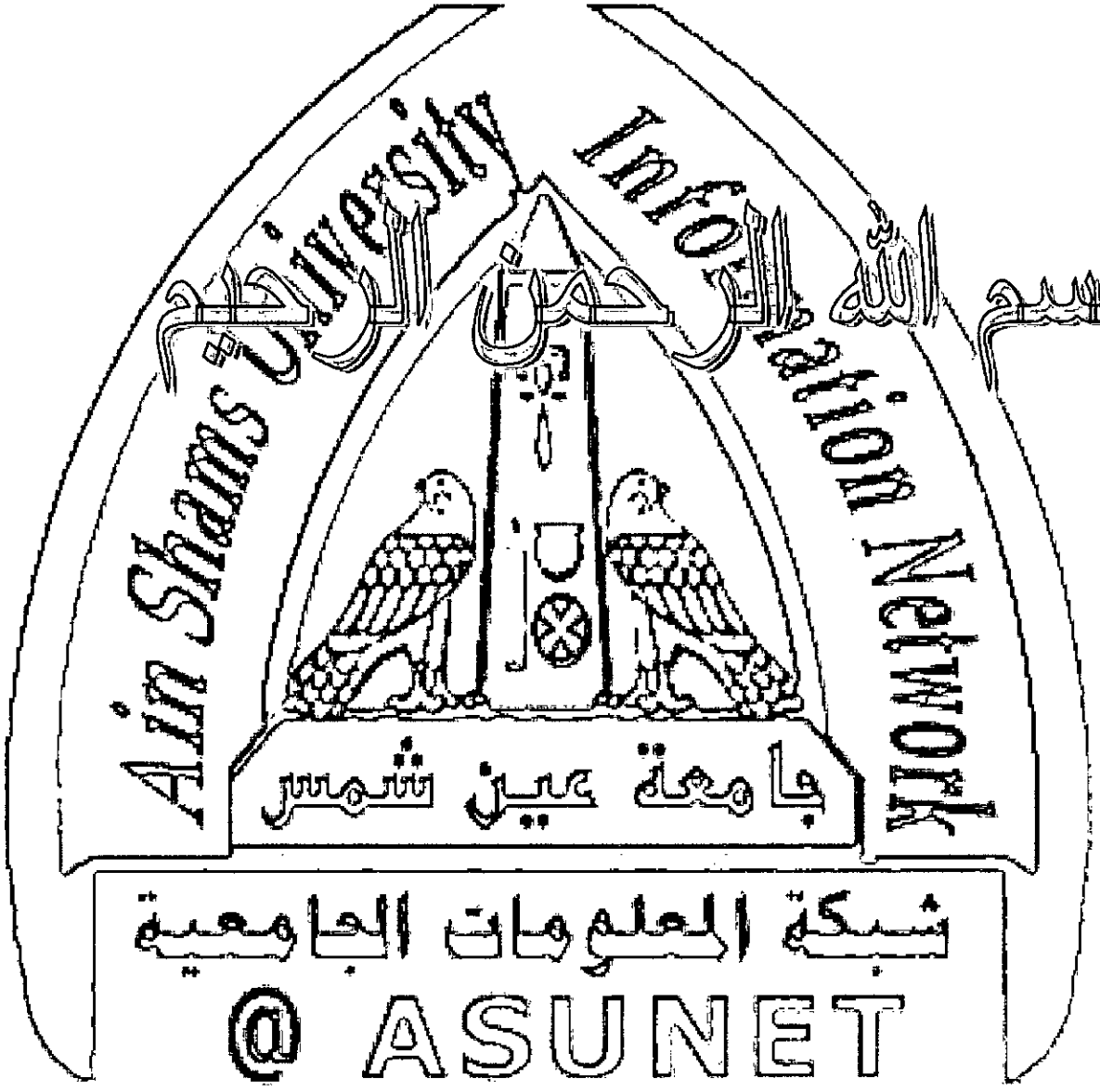

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التوثيق الالكتروني والميكروفيلم

