BÖLÜM 3

DEPREM TAHMİNİ VE TEHLİKE ANALİZLERİ İÇİN ÇOKLU PARAMETRE KULLANIMI: DOĞU ANADOLU FAY ZONU (DAFZ), TÜRKİYE, ÖRNEĞİ

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3.1. GİRİŞ

Depremler en tehlikeli ve en yıkıcı doğal olayların başında gelir. Geçmişten günümüze Türkiye ve dünyanın farklı bölgeleri için deprem oluşumlarının bölge-zaman-magnitüd analizleri çok sayıda araştırmacı tarafından yapılmış ve oldukça önemli sonuçlar ortaya konulmuştur. Depremlerin bölge-zaman oluşumlarının rastgele olmadığı bilinir ve genellikle herhangi bir öncü/belirti vermeksizin meydana gelirler. Artçı şoklar, öncü şoklar, yeraltı su seviyesi ve sıcaklık, hayvan davranışlarındaki değişimler, elektromanyetik sinyaller, öncü fay atımları, kimyasal yayılımlar, hızın zamanla değişimi, öncü durgunluk veya aktivite gibi analizler sismologların tanımladığı belirtilerden sadece birkaçıdır (Holliday ve diğ. 2005). Ayrıca, iyi tanımlanmış sismolojik, jeodezik ve jeomanyetik, jeoelektrik, jeodezik ve gravite öncüleri, yer sıvısı, hidro-sismoloji gibi diğer jeofiziksel parametreler gözlenebilir ve deprem tahmini için analiz edilebilir (Geller 1997, Huang ve diğ. 2017). Yerin kabuk yapısının tekdüze olmadığı ve deprem oluşumlarının da karmaşık bir yapıya sahip olduğu dikkate alınırsa, deprem tahmini istatistiksel bir tabana oturtulabilir ve depremlerin istatistiksel davranışları gelecekteki beklenen depremlerin tahmininde oldukça önemli önemli hale gelir (Rundle ve diğ. 2002). Dolayısıyla, deprem tahmini çalışmalarındaki başlıca problem, dep-

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iyi anlaşılmasına katkı sağlayabilir. Literatür çalışmalarına ve elde edilen bulgulara bağlı olarak, gelecekte beklenebilecek depremlerin yerini, zamanını ve büyüklüğünü tahmin edebilmek için çoklu parametre analizinin bir kombinasyonu daha destekleyici bir analiz olacaktır. Sonuç olarak bu çalışma, Türkiye'nin farklı bölgelerindeki orta-uzun vadede deprem tahmini ve tehlike analizleri için teşvik edici sonuçlar ortaya koymuştur.

TEŞEKKÜR

Çalışma kapsamında bazı haritalar ZMAP yazılımı (Wiemer 2001) kullanılarak oluşturulmuştur. Tektonik haritalar Bozkurt (2001) ile Emre ve diğ. (2018)'den sayısallaştırılarak oluşturulmuştur. RI, PI ve birleştirilmiş yönteme ait kodların hazırlanmasında katkılar sunan Dr. Kazuyoshi Z. Nanjo'ya, deprem verisinin temin edilmesinde yardımcı olan KRDAE'ye teşekkür ederim. Ayrıca, başta editör olmak üzere yapıcı önerilerde bulunan hakem kuruluna teşekkür ederim.

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