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101 Life Skills Games for Children - Bernie Badegruber 2005
"Collection of games aimed at enhancing children's self-awareness and social and emotional skills, helping them understand and deal with problems in daily interactions with other children and adults"--Provided by publisher.

A Book of Russian Idioms Illustrated - M. I. Dubrovin 2014-05-23
A Book of Russian Idioms Illustrated highlights the role of Russian idioms in the historical development of the Russian language and how mastery of these idioms can bring about deeper understanding of the language. The book identifies the types of idioms that are discussed, and then states that phraseological fusions are word combinations whose meaning cannot be deduced from the meaning of their elements, while phraseological unities are word combinations whose meaning are partly dependent on the connotation of their individual words. The idioms are arranged alphabetically as units, and each entry is composed of a Russian idiom with its transliteration, literal translation, and explanation. English equivalents are also provided. The text underscores the use of pictures to depict the meaning of idioms and to illustrate their real meanings. The illustrations are presented in a humorous manner, showing the influence of humor in Russian idioms. The manuscript notes that Russian idioms are greatly of popular origin, hence they practically deal with human relations. The book is a vital reference for English speaking students of the Russian language who are familiar with the essentials of Russian grammar and basic Russian vocabulary.

United Nations Fourth World Conference on Women - United States. Congress. House. Committee on International Relations. Subcommittee on International Operations and Human Rights 1996

Progress of the World's Women 2015-2016 - 2015-04-27
This UN Women's flagship report shows that, all too often, women's economic and social rights are held back, because they are forced to fit into a 'man's world'. But, it is possible to move beyond the status quo, to picture a world where economies are built with women's rights at their heart. It is being published as the international community comes together to define a transformative post-2015 development agenda, and coincides with the 20th anniversary commemoration of the landmark Fourth World Conference on Women in Beijing, China which set out a comprehensive agenda to advance gender equality. This publication brings together

human rights and economic policymaking, and provides the key elements for a far-reaching new policy agenda that can transform economies and make women's rights a reality. Through solid in-depth analysis and data, this evidence-based report provides key recommendations on moving towards an economy that truly works for women, for the benefit of all.

Spirit Possession in the Nepal Himalayas - John T. Hitchcock 1994-01-01

World Development Report 2016 - World Bank Group 2016-01-14
Digital technologies are spreading rapidly, but digital dividends--the broader benefits of faster growth, more jobs, and better services--are not. If more than 40 percent of adults in East Africa pay their utility bills using a mobile phone, why can't others around the world do the same? If 8 million entrepreneurs in China--one third of them women--can use an e-commerce platform to export goods to 120 countries, why can't entrepreneurs elsewhere achieve the same global reach? And if India can provide unique digital identification to 1 billion people in five years, and thereby reduce corruption by billions of dollars, why can't other countries replicate its success? Indeed, what's holding back countries from realizing the profound and transformational effects that digital technologies are supposed to deliver? Two main reasons. First, nearly 60 percent of the world's population are still offline and can't participate in the digital economy in any meaningful way. Second, and more important, the benefits of digital technologies can be offset by growing risks. Startups can disrupt incumbents, but not when vested interests and regulatory uncertainty obstruct competition and the entry of new firms. Employment opportunities may be greater, but not when the labor market is polarized. The internet can be a platform for universal empowerment, but not when it becomes a tool for state control and elite capture. The World Development Report 2016 shows that while the digital revolution has forged ahead, its 'analog complements'--the regulations that promote entry and competition, the skills that enable workers to access and then leverage the new economy, and the institutions that are accountable to citizens--have not kept pace. And when these analog complements to digital investments are absent, the development impact can be disappointing. What, then, should countries do? They should formulate digital development strategies that are much broader than current information and communication technology (ICT) strategies. They should create a policy and institutional environment for technology that fosters the greatest benefits. In short, they need to build a strong analog foundation to deliver digital dividends to everyone, everywhere.

