

Jane Liu Real Time System Solution Manual

In the tradition of Octavia Butler, here is radical self-help, society-help, and planet-help to shape the futures we want. Change is constant. The world, our bodies, and our minds are in a constant state of flux. They are a stream of ever-mutating, emergent patterns. Rather than steel ourselves against such change, Emergent Strategy teaches us to map and assess the swirling structures and to read them as they happen, all the better to shape that which ultimately shapes us, personally and politically. A resolutely materialist spirituality based equally on science and science fiction: a wild feminist and afro-futurist ride! adrienne maree brown, co-editor of Octavia's Brood: Science Fiction from Social Justice Movements, is a social justice facilitator, healer, and doula living in Detroit. Principles of Concurrent and Distributed Programming provides an introduction to concurrent programming focusing on general principles and not on specific systems. Software today is inherently concurrent or distributed – from event-based GUI designs to operating and real-time systems to Internet applications. The new edition of this classic introduction to concurrency has been completely revised in view of the growing importance of concurrency constructs embedded in programming languages and of formal methods such as model checking that are widely used in industry.

Drug overdose, driven largely by overdose related to the use of opioids, is now the leading cause of unintentional injury death in the United States. The ongoing opioid crisis lies at the intersection of two public health challenges: reducing the burden of suffering from pain and containing the rising toll of the harms that can arise from the use of opioid medications. Chronic pain and opioid use disorder both represent complex human conditions affecting millions of Americans and causing untold disability and loss of function. In the context of the growing opioid problem, the U.S. Food and Drug Administration (FDA) launched an Opioids Action Plan in early 2016. As part of this plan, the FDA asked the National Academies of Sciences, Engineering, and Medicine to convene a committee to update the state of the science on pain research, care, and education and to identify actions the FDA and others can take to respond to the opioid epidemic, with a particular focus on informing FDA's development of a formal method for incorporating individual and societal considerations into its risk-benefit framework for opioid approval and monitoring.

This book integrates new ideas and topics from real time systems, embedded systems, and software engineering to give a complete picture of the whole process of developing software for real-time embedded applications. You will not only gain a thorough understanding of concepts related to microprocessors, interrupts, and system boot process, appreciating the importance of real-time modeling and scheduling, but you will also learn software engineering practices such as model documentation, model analysis, design patterns, and standard conformance. This book is split into four parts to help you learn the key concept

of embedded systems; Part one introduces the development process, and includes two chapters on microprocessors and interrupts---fundamental topics for software engineers; Part two is dedicated to modeling techniques for real-time systems; Part three looks at the design of software architectures and Part four covers software implementations, with a focus on POSIX-compliant operating systems. With this book you will learn: The pros and cons of different architectures for embedded systems POSIX real-time extensions, and how to develop POSIX-compliant real time applications How to use real-time UML to document system designs with timing constraints The challenges and concepts related to cross-development Multitasking design and inter-task communication techniques (shared memory objects, message queues, pipes, signals) How to use kernel objects (e.g. Semaphores, Mutex, Condition variables) to address resource sharing issues in RTOS applications The philosophy underpinning the notion of "resource manager" and how to implement a virtual file system using a resource manager The key principles of real-time scheduling and several key algorithms Coverage of the latest UML standard (UML 2.4) Over 20 design patterns which represent the best practices for reuse in a wide range of real-time embedded systems Example codes which have been tested in QNX---a real-time operating system widely adopted in industry

Work practices and organizational processes vary widely and evolve constantly. The technological infrastructure has to follow, allowing or even supporting these changes. Traditional approaches to software engineering reach their limits whenever the full spectrum of user requirements cannot be anticipated or the frequency of changes makes software reengineering cycles too clumsy to address all the needs of a specific field of application. Moreover, the increasing importance of 'infrastructural' aspects, particularly the mutual dependencies between technologies, usages, and domain competencies, calls for a differentiation of roles beyond the classical user--designer dichotomy. End user development (EUD) addresses these issues by offering lightweight, use-time support which allows users to configure, adapt, and evolve their software by themselves. EUD is understood as a set of methods, techniques, and tools that allow users of software systems who are acting as non-professional software developers to 1 create, modify, or extend a software artifact. While programming activities by non-professional actors are an essential focus, EUD also investigates related activities such as collective understanding and sense-making of use problems and solutions, the interaction among end users with regard to the introduction and diffusion of new configurations, or delegation patterns that may also partly involve professional designers.

