



Special Issue Reprint

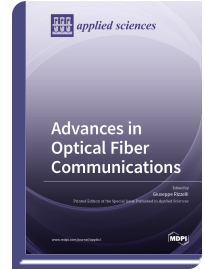
Advances in Optical Fiber Communications

www.mdpi.com/books/reprint/6442

Edited by
Giuseppe Rizzelli

ISBN 978-3-0365-4947-7 (Hardback)

ISBN 978-3-0365-4948-4 (PDF)



Given the increasing importance of a globally interconnected world, driven by modern digital services and the need for fast and reliable access to digital resources, communication networks are one of the key infrastructures in today's society. In this scenario, fiber optics and optical devices play a leading role, as they allow for unprecedented growth in our capacity to cope with the ever-increasing traffic demand.

Optical transmission solutions range from high-speed networks based on coherent detection and advanced modulation formats for long-haul-level communications, to networks still relying on traditional intensity modulation and direct detection receivers for short-reach communications, down to intra-data center scenarios. In between there is a whole gamut of network architectures, providing different solutions for specific applications, targeting the minimization of cost-per-bit as a trade-off between capacity and overall implementation cost, in order for operators to cope with the increasing traffic demand while still providing reasonable market accessibility.

Currently, most communications rely on optical technologies, and the worldwide goal is the optimum trade-off between transmission speed and cost-per-bit. This is usually pursued by i) manufacturing low-cost devices, ii) the introduction of digital solutions to overcome the physical limitations of optical communications systems and iii) the optimization of network design.

Contributions to this Special Issue address these three subjects, and provide valuable insights into the optical fiber communications world.



Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/6442

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.