Latin - Frederic M. Wheelock 1959

The Sand Sea - Michael McClellan 2020-06-24 "An astounding epic novel of J.R.R. Tolkien proportions!" — Steven Pressfield, Bestselling author of Gates of Fire and The War of Art Raiders of the Lost Ark playing A Game of Thrones The Sand Sea takes place on an alternative Earth roiled by war and conquest that mirrors our own Gilded Age. The treasure that ignites greed and folly in this parallel world is not petroleum, but beserite—a mineral of immeasurable value. Captivated by an ancient prophecy and the call of adventure, inexperienced nobleman and scholar Peter Harmon (think of a young Winston Churchill-like naif) joins an expedition to stake his nation's claim to a global empire. Harmon's destination is a vast and inhospitable desert halfway around the world, dominated by the iron-fisted Grand Vizer Jemojeen Jongdar. A tyrant on a mission to secure the ancient and supernatural Staff of the Ram, the Lion, and the Serpent, Jongdar knows the truth that others can only imagine: The one who controls the staff will possess the power to rule the world. Before he can seize his destiny, Jongdar must find and destroy the one person capable of thwarting his ambition, the rightful heir to the Sand Sea realm, an innocent woman named Selena Savanar. Can the brave and indomitable Selena accept her true destiny and rally her people in the eye of a gathering storm? To do so will require her to outwit the man who burned her father alive and left her an orphan and beggar a lifetime ago. Or will Peter Harmon and the cadre of opportunists he rides with conquer the divided empire? With the mythic structure of J.R.R. Tolkien's The Lord of the Rings trilogy in a world as rich and real as

George R.R. Martin's Westeros, The Sand Sea is an immersive experience made to order for epic fantasy fans and anyone who enjoys grand-scale historical fiction.

Ethnoveterinary Medicine - 2020
The importance of a complementary approach to animal health is highlighted in this book, with core themes encompassing reviews of traditional veterinary medicine for common diseases afflicting livestock, as well as local practices in different areas of the world. The book includes chapters on ethnoveterinary medicine used to prevent and treat ticks and tick-borne diseases, infectious diseases and parasites. Ethnoveterinary practices in parts of the world which have not been comprehensively reviewed before are highlighted, including Estonia, Belarus and the Maghreb - the north-western tip of Africa. A fascinating account of African ethnoveterinary medicine and traditional husbandry practices is provided by a veteran in the field with a wealth of practical experience in the area. Neglected areas of research involve the relationship of ethnoveterinary medicine with environmental, ethical, cultural and gender aspects, and leading experts explore these issues. The book is intended to provide an informative compilation of current research and future prospects in ethnoveterinary medicine, which hopes to inform and encourage investigations in new directions. Sustainable development requires a concerted effort to combine indigenous knowledge systems with scientific research to improve animal health. This is the case not only in rural areas where access to orthodox veterinary health care may be limited, but also against the backdrop of antibiotic resistance and increased demand for alternative and complementary therapies to enhance the health of both production and companion animals. Students, academics and veterinary professionals will find this book a useful addition to knowledge on present and future aspects of ethnoveterinary research.

The Memoirs of Marshal Zhukov - Georgiĭ Konstantinovich Zhukov 1971
Memoirs of a Soviet military commander in the course of World War II.

Tim[eo]tion - Jonathan Shaw 2003
Classic images of Muybridge and Edgerton and groundbreaking experiments of Shaw.

Current and Historical Debates in Social Sciences: Field Studies and Analysis - Emrah Doğan 2020-10-24
Historical and current debates in social sciences mirror the reality of human existence. However, the reality and facts of human existence are also different from each other. At the same time, these phenomena in social sciences are multidimensional. In this sense, some of the human cases were included in this study. Besides, historical and current analyses in this study have been examined in other social science studies. The multidimensional perspective of the field of social science encourages re-examining the topics covered and revealing different trends. In this context, this study aimed to clarify light on the dark points in the field of social science by reconsidering the discussed or not discussed issues.

Gopāla-campū - Jīva Gosvāmī 2009
Poem on Krishna, Hindu deity; Sanskrit text with English translation.