This book comprehensively covers the three main areas of the subject: concepts, design and programming. Information on the applications of the embedded/real-time systems are woven into almost every aspect discussed which of course is inevitable. Hardware architecture and the various hardware platforms, design & development, operating systems, programming in Linux and RTLinux, navigation

systems and protocol converter are discussed extensively. Special emphasis is given to embedded database and Java applications, and embedded software development. · Introduction to Embedded Systems· Architecture of Embedded Systems· Programming for Embedded Systems· The Process of Embedded System Development· Hardware Platforms· Communication Interfaces· Embedded/Real-Time Operating System Concepts· Overview of Embedded/Real-Time Operating Systems· Target Image Creation· Representative Embedded Systems· Programming in Linux· Programming in RTLinux· Development of Navigation System· Development of Protocol Converter· Embedded Database Application· Mobile Java Applications· Embedded Software Development on 89C51 Micro-Controller Platform· Embedded Software Development on AVR Micro-Controller Platform· Embedded Systems Applications Using Intel StrongARM Platform· Future Trends

Modern embedded systems are used for connected, media-rich, and highly integrated handheld devices such as mobile phones, digital cameras, and MP3 players. All of these embedded systems require networking, graphic user interfaces, and integration with PCs, as opposed to traditional embedded processors that can perform only limited functions for industrial applications. While most books focus on these controllers, Modern Embedded Computing provides a thorough understanding of the platform architecture of modern embedded computing systems that drive mobile devices. The book offers a comprehensive view of developing a framework for embedded systems-on-chips. Examples feature the Intel Atom processor, which is used in high-end mobile devices such as e-readers, Internet-enabled TVs, tablets, and net books. Beginning with a discussion of embedded platform architecture and Intel Atom-specific architecture, modular chapters cover system boot-up, operating systems, power optimization, graphics and multi-media, connectivity, and platform tuning. Companion lab materials compliment the chapters, offering hands-on embedded design experience. Learn embedded systems design with the Intel Atom Processor, based on the dominant PC chip architecture. Examples use Atom and offer comparisons to other platforms Design embedded processors for systems that support gaming, in-vehicle infotainment, medical records retrieval, point-of-sale purchasing, networking, digital storage, and many more retail, consumer and industrial applications Explore companion lab materials online that offer hands-on embedded design experience

This updated edition offers an indispensable exposition on real-time computing, with particular emphasis on predictable scheduling algorithms. It introduces the fundamental concepts of real-time computing, demonstrates the most significant results in the field, and provides the essential methodologies for designing predictable computing systems used to support time-critical control applications. Along with an in-depth guide to the available approaches for the implementation and analysis of real-time applications, this revised edition contains a close examination of recent developments in real-time systems, including limited

preemptive scheduling, resource reservation techniques, overload handling algorithms, and adaptive scheduling techniques. This volume serves as a fundamental advanced-level textbook. Each chapter provides basic concepts, which are followed by algorithms, illustrated with concrete examples, figures and tables. Exercises and solutions are provided to enhance self-study, making this an excellent reference for those interested in real-time computing for designing and/or developing predictable control applications.

