Worcester Polytechnic Institute Computer Science Ranking

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Strategies for Using Multicasting to Locate Resources
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Computer Science Department MQP Review

CAROLYN NATHANIEL

Worcester Polytechnic Institute (WPI), Computer Science DepartmentProvides information about the Worcester Polytechnic Institute (WPI) Computer Science Department, including its past, present and future. Explains that the computer education program seeks to train outstanding professionals for technology transfer to the fields of biology, electrical engineering, materials science, civil engineering and mechanical engineering as well as to electronics and computer industries. Notes that the department maintains a highly trained faculty and up-to-date research facilities. Describes the undergraduate program in computer science studies and WPI's location near New England's high-technology region.Welcome to Worcester Polytechnic Institute, Department of Computer ScienceIntroduces Worcester Polytechnic Institute, Computer Science Department in Worcester, Massachusetts. Includes information regarding department programs, people, research and news/resources. The undergraduate program aims to create computer scientists who are broadly-educated and have a clear understanding of the natural laws and social orders that govern the world around them.Computer Science Department MQP ReviewWorcester Polytechnic Institute: Artificial Intelligence WebliographyPresents a collection of Internet resources on artificial intelligence, provided by the Computer Science Department of the Worcester Polytechnic Institute. Provides access to related newsgroups, FAQ sections, bibliographies, literature information, research groups, artificial intelligence laboratories, journals, and conferences.Research Into Knowledge-based Design at Worcester Polytechnic InstituteComputer Science at the Secondary School LevelAnalysis of Computer Science Curricula in Two-year and Four-year InstitutionsUsing Design History Systems for Technology TransferDesignResource-driven Resource LocationThe Design and Development of a Basic Introductory Course in Computer ScienceRoutineness RevisitedCompilationComparisons of Distributed Operating System Performance Using the WPI Benchmark SuiteConstraint Absorption and Relaxation Using a Design HistoryA Visual Programming Environment for Supporting Scientific Data AnalysisOn Direct Algorithms for Computing the Transitive Closure of a Two-dimensionally Structured FileEvaluating Design Knowledge Compilation MechanismsStrategies for Using Multicasting to Locate ResourcesA Model for Executing Computations in a Distributed EnvironmentRobot Learning from Human Teachers

Worcester Polytechnic Institute (WPI), Computer Science Department
Protocols, Strands, and Logic Addison-Wesley
Presents a collection of Internet resources on artificial intelligence, provided by the Computer Science Department of the Worcester Polytechnic Institute. Provides access to related newsgroups, FAQ sections, bibliographies, literature information, research groups, artificial intelligence laboratories, journals, and conferences.

A Structural Analysis Approach Using Computer Science Principles O'Reilly Media
Presents access to an online information resource of WWW sites dealing with artificial intelligence (AI) in design, compiled by the Computer Science Department of Worcester Polytechnic Institute (WPI), located in Massachusetts. Includes links to sites offering information about AI used in such fields as mechanical engineering, civil engineering, architecture, design research, manufacturing sciences, and others.

On Direct Algorithms for Computing the Transitive Closure of a Two-dimensionally Structured File
Morgan & Claypool Publishers
The Architecture of Computer Hardware, Systems Software and Networking is designed help students majoring in information technology (IT) and information systems (IS) understand the structure and operation of computers and computer-based devices. Requiring only basic computer skills, this accessible textbook introduces the basic principles of system architecture and explores current technological practices and trends using clear, easy-to-understand language. Throughout the text, numerous relatable examples, subject-specific illustrations, and in-depth case studies reinforce key learning points and show students how important concepts are applied in the real world. This fully-updated sixth edition features a wealth of new and revised content that reflects today's technological landscape. Organized into five parts, the book first explains the role of the computer in information systems and provides an overview of its components. Subsequent sections discuss the representation of data in the computer, hardware architecture and operational concepts, the basics of computer networking, system software and operating systems, and various interconnected systems and components. Students are introduced to the material using ideas already familiar to them, allowing them to gradually build upon what they have learned without being overwhelmed and develop a deeper knowledge of computer architecture.