Practical Recommender Systems - Kim Falk 2019-01-18
Summary Online recommender systems help users find movies, jobs, restaurants-even romance! There's an art in combining statistics, demographics, and query terms to achieve results that will delight them. Learn to build a recommender system the right way: it can make or break your application! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Recommender systems are everywhere, helping you find everything from movies to jobs, restaurants to hospitals, even romance. Using behavioral and demographic data, these systems make predictions about what users will be most interested in at a particular time, resulting in high-quality, ordered, personalized suggestions. Recommender systems are practically a necessity for keeping your site content current, useful, and interesting to your visitors. About the Book Practical Recommender Systems explains how recommender systems work and shows how to create and apply them for your site. After covering the basics, you'll see how to collect user data and produce personalized recommendations. You'll learn how to use the most popular recommendation algorithms and

see examples of them in action on sites like Amazon and Netflix. Finally, the book covers scaling problems and other issues you'll encounter as your site grows. What's inside How to collect and understand user behavior Collaborative and content-based filtering Machine learning algorithms Real-world examples in Python About the Reader Readers need intermediate programming and database skills. About the Author Kim Falk is an experienced data scientist who works daily with machine learning and recommender systems. Table of Contents PART 1 - GETTING READY FOR RECOMMENDER SYSTEMS What is a recommender? User behavior and how to collect it Monitoring the system Ratings and how to calculate them Non-personalized recommendations The user (and content) who came in from the cold PART 2 - RECOMMENDER ALGORITHMS Finding similarities among users and among content Collaborative filtering in the neighborhood Evaluating and testing your recommender Content-based filtering Finding hidden genres with matrix factorization Taking the best of all algorithms: implementing hybrid recommenders Ranking and learning to rank Future of recommender systems

IOS Apprentice (Eighth Edition): Beginning IOS Development with Swift and UIKit - Joey Devilla 2019-12-12
Learn iPhone and iPad Programming via Tutorials! If you're new to iOS or Swift, or to programming in general, learning how to write an app can seem incredibly overwhelming. That's why you need a book that: Shows you how to write an app step-by-step. Has tons of illustrations and screenshots to make everything clear. Is written in a fun and easygoing manner! In this book, you will learn how to make your own iPhone and iPad apps, through four engaging, epic-length tutorials. These hands-on tutorials describe in full detail how to build a new app from scratch. Five tutorials, five apps. Each new app will be a little more advanced than the one before, and together they cover everything you need to know to make your own apps. By the end of the series you'll be experienced enough to turn your ideas into real apps that you can sell on the App Store.
A Grammar of Sierra Popoluca - Lynda

Boudreault 2018-08-21
This work is a comprehensive description of the grammar of Sierra Popoluca, a Mixe-Zoquean language spoken by approximately 28,000 people in Veracruz, Mexico. This detailed description and analysis includes an overview of the language and its family, its typological features and its phonology. The grammar also provides an overview of the word classes, including verbs, nouns, relational nouns/postpositions, adjectives, adverbs, numbers, and formative types. The bulk of this grammar is devoted to the morphosyntax of Sierra Popoluca, including nouns and nominal morphology, verbs and verbal morphology, and the mechanisms for expressing tense, aspect, mood, and modality. An agglutinating, polysynthetic, head-marking language with ergative-absolutive alignment and sensitivity to animacy and saliency hierarchies, Sierra Popoluca has a number of strategies to form complex predicates, which include verb serialization, noun incorporation, and dependent verb constructions. These complex predicate formation strategies and sentence-level syntax are also described here. A compilation of interlinearized texts appears in the appendix. There is no competing work that provides the breadth and depth of coverage of the Sierra Popoluca grammar.

Workbook for Wheelock's Latin, 3rd Edition, Revised - Paul T. Comeau 2000-05-30
WHEELOCK'S LATIN: AUDIO FILES When Professor Frederic M. Wheelock's Latin first appeared in 1956, the reviews extolled its thoroughness, organization, and conciseness; at least one reviewer predicted that the book "might well become the standard text" for introducing students to elementary Latin. Now, five decades later, that prediction has certainly proved accurate. Workbook for Wheelock's Latin is an essential companion to the classic introductory textbook. Designed to supplement the course of study in Wheelock's Latin, 6th Edition, Revised, each of the forty chapters in this newly updated edition features: Transformation drills, word and phrase translations, and other exercises to test and sharpen the student's skills "Word Power" sections that focus on vocabulary and derivatives Reading comprehension questions and sentences

for translation practice Perforated pages for hand-in homework assignments and space for the student's name and date
The Fair God - Lew Wallace 1898

