ISSN: 2667-4203

ESKİŞEHİR TECHNICAL UNIVERSITY JOURNAL OF SCIENCE AND TECHNOLOGY C— Life Sciences and Biotechnology

ESKİŞEHİR TEKNİK ÜNİVERSİTESİ BİLİM VE TEKNOLOJİ DERGİSİ C – Yaşam Bilimleri ve Biyoteknoloji

 $Volume/Cilt 9 \quad Number/Sayı 2 \quad July/Temmuz - 2020$

ESKİŞEHİR TECHNICAL UNIVERSITY JOURNAL OF SCIENCE AND TECHNOLOGY C- Life Sciences and Biotechnology



Eskişehir Teknik Üniversitesi Bilim ve Teknoloji Dergisi C – Yaşam Bilimleri ve Biyoteknoloji

Volume: 9 / Number: 2 / July - 2020

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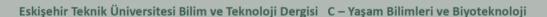
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ISSN: 2667-4203

ESKİŞEHİR TECHNICAL UNIVERSITY JOURNAL OF SCIENCE AND TECHNOLOGY C- Life Sciences and Biotechnology





Volume: 9 / Number: 2 / July - 2020

Owner / Publisher: Prof. Dr. Tuncay DÖĞEROĞLU for Eskişehir Technical University

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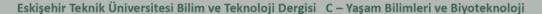
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Books

Haupt R.L. and Haupt S.E. *Practical Genetic Algorithms*. 2nd ed. New York, NY, USA: Wiley, 2004.

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Chapters in boks

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C– Yaşam Bilimleri ve Biyoteknoloji

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