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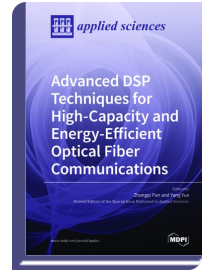
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## **Advanced DSP Techniques for High-Capacity and Energy-Efficient Optical Fiber Communications**

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Edited by  
Zhongqi Pan  
Yang Yue

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The rapid proliferation of the Internet has been driving communication networks closer and closer to their limits, while available bandwidth is disappearing due to an ever-increasing network load. Over the past decade, optical fiber communication technology has increased per fiber data rate from 10 Tb/s to exceeding 10 Pb/s. The major explosion came after the maturity of coherent detection and advanced digital signal processing (DSP). DSP has played a critical role in accommodating channel impairments mitigation, enabling advanced modulation formats for spectral efficiency transmission and realizing flexible bandwidth. This book aims to explore novel, advanced DSP techniques to enable multi-Tb/s/channel optical transmission to address pressing bandwidth and power-efficiency demands. It provides state-of-the-art advances and future perspectives of DSP as well.



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