International Code of Signals, American Edition - United States. Hydrographic Office 1923

Conversational Klingon. Cassette. - Marc Okrand 1996-01

Innovations and Interdisciplinary Solutions for Underserved Areas - Jessica P. R. Thorn 2020-08-05
This book constitutes the refereed post-conference proceedings of the 4th EAI International Conference on Innovations and Interdisciplinary Solutions for Underserved Areas, InterSol 2020, held in Nairobi, Kenya, in March 2020. Due to the COVID-19 pandemic the conference is postponed to a later date in 2020. The 20 papers presented were selected from 50 submissions and issue different problems in underserved and unserved areas. They face problems in almost all sectors such as energy, water, communication, climate, food, education, transportation, social development, and economic growth.

Jobs for Shared Prosperity - Roberta Gatti 2013-04-25
In the aftermath of the Arab Spring, when thousands of young women and men fought for the opportunity to realize their aspirations and potential, the question of jobs continues to be crucial in the Middle East and North Africa region. This report uses jobs as a lens to weave together the complex dynamics of employment creation, skills supply, and the institutional environment of labor markets. Consistent with the framework of the 2013 World Development Report on jobs, of which this report is the regional companion, this work goes beyond the traditional links between jobs, productivity, and living standards to include an understanding of how jobs matter for individual dignity and expectations—an aspect that was clearly central to the Arab Spring. Just as important, this report complements the economic perspective with an analysis of political economy equilibrium, with a view to identifying mechanisms that would trigger a reform process. As such, the report has

three objectives: First, it seeks to provide an in-depth characterization of the dynamics of labor markets in the Middle East and North Africa and to analyze the barriers to the creation of more and better jobs. It does so by taking a cross-sectoral approach and identifying the distortions and incentives that the many actors—firms, governments, workers, students, education, and training systems—currently face, and which ultimately determine the equilibrium in labor markets. Second, the report proposes a medium term roadmap of policy options that could promote the robust and inclusive growth needed to tackle the structural employment challenge for the region. Third, the report aims to inform and open up a platform for debate on jobs among a broad set of stakeholders, with the ultimate goal of contributing to reach a shared view of the employment challenges and the reform path ahead.

The Klingon Dictionary - Marc Okrand 1992-01-01
The Klingon Dictionary is the first comprehensive sourcebook for Klingon language and syntax, including fundamental rules of grammar as well as words and expressions that illustrate the complex nature of Klingon culture. It features a precise pronunciation guide, rules for proper use of affixes and suffixes, and a small phrasebook with Klingon translations for essential expressions such as "Activate the transport beam," "Always trust your instincts," and the ever-popular "Surrender or die!"
Overcharge Claims - Amos C. Adams 1925

Syndromes of Corruption - Michael Johnston 2005-12-01
Corruption is a threat to democracy and economic development in many societies. It arises in the ways people pursue, use and exchange wealth and power, and in the strength or weakness of the state, political and social institutions that sustain and restrain those processes. Differences in these factors, Michael Johnston argues, give rise to four major syndromes of corruption: Influence Markets, Elite Cartels, Oligarchs and Clans, and Official Moguls. In this 2005 book, Johnston uses statistical measures to identify societies in each group, and case studies to show that the expected syndromes do arise. Countries studied

include the United States, Japan and Germany (Influence Markets); Italy, Korea and Botswana (Elite Cartels); Russia, the Philippines and Mexico (Oligarchs and Clans); and China, Kenya, and Indonesia (Offical Moguls). A concluding chapter explores reform, emphasising the ways familiar measures should be applied - or withheld, lest they do harm - with an emphasis upon the value of 'deep democratisation'.