In this text performance measures, scheduling, real-time architectures, and algorithms are treated, along with fault-tolerance technology. With "Real-Time Systems", students will gain a deeper insight into the material through the use of numerous exercises and examples. For instance, simple examples found in Chapter 2 illustrate the differences between real-time and non-real-time systems. Computers as Components, Second Edition, updates the first book to bring essential knowledge on embedded systems technology and techniques under a single cover. This edition has been updated to the state-of-the-art by reworking and expanding performance analysis with more examples and exercises, and coverage of electronic systems now focuses on the latest applications. It gives a more comprehensive view of multiprocessors including VLIW and superscalar architectures as well as more detail about power consumption. There is also more advanced treatment of all the components of the system as well as in-depth coverage of networks, reconfigurable systems, hardware-software co-design, security, and program analysis. It presents an updated discussion of current industry development software including Linux and Windows CE. The new edition's case studies cover SHARC DSP with the TI C5000 and C6000 series, and real-world applications such as DVD players and cell phones. Researchers, students, and savvy professionals schooled in hardware or software design, will value Wayne Wolf's integrated engineering design approach. * Uses real processors (ARM processor and TI C55x DSP) to demonstrate both technology and techniques...Shows readers how to apply principles to actual design practice. * Covers all necessary topics with emphasis on actual design practice...Realistic introduction to the state-of-the-art for both students and practitioners. * Stresses necessary fundamentals which can be applied to evolving technologies...helps readers gain facility to design large, complex embedded systems that actually work.

"This book is a comprehensive text for the design of safety critical, hard real-time embedded systems. It offers a splendid example for the balanced, integrated treatment of systems and software engineering, helping readers tackle the hardest problems of advanced real-time system design, such as determinism, compositionality, timing and fault management. This book is an essential reading for advanced undergraduates and graduate students in a wide range of disciplines impacted by embedded computing and software. Its conceptual clarity, the style of explanations and the examples make the abstract concepts accessible for a wide audience." Janos Sztipanovits, Director E. Bronson Ingram

Distinguished Professor of Engineering Institute for Software Integrated Systems Vanderbilt University Real-Time Systems focuses on hard real-time systems, which are computing systems that must meet their temporal specification in all anticipated load and fault scenarios. The book stresses the system aspects of distributed real-time applications, treating the issues of real-time, distribution and fault-tolerance from an integral point of view. A unique cross-fertilization of ideas and concepts between the academic and industrial worlds has led to the inclusion of many insightful examples from industry to explain the fundamental scientific concepts in a real-world setting. Compared to the first edition, new developments in complexity management, energy and power management, dependability, security, and the internet of things, are addressed. The book is written as a standard textbook for a high-level undergraduate or graduate course on real-time embedded systems or cyber-physical systems. Its practical approach to solving real-time problems, along with numerous summary exercises, makes it an excellent choice for researchers and practitioners alike.

From award-winning author Ken Liu comes his much anticipated second volume of short stories. Ken Liu is one of the most lauded short story writers of our time. This collection includes a selection of his science fiction and fantasy stories from the last five years—sixteen of his best—plus a new novelette. In addition to these seventeen selections, *The Hidden Girl and Other Stories* also features an excerpt from book three in the *Dandelion Dynasty* series, *The Veiled Throne*.

The presence and use of real-time systems is becoming increasingly common. Examples of such systems range from nuclear reactors, to automotive controllers, and also entertainment software such as games and graphics animation. The growing importance of real-time systems is becoming increasingly common.

For any organization to be successful, it must operate in such a manner that knowledge and information, human resources, and technology are continually taken into consideration and managed effectively. Business concepts are always present regardless of the field or industry – in education, government, healthcare, not-for-profit, engineering, hospitality/tourism, among others. Maintaining organizational awareness and a strategic frame of mind is critical to meeting goals, gaining competitive advantage, and ultimately ensuring sustainability. The *Encyclopedia of Organizational Knowledge, Administration, and Technology* is an inaugural five-volume publication that offers 193 completely new and previously unpublished articles authored by leading experts on the latest concepts, issues, challenges, innovations, and opportunities covering all aspects of modern organizations. Moreover, it is comprised of content that highlights major breakthroughs, discoveries, and authoritative research results as they pertain to all aspects of organizational growth and development including methodologies that can help companies thrive and analytical tools that assess an organization's internal health and performance. Insights are offered in key topics such as organizational structure, strategic leadership, information technology management, and business analytics, among others. The knowledge compiled in

this publication is designed for entrepreneurs, managers, executives, investors, economic analysts, computer engineers, software programmers, human resource departments, and other industry professionals seeking to understand the latest tools to emerge from this field and who are looking to incorporate them in their practice. Additionally, academicians, researchers, and students in fields that include but are not limited to business, management science, organizational development, entrepreneurship, sociology, corporate psychology, computer science, and information technology will benefit from the research compiled within this publication.