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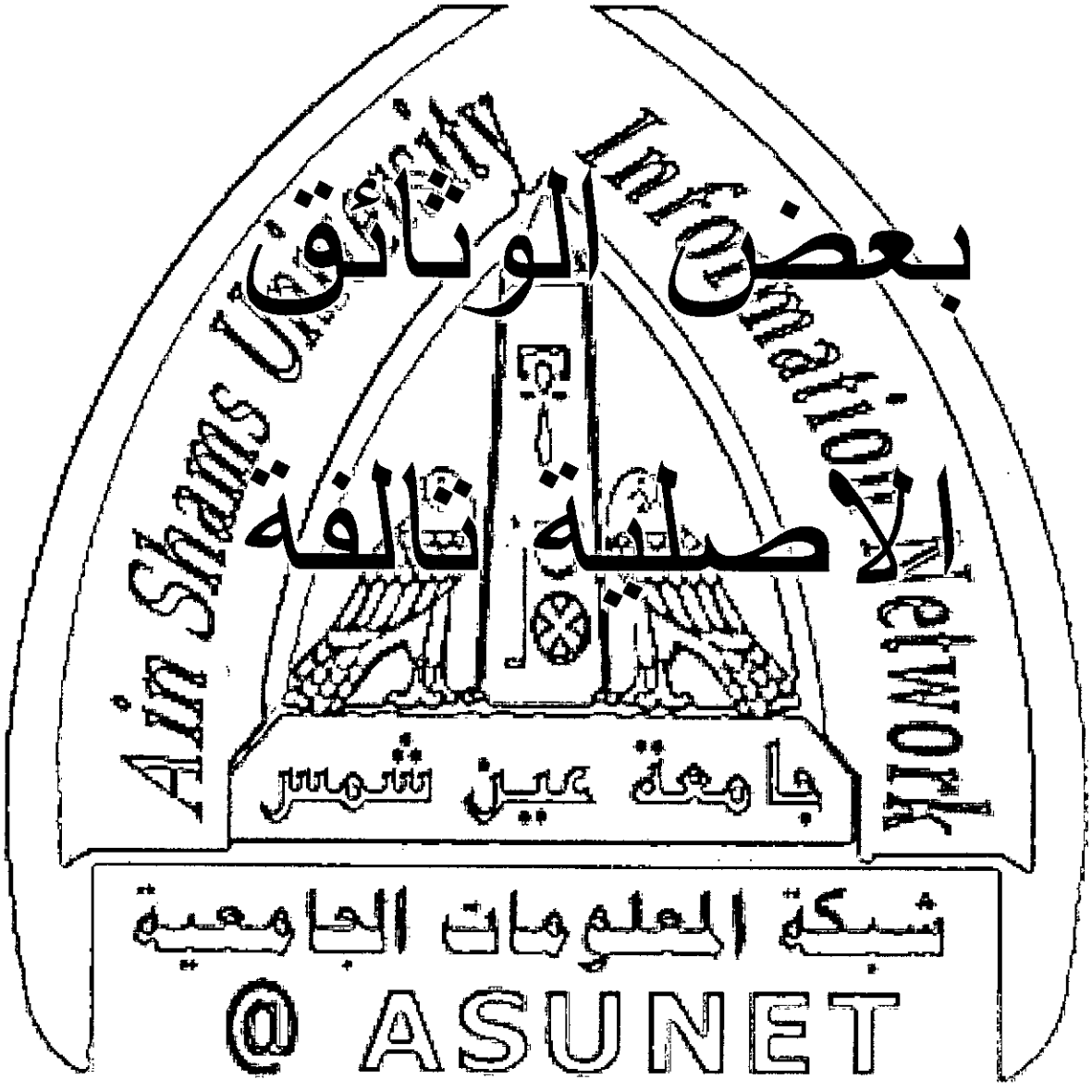

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Viscous Rotating Polytropic Model

Presented by

Hazem Mohamed Mohamed El-Zafarani

A Thesis Submitted
to
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the Degree of Doctor of Philosophy
(Ph.D) of Science
(Astronomy)

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APROVAL SHEET FOR SUMISSION

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ABSTRACT

Student Name: Hazem Mohamed Mohamed El Zafarani
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Degree: Doctor of Philosophy (Astronomy)

We develop a semi analytical technique determine the structure of symmetric stellar models for uniform or differentially rotating polytropes of index n=1.5, neglecting viscosity and meridional current. The angular velocity profiles are determined by rotation law in the form that the angular velocity changing with the radial distance are chosen, also an approximation of solar like rotation also was constructed using solar surface rotation law. In both cases the results shows a fairly well agreement with global feature for stars and different technique introduced.
Keywords: Polytrope, Uniform, Non-uniform, Rotation, Convection.

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