Who Financed Hitler - James Pool 1997-10 Uncovers the means by which Hitler built the foundation on which the Third Reich would rise through contributions, bribery, and blackmail

Optimization, Optimal Control and Partial Differential Equations - V. Barbu 2013-03-07 This book collects research papers presented in the First Franco Romanian Conference on Optimization, Optimal Control and Partial Differential Equations held at lasi on 7-11 september 1992. The aim and the underlying idea of this conference was to take advantage of the new SOCial developments in East Europe and in particular in Romania to stimulate the scientific contacts and cooperation between French and Romanian mathematicians and teams working in the field of optimization and partial differential equations. This volume covers a large spectrum of problems and result developments in this field in which most of the participants have brought notable contributions. The following topics are discussed in the contributions presented in this volume. 1 - Variational methods in mechanics and physical models Here we mention the contributions of D. Cioranescu. P. Donato and H.I. Ene (fluid flows in dielectric porous media). R. Stavre (the impact of a jet with two fluids on a porous wall). C. Lefter and D. Motreanu (nonlinear eigenvalue problems with discontinuities). I. Rus (maximum principles for elliptic systems). and on asymptotic XII properties of solutions of evolution equations (R Latcu and M. Megan. R Luca and R Morozanu. R Faure). 2 -The controllabillty of Inflnlte dimensional and distributed parameter systems with the contribution of P. Grisvard (singularities and exact controllability for hyperbolic systems). G. Geymonat. P. Loreti and V. Valente (exact controllability of a shallow shell model). C.

Applied Genetics of Leguminosae Biotechnology - Pawan K. Jaiwal 2013-06-29

Legumes include many very important crop plants that contribute very critical protein to the diets of both humans and animals around the world. Their unique ability to fix atmospheric nitrogen in association with Rhizobia enriches soil fertility, and establishes the importance of their niche in agriculture. Divided into two volumes, this work presents an up-to-date analysis of in vitro and recombinant DNA technologies for the improvement of grain, forage and tree legumes. Volume 10B presents the current state and future prospects of in vitro regeneration and genetic transformation expression and stability of transgenes modification of traits in almost all the important legumes, for example: soybean; peanut; pea; french bean; chick pea; pigeon pea; cowpea; mung bean; black gram; azuki bean; lentil; Lathyrus; lupinus; Lotus spp; Medicago spp; Trifolium spp; Winged bean; Guar; and tree legumes for their improvement.

Machine Learning by Tutorials (Second Edition) - raywenderlich Tutorial Team 2020-05-19 Learn Machine Learning!Machine learning is one of those topics that can be daunting at first blush. It's not clear where to start, what path someone should take and what APIs to learn in order to get started teaching machines how to learn.This is where Machine Learning by Tutorials comes in! In this book, we'll hold your hand through a number of tutorials, to get you started in the world of machine learning. We'll cover a wide range of popular topics in the field of machine learning, while developing apps that work on iOS devices.Who This Book Is ForThis books is for the intermediate iOS developer who already knows the basics of iOS and Swift development, but wants to understand how machine learning works.Topics covered in Machine Learning by TutorialsCoreML: Learn how to add a machine learning model to your iOS apps, and how to use iOS APIs to access it.Create ML: Learn how to create your own model using Apple's Create ML Tool.Turi Create and Keras: Learn how to tune parameters to improve your machine learning model using more advanced tools.Image Classification: Learn how to apply machine learning models to predict objects in an image.Convolutional Networks: Learn advanced machine learning techniques for predicting objects in an image with

Convolutional Neural Networks (CNNs).Sequence Classification: Learn how you can use recurrent neural networks (RNNs) to classify motion from an iPhone's motion sensor.Text-to-text Transform: Learn how to use machine learning to convert bodies of text between two languages.By the end of this book, you'll have a firm understanding of what machine learning is, what it can and cannot do, and how you can use machine learning in your next app!