The Memory Key author Liana Liu delivers a thrilling story of one girl struggling to claim her own identity while becoming an unwitting participant in the strange fate of a wealthy dynasty. The house on Arrow Island is full of mystery. Yet, when Mei arrives, she can't help feeling relieved. She's happy to spend the summer in an actual mansion tutoring a rich man's daughter if it means a break from her normal life—her needy mother, her delinquent brother, their tiny apartment in the city. And Ella Morison seems like an easy charge, sweet and well behaved. What she doesn't know is that something is very wrong in the Morison household. Though Mei tries to focus on her duties, she becomes increasingly distracted by the family's problems and her own complicated feelings for Ella's brother, Henry. But most disturbing of all are the unexplained noises she hears at night—the howling and thumping and cries. Mei is a sensible girl. She isn't superstitious; she doesn't believe in ghosts. Yet she can't shake her fear that there is danger lurking in the shadows of this beautiful house, a darkness that could destroy the family inside and out...and Mei along with them.

Embedded systems exposed! From operating our cars, to controlling the elevators we ride, to doing our laundry or cooking our dinner, the special computers we call embedded systems are quietly and unobtrusively doing their jobs. Embedded systems give us the ability to put increasingly large amounts of capability into ever-smaller devices. Embedded Systems: A Contemporary Design Tool introduces you to the theoretical and software foundations of these systems, and shows you how to apply embedded systems concepts to design practical applications that solve real-world challenges. Taking the user's problem and needs as your starting point, you'll delve into each of the key theoretical and practical aspects to consider when designing an application. Author James Peckol walks you through the formal hardware and software development process, covering:

- * How to break the problem down into major functional blocks
- * Planning the digital and software architecture of the system
- * Designing the physical world interface to external analog and digital signals
- * Debugging and testing throughout the development cycle
- * Improving performance

Stressing the importance of safety and reliability in the design and development of embedded systems and providing a balance treatment of both the hardware and software aspects of embedded systems, Embedded Systems gives you the right tools for developing safe, reliable, and robust solutions in a wide range of embedded

applications.

The first book to provide a comprehensive overview of the subject rather than a collection of papers. The author is a recognized authority in the field as well as an outstanding teacher lauded for his ability to convey these concepts clearly to many different audiences. A handy reference for practitioners in the field.

MicroC/OS II Second Edition describes the design and implementation of the MicroC/OS-II real-time operating system (RTOS). In addition to its value as a reference to the kernel, it is an extremely detailed and highly readable design study particularly useful to the embedded systems student. While documenting the design and implementation of the ker

An excellent source of 135 holiday songs that correlate with the special events of each month in the school year. Elements of the Orff, Kodály and Laban philosophies are used and the Teacher's Edition contains extensive suggestions on focus, activities, body movement and other innovative ideas.

What does it mean to be an engaged American in today's divided political landscape, and how do we restore hope in our country? In a collection of "civic sermons" delivered at gatherings around the nation, popular advocate for active citizenship Eric Liu takes on these thorny questions and provides inspiration and solace in a time of anger, fear, and dismay over the state of the Union. Here are 19 stirring explorations of current and timeless topics about democracy, liberty, equal justice, and powerful citizenship. This book will energize you to get involved, in ways both large and small, to help rebuild a country that you're proud to call home. Become America will challenge you to rehumanize our politics and rekindle a spirit of love in civic life.

Young Love Liu, who wonders about life outside of the conformist region of Xinjiang during the Cultural Revolution, is inspired by a teacher to learn English but finds his survival threatened by the atmosphere of suspicion and repression that marks his ho

The popular media often portrays Asian Americans as highly educated and successful individuals—the "Model Minority." As the ethnic minority with the largest percentage of college graduates, many Asian Americans do enter the professional workforce. However, many of them seem to stall in their careers and never make it to the corner offices. Leading executive coach Jane Hyun explores how traditional Asian values can be at odds with Western corporate culture. By using anecdotes, case studies, and exercises, Hyun offers practical solutions for resolving misunderstandings and overcoming challenges in an increasingly multicultural workplace. This timely book explains how companies will benefit from discovering and supporting the talents of their Asian employees and shows Asians how to leverage their strengths to break through the bamboo ceiling.