PThreads Programming John Wiley & Sons
I highly recommend this book for anyone who's ever tried to implement RUP on a small project. Pollice and company have demystified and effectively scaled the process while ensuring that its essence hasn't been compromised. A must-have for any RUPster's library! Chris Soskin, Process Engineering Consultant, Toyota Motor SalesDo you want to improve the process on your next project? Perhaps you'd like to combine the best practices from the Rational Unified Process (RUP) and from agile methodologies (such as Extreme Programming). If so, buy this book! Software Development for Small Teams describes an entire software development project, from the initial customer contact through delivery of the software. Through a case study, it describes how one small, distributed team designed and applied a successful process. But this is not a perfect case study. The story includes what worked and what didn't, and describes how the team might change its process for the next project. The authors encourage you to assess their results and to use the lessons learned on your next project. Key topics covered include: Achieving a balance between people, process, and tools; recognizing that software develo

Delay Analysis of a Ring-based, Two-level, Asymmetric Metropolitan Area Network Addison-Wesley Professional
Computers are just as busy as the rest of us nowadays. They have lots of tasks to do at once, and need some cleverness to get them all done at the same time.That's why threads are seen more and more often as a new model for programming. Threads have been available for some time. The Mach

operating system, the Distributed Computer Environment (DCE), and Windows NT all feature threads.One advantage of most UNIX implementations, as well as DCE, is that they conform to a recently ratified POSIX standard (originally 1003.4a, now 1003.1c), which allows your programs to be portable between them. POSIX threads are commonly known as pthreads, after the word that starts all the names of the function calls. The standard is supported by Solaris, OSF/1, AIX, and several other UNIX-based operating systems.The idea behind threads programming is to have multiple tasks running concurrently within the same program. They can share a single CPU as processes do, or take advantage of multiple CPUs when available. In either case, they provide a clean way to divide the tasks of a program while sharing data.A window interface can read input on dozens of different buttons, each responsible for a separate task. A network server has to accept simultaneous calls from many clients, providing each with reasonable response time. A multiprocessor runs a number-crunching program on several CPUs at once, combining the results when all are done. All these kinds of applications can benefit from threads.In this book you will learn not only what the pthread calls are, but when it is a good idea to use threads and how to make them efficient (which is the whole reason for using threads in the first place). The authors delves into performance issues, comparing threads to processes, contrasting kernel threads to user threads, and showing how to measure speed. He also describes in a simple, clear manner what all the advanced features are for, and how threads interact with the rest of the UNIX system.Topics include: Basic design techniques Mutexes, conditions, and specialized synchronization techniques Scheduling, priorities, and other real-time issues Cancellation UNIX libraries and re-entrant routines Signals Debugging tips Measuring performance Special considerations for the Distributed Computing Environment (DCE)

A Model for Executing Computations in a Distributed Environment CRC Press
Introduces Worcester Polytechnic Institute, Computer Science Department in Worcester, Massachusetts. Includes information regarding department programs, people, research and news/resources. The undergraduate program aims to create computer scientists who are broadly-educated and have a clear understanding of the natural laws and social orders that govern the world around them.

Worcester Polytechnic Institute (WPI), Computer Science Department Wiley Global Education
A comprehensive review of position location technology — from fundamental theory to advanced practical applications Positioning systems and location technologies have become significant components of modern life, used in a multitude of areas such as law enforcement and security, road safety and navigation, personnel and object tracking, and many more. Position location systems have greatly reduced societal vulnerabilities and enhanced the quality of life for billions of people around the globe — yet limited resources are available to researchers and students in this important field. The Handbook of Position Location: Theory, Practice, and Advances fills this gap, providing a comprehensive overview of both fundamental and cutting-edge techniques and introducing practical methods of advanced localization and positioning. Now in its second edition, this handbook offers broad and in-depth coverage of essential topics including Time of Arrival (TOA) and Direction of Arrival (DOA) based positioning, Received Signal Strength (RSS) based positioning, network localization, and others. Topics such as GPS, autonomous vehicle applications, and visible light localization are examined, while major revisions to chapters such as body area network positioning

and digital signal processing for GNSS receivers reflect current and emerging advances in the field. This new edition: Presents new and revised chapters on topics including localization error evaluation, Kalman filtering, positioning in inhomogeneous media, and Global Positioning (GPS) in harsh environments Offers MATLAB examples to demonstrate fundamental algorithms for positioning and provides online access to all MATLAB code Allows practicing engineers and graduate students to keep pace with contemporary research and new technologies Contains numerous application-based examples including the application of localization to drone navigation, capsule endoscopy localization, and satellite navigation and localization Reviews unique applications of position location systems, including GNSS and RFID-based localization systems The Handbook of Position Location: Theory, Practice, and Advances is valuable resource for practicing engineers and researchers seeking to keep pace with current developments in the field, graduate students in need of clear and accurate course material, and university instructors teaching the fundamentals of wireless localization.

