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of quadratic and cubic nonlinearities on harmonic generation Coverage includes a review of linear wave propagation and the origins of optical nonlinearity Dynamic Laser Speckle and Applications Hector J. Rabal,Roberto A. Braga Jr.,2018-10-03 Speckle study constitutes a multidisciplinary area with inherent complexities In order to conquer challenges such as the variability of samples and sensitive measurements researchers must develop a theoretical and statistical understanding of both biological and non biological metrology using dynamic speckle laser Dynamic Laser Speckle and Applications discusses the main methodologies used to analyze biospeckle phenomena with a strong focus on experimentation After establishing a theoretical background in both speckle and biospeckle the book presents the main methodologies for statistical and image analysis It then deals with the concept of frequency decomposition before moving on to a discussion of fuzzy methods to treat dynamic speckle data The book dedicates two sections to applications including agricultural approaches Additional features include photo images of experiments and software to aid in easy start up of dynamic speckle usage A systematic approach to new dynamic speckle laser phenomena this book provides the physical theory and statistical background needed to analyze images formed by laser illumination in biological and non biological samples **Handbook of Optical Design, Second Edition** Daniel Malacara-Hernández,Zacarías Malacara-Hernández,2014-10-31 Infused with more than 500 tables and figures this reference clearly illustrates the intricacies of optical system design and evaluation and considers key aspects of component selection optimization and integration for the development of effective optical apparatus The book provides a much needed update on the vanguard in the field with vivid explanations of computer aided strategies and developments essential for success in the engineering of modern optical structures It analyzes the performance of a wide range of optical materials components and systems from simple magnifiers to complex lenses used in photography ophthalmology telescopes microscopes and projection systems

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table of content next page enhancement adds code to the application data classes to integrate them with jdo as a result of enhancement the enhanced class implements the persistencecapable interface when jdo acts on an application data object it acts on it as a persistencecapable object

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object fields are accessed by their name you must use a name that is unambiguous you may use a simple name for a field within its own class for example we can add a statement within the rectangle class that prints the width and height system out println width and height are width height in this case width and height are

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using transient application data objects and objects of classes that are not persistence capable for parameter values is not portable across jdo implementations declaring the query s variables the query interface provides a method to declare

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in order to provide persistent services for the application s data objects jdo must manage the objects within a java virtual machine jvm jdo manages some objects and does not manage other objects if jdo manages an object it manages its persistent state or its transactional state or both

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managers using a persistence manager the application can control the life cycle and caching of application data objects it can get the identity object for a persistent application data object and it can later fetch the persistent object that corresponds to an identity object finally the persistence manager interface has factory methods

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mar 28 2023 the java data objects is an api designed for persisting object oriented data into any database and providing a user friendly query language using the java syntax in this article we are going to see how to use the jdo api for persisting our objects in a database

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