Real-time systems are now used in a wide variety of applications. Conventionally, they were configured at design to perform a given set of tasks and could not readily adapt to dynamic situations. The concept of imprecise and approximate computation has emerged as a promising approach to providing scheduling

flexibility and enhanced dependability in dynamic real-time systems. The concept can be utilized in a wide variety of applications, including signal processing, machine vision, databases, networking, etc. For those who wish to build dynamic real-time systems which must deal safely with resource unavailability while continuing to operate, leading to situations where computations may not be carried through to completion, the techniques of imprecise and approximate computation facilitate the generation of partial results that may enable the system to operate safely and avert catastrophe. Audience: Of special interest to researchers. May be used as a supplementary text in courses on real-time systems.

The proliferation of multicore processors in the embedded market for Internet-of-Things (IoT) and Cyber-Physical Systems (CPS) makes developing real-time embedded applications increasingly difficult. What is the underlying theory that makes multicore real-time possible? How does theory influence application design? When is a real-time operating system (RTOS) useful? What RTOS features do applications need? How does a mature RTOS help manage the complexity of multicore hardware? *Real-Time Systems Development with RTEMS and Multicore Processors* answers these questions and more with exemplar Real-Time Executive for Multiprocessor Systems (RTEMS) RTOS to provide concrete advice and examples for constructing useful, feature-rich applications. RTEMS is free, open-source software that supports multi-processor systems for over a dozen CPU architectures and over 150 specific system boards in applications spanning the range of IoT and CPS domains such as satellites, particle accelerators, robots, racing motorcycles, building controls, medical devices, and more. The focus of this book is on enabling real-time embedded software engineering while providing sufficient theoretical foundations and hardware background to understand the rationale for key decisions in RTOS and application design and implementation. The topics covered in this book include: Cross-compilation for embedded systems development Concurrent programming models used in real-time embedded software Real-time scheduling theory and algorithms used in wide practice Usage and comparison of two application programmer interfaces (APIs) in real-time embedded software: POSIX and the RTEMS Classic APIs Design and implementation in RTEMS of commonly found RTOS features for schedulers, task management, time-keeping, inter-task synchronization, inter-task communication, and networking The challenges introduced by multicore hardware, advances in multicore real-time theory, and software engineering multicore real-time systems with RTEMS All the authors of this book are experts in the academic field of real-time embedded systems. Two of the authors are primary open-source maintainers of the RTEMS software project.

Real-time and embedded systems must make the most of very limited processor and memory sources, and UML is an invaluable tool for achieving these goals. Key topics include information on tradeoffs associated with each object design approach, design patterns and

identification strategies, detailed appendix on OMG, and more.

Hard real-time systems are very predictable, but not sufficiently flexible to adapt to dynamic situations. They are built under pessimistic assumptions to cope with worst-case scenarios, so they often waste resources. Soft real-time systems are built to reduce resource consumption, tolerate overloads and adapt to system changes. They are also more suited to novel applications of real-time technology, such as multimedia systems, monitoring apparatuses, telecommunication networks, mobile robotics, virtual reality, and interactive computer games. This unique monograph provides concrete methods for building flexible, predictable soft real-time systems, in order to optimize resources and reduce costs. It is an invaluable reference for developers, as well as researchers and students in Computer Science.

'... a very good balance between the theory and practice of real-time embedded system designs.' —Jun-ichiro Itojun Hagino, Ph.D., Research Laboratory, Internet Initiative Japan Inc., IETF IPv6 Operations Working Group (v6ops) co-chair 'A cl