Handbook of Position Location Springer Nature
Learning from Demonstration (LfD) explores techniques for learning a task policy from examples provided by a human teacher. The field of LfD has grown into an extensive body of literature over the past 30 years, with a wide variety of approaches for encoding human demonstrations and modeling skills and tasks. Additionally, we have recently seen a focus on gathering data from non-expert human teachers (i.e., domain experts but not robotics experts). In this book, we provide an introduction to the field with a focus on the unique technical challenges associated with designing robots that learn from naive human teachers. We begin, in the introduction, with a unification of the various terminology seen in the literature as well as an outline of the design choices one has in designing an LfD system. Chapter 2 gives a brief survey of the psychology literature that provides insights from human social learning that are relevant to designing robotic social learners. Chapter 3 walks through an LfD interaction, surveying the design choices one makes and state of the art approaches in prior work. First, is the choice of input, how the human teacher interacts with the robot to provide demonstrations. Next, is the choice of modeling technique. Currently, there is a dichotomy in the field between approaches that model low-level motor skills and those that model high-level tasks composed of primitive actions. We devote a chapter to each of these. Chapter 7 is devoted to interactive and active learning approaches that allow the robot to refine an existing task model. And finally, Chapter 8 provides best practices for evaluation of LfD systems, with a focus on how to approach experiments with human subjects in this domain.

An Intelligent Graphical Interface for Tunnel Support Specification
This Festschrift was published in honor of Joshua Guttman on the occasion of his 66.66 birthday. The impact of his work is reflected in the 23 contributions enclosed in this volume. Joshua's most influential and enduring contribution to the field has been the development of the strand space formalism for analyzing cryptographic protocols. It is one of several "symbolic approaches" to security protocol analysis in which the underlying details of cryptographic primitives are abstracted away, allowing a focus on potential flaws in the communication patterns between participants. His attention to the underlying logic of strand spaces has also allowed him to merge domain-specific reasoning about protocols with general purpose, first-order logical theories. The identification of

clear principles in a domain paves the way to automated reasoning, and Joshua has been a leader in the development and distribution of several tools for security analysis.

Research Into Knowledge-based Design at Worcester Polytechnic Institute

Provides information about the Worcester Polytechnic Institute (WPI) Computer Science Department, including its past, present and future. Explains that the computer education program seeks to train outstanding professionals for technology transfer to the fields of biology, electrical engineering, materials science, civil engineering and mechanical engineering as well as to electronics and computer industries. Notes that the department maintains a highly trained faculty and up-to-date research facilities. Describes the undergraduate program in computer science studies and WPI's location near New England's high-technology region.

Load Indices for Load Sharing in Heterogeneous Distributed Computing Systems

An Updated Guide to the Visualization of Data for Designers, Users, and Researchers Interactive Data Visualization: Foundations, Techniques, and Applications, Second Edition provides all the theory, details, and tools necessary to build visualizations and systems involving the visualization of data. In color throughout, it explains basic terminology and concepts, algorithmic and software engineering issues, and commonly used techniques and high-level algorithms. Full source code is provided for completing implementations. New to the Second Edition New related readings, exercises, and programming projects Better quality figures and numerous new figures New chapter on techniques for time-oriented data This popular book continues to explore the fundamental components of the visualization process, from the data to the human viewer. For developers, the book offers guidance on designing effective visualizations using methods derived from human perception, graphical design, art, and usability analysis. For practitioners, it shows how various public and commercial visualization systems are used to solve specific problems in diverse domains. For researchers, the text describes emerging technology and hot topics in development at academic and industrial centers today. Each chapter presents several types of exercises, including review questions and problems that motivate readers to build on the material covered and design alternate approaches to solving a problem. In addition, programming projects encourage readers to perform a range of tasks, from the simple implementation of algorithms to the extension of algorithms and programming techniques. Web Resource A supplementary website includes downloadable software tools and example data sets, enabling hands-on experience with the techniques covered in the text. The site also offers links to useful data repositories and data file formats, an up-to-date listing of software packages and vendors, and instructional tools, such as reading lists, lecture slides, and demonstration programs.

The Design and Development of a Basic Introductory Course in Computer Science

Computer animation and graphics are now prevalent in everyday life from the computer screen, to the movie screen, to the smart phone screen. The growing excitement about WebGL applications and their ability to integrate HTML5, inspired the authors to exclusively use WebGL in the Seventh Edition of Interactive Computer Graphics with WebGL. Thisis the only introduction to computer graphics text for undergraduates that fully integrates WebGL and emphasizes application-based programming. The top-down, programming-oriented approach allows for coverage of engaging 3D material early in the course so students immediately begin to create their own 3D graphics.

Interactive Data Visualization

A Visual Programming Environment for Supporting Scientific Data Analysis

Computer Science at the Secondary School Level

Worcester Polytechnic Institute: Artificial Intelligence Webliography

Artificial Intelligence (AI) in Design Webliography

Evaluating Design Knowledge Compilation Mechanisms

Analysis of Computer Science Curricula in Two-year and Four-year Institutions

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