Award-winning author Chen Qiufan's *Waste Tide* is a thought-provoking vision of the future. Translated by Ken Liu, who brought Cixin Liu's Hugo Award-winning *The Three Body Problem* to English-speaking readers. Mimi is drowning in the world's trash. She's a waste worker on Silicon Isle, where electronics -- from cell phones and laptops to bots and bionic limbs — are sent to be recycled. These amass in towering heaps, polluting every spare inch of land. On this island off the coast of China, the fruits of capitalism and consumer culture come to a toxic end. Mimi and thousands of migrant waste workers like her are lured to Silicon Isle with the promise of steady work and a better life. They're the lifeblood of the island's economy, but are at the mercy of those in power. A storm is brewing, between ruthless local gangs, warring for control. Ecoterrorists, set on toppling the status quo. American investors, hungry for profit. And a Chinese-American interpreter, searching for his roots. As these forces collide, a war erupts -- between the rich and the poor; between tradition and modern ambition; between humanity's past and its future. Mimi, and others like her, must decide if they will remain pawns in this war or change the rules of the game altogether. "An accomplished eco-techno-thriller with heart and soul as well as brain. Chen Qiufan is an astute observer, both of the present world and of the future that the next generation is in danger of inheriting." — David Mitchell, New York Times bestselling author of *Cloud Atlas*

This book is based on the real story. It tells the Brave heart story. how an ordinary Chinese girl, penniless, survived many life and death, boarded a famous interview on TV, but she sacrificed herself, and saved her classmates. She was the doctor intern, and had joined many operations when she was only 17 years old..At the age of 14, Jane was admitted to the medical university, who was almost penniless at the time, had just experienced domestic violence and was wounded, first time to Beijing. How did Jane buy a ticket? Years later, Jane thought her parents would repent, but she got kidnaped by her mother to the mental hospital. How did Jane escape from the mental hospital intelligently? how did she won the Global Product Design Award of the Fortune 500 American company and grew into a true story of aspiring yo

Covering the late colonial age to World War I and beyond, this collection of essays places the economic history of the American South in an international light by establishing useful comparisons with the larger Atlantic and world economy. In an attempt to dispel long-lasting myths about the South, the essays analyze the economic evolution of the South since the slave era. From this perspective, the conception of a backward, wholly agricultural antebellum South occupied only by wealthy planters, poor whites, and contented slaves has finally given way to one of economic and social dynamism as well as regional prosperity. In a coherent and cohesive progression of subjects, these essays show that the South had been deeply enmeshed in the Atlantic economy since the colonial period and, after the Civil War, retained distinctive needs that caused increasing departure from the course northerners adopted on matters of political economy. This comparative approach also helps explain the motivations

behind the political choices made by the South as an eminently export-oriented region. This book shows that the South was not slower to develop with respect to industrialization than either the majority of the northern states, especially in the West, or the countries of Western Europe. In fact, the apparently disappointing performance of the New South's economy appears to be the result of more pervasive and largely uncontrollable trends that affected the national as well as the international economy. *Global Perspectives on Industrial Transformation in the American South* makes an important contribution to the economic history of the South and to recent efforts to place American history in a more international context. Thoroughly revised, this third edition focuses on modern techniques used to generate synthetic three-dimensional images in a fraction of a second. With the advent of programmable shaders, a wide variety of new algorithms have arisen and evolved over the past few years. This edition discusses current, practical rendering methods used in games and other applications. It also presents a solid theoretical framework and relevant mathematics for the field of interactive computer graphics, all in an approachable style. The authors have made the figures used in the book available for download for fair use.:Download Figures. Reviews *Rendering* has been a required reference for professional graphics practitioners for nearly a decade. This latest edition is as relevant as ever, covering topics from essential mathematical foundations to advanced techniques used by today's cutting edge games. -- Gabe Newell, President, Valve, May 2008 *Rendering ...* has been completely revised and revamped for its updated third edition, which focuses on modern techniques used to generate three-dimensional images in a fraction of the time old processes took. From practical rendering for games to math and details for better interactive applications, it's not to be missed. -- The Bookwatch, November 2008 You'll get brilliantly lucid explanations of concepts like vertex morphing and variance shadow mapping—as well as a new respect for the incredible craftsmanship that goes into today's PC games. -- Logan Decker, *PC Gamer Magazine*, February 2009 Monte Carlo methods are revolutionizing the on-line analysis of data in many fields. They have made it possible to solve numerically many complex, non-standard problems that were previously intractable. This book presents the first comprehensive treatment of these techniques.

Today's embedded and real-time systems contain a mix of processor types: off-the-shelf microcontrollers, digital signal processors (DSPs), and custom processors. The decreasing cost of DSPs has made these sophisticated chips very attractive for a number of embedded and real-time applications, including automotive, telecommunications, medical imaging, and many others—including even some games and home appliances. However, developing embedded and real-time DSP applications is a complex task influenced by many parameters and issues. *DSP Software Development Techniques for Embedded and Real-Time Systems* is an introduction to DSP software development for embedded and real-time developers giving details on how to use digital signal processors efficiently in embedded and real-time systems. The book covers software and firmware design principles, from processor architectures and basic theory to the selection of appropriate languages and basic algorithms. The reader will find practical guidelines, diagrammed techniques, tool descriptions, and code templates for developing and optimizing DSP software and firmware. The book also covers integrating and testing DSP systems as well as managing the DSP development effort. Digital signal processors (DSPs) are the future of microchips! Includes practical guidelines, diagrammed techniques, tool descriptions, and code

templates to aid in the development and optimization of DSP software and firmware

One of the Time 100 Best Fantasy Books Of All Time Two men rebel together against tyranny—and then become rivals—in this first sweeping book of an epic fantasy series from Ken Liu, recipient of Hugo, Nebula, and World Fantasy awards. Hailed as one of the best books of 2015 by NPR. Wily, charming Kuni Garu, a bandit, and stern, fearless Mata Zyndu, the son of a deposed duke, seem like polar opposites. Yet, in the uprising against the emperor, the two quickly become the best of friends after a series of adventures fighting against vast conscripted armies, silk-draped airships, and shapeshifting gods. Once the emperor has been overthrown, however, they each find themselves the leader of separate factions—two sides with very different ideas about how the world should be run and the meaning of justice. Fans of intrigue, intimate plots, and action will find a new series to embrace in the Dandelion Dynasty.

Within every person lies the power to change one world. Within Flora lies the hope for two. In the isolated rural valley of Terrene, where technology is grown, not manufactured, Flora Karachi paints her anguish with flowers and yearns to travel outside the mountain walls that guard her village. But in a society which values harmony and symmetry above all else, her dangerous curiosity and her indelicate scars, earned from a lifetime of inexplicable blackouts, make her an outcast with few prospects for adventure. Then the dreams come. Lucid and overpowering, they throw Flora into a fascinatingly advanced world where she lives the life of Jane Ingram, an American scientist fighting global climate change while trying to raise a child in a society where interpersonal interaction is becoming obsolete. Flora 's blackouts open a window into knowledge lost long ago and possibilities that are yet to come. To unravel these mysteries, she must travel to the enigmatic Institute, an ancient enclave hidden in the surrounding mountains, where scholars guard the secrets of Terrene. Living two lives, Flora will fight to become an Institute scholar in her own world while struggling to save the planet from humanity's neglect in Jane's. Yet all of Flora's courage combined with all of Jane's experience may not be enough to defeat the powerful forces protecting the secret which ties their two worlds together. To find salvation for both worlds, Jane and Flora must sacrifice their own dreams, conquer their fears, and discover hope for a new beginning. Hailed as a clever blend between science fiction and fantasy, Terrene explores the challenges of accelerating technology and global climate change through the stories of two remarkable women in two worlds that are not as distant as they seem.

Nineteen-year-old Na has always lived in the shadow of her younger brother, Bao-bao, her parents' cherished son. Years ago, Na's parents left her in the countryside and went to work in the city, bringing Bao-bao along and committing everything to his education. But when Bao-bao dies suddenly, Na realizes how little she knew him. Did he really kill himself because of a low score on China's all-important college entrance exam? Na learns that Bao-bao had many secrets and

that his death may not be what it seems. Na's parents expect her to quit her vocational school and go to work, forcing Na to confront traditional expectations for and pressures on young women.

View our feature on Marjorie Liu's *Darkness Calls*. Demon hunter Maxine Kiss, inked with living tattoos, is on a mission to rescue the man she loves from a bloodthirsty army. To save him, Maxine has only one choice: to lose control—and release her own powers of darkness.

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