Machiavelli Volume I - Niccolò Machiavelli 2021-03-25
Machiavelli Volume I From Niccolò Machiavelli
Journal of the Gypsy Lore Society - 1913

A Sanskrit Reader - Charles Rockwell Lanman 1903

Science Citation Index - 1992
Vols. for 1964- have guides and journal lists.
A Grammar of the Telugu Language - Charles Philip Brown 1857

A Practical Guide for Health Researchers - M. F. Fathalla 2004
Health researchers, the intended audience of this book, are not limited to scientists pursuing a research career. They include health professionals, administrators, policymakers and non-governmental organizations, among others, who can and should use the scientific method to guide their work for improving the health of individuals and communities. Even if they do not pursue much research themselves, they need to grasp the principles of the scientific method, to understand the value and also the limitations of science, and to be able to assess and evaluate results of research before applying them. This book includes the following chapters: Introduction and overview; ethics in health research; what research to do; planning the research; writing the research protocol; submitting a research proposal; implementing the research project; describing and analysing the research results; communicating research; guidelines on writing a scientific paper; publishing a scientific paper; guidelines on making a scientific presentation; assessing and evaluating research.
BEING A BUDDHIST NUN - Kim Gutschow

2009-06-30
They may shave their heads, don simple robes, and renounce materialism and worldly desires. But the women seeking enlightenment in a Buddhist nunnery high in the folds of Himalayan Kashmir invariably find themselves subject to the tyrannies of subsistence, subordination, and sexuality. Ultimately, Buddhist monasticism reflects the very world it is supposed to renounce. Butter and barley prove to be as critical to monastic life as merit and meditation. Kim Gutschow lived for more than three years among these women, collecting their stories, observing their ways, studying their lives. Her book offers the first ethnography of Tibetan Buddhist society from the perspective of its nuns. Gutschow depicts a gender hierarchy where nuns serve and monks direct, where monks bless the fields and kitchens while nuns toil in them. Monasteries may retain historical endowments and significant political and social power, yet global flows of capitalism, tourism, and feminism have begun to erode the balance of power between monks and nuns. Despite the obstacles of being considered impure and inferior, nuns engage in everyday forms of resistance to pursue their ascetic and personal goals. A richly textured picture of the little known culture of a Buddhist nunnery, the book offers moving narratives of nuns struggling with the Buddhist discipline of detachment. Its analysis of the way in which gender and sexuality construct ritual and social power provides valuable insight into the relationship between women and religion in South Asia today.
Tibetan Astrology - Philippe Cornu 2002-12-10
Astrology is one of the traditional arts and sciences of Tibet, where it is known as "the science of calculation," used by monks and lamas in the study of the rhythms and cycles of time, for divination, for choosing auspicious times for rituals and life-cycle events such as marriages and funerals, and as an adjunct to the practice of traditional medicine. This comprehensive introduction to the topic includes: • Historical roots and influences from China and India as well as the Buddhist Kalachakra teachings and the ancient Bön religion of Tibet • The two main branches of Tibetan astrology: Nagtsi, or "black astrology,"

based on the Chinese system, and Kartsi, or "white astrology," derived from Indian astrology • The twelve- and sixty-year cycles and the twelve animals and five elements associated with them • The mewa, or magical squares, which are numerological factors used to calculate the auspiciousness of days or years • The parkha, or eight trigrams of the I Ching, representing the elements, directions, seasons, and fundamental universal forces • How to analyze the character of hours, days, months, and years, so as to determine auspicious times for various activities • How to cast and interpret a Tibetan horoscope Also included are numerous diagrams and charts that are indispensable to the practice of Tibetan astrology, including tables for converting Western dates to dates on the Tibetan calendar.

National Evaluation Capacities - 2012
The 2nd International Conference on National Evaluation Capacities held on 12-14 September 2011 in Johannesburg, South Africa, allowed nearly 100 participants to share experiences on use of evaluation for public policies and programmes from countries with different levels of development of national monitoring and evaluation systems, identifying lessons and constraints in implementing national monitoring and evaluation systems with a focus on use of evaluation, and identifying supply and demand for technical assistance in strengthening institutional capacity for national use of evaluation under the umbrella of South-South and triangular cooperation. This publication presents the major themes related to evaluation use for public policy and programmes, which were touched upon during the discussions.

Shotokan's Secret - Bruce D. Clayton 2004
In 1853, the hard-style karate that became shotokan took shape in Okinawa. Learn how an embattled king with an unarmed force of bodyguards survived an invasion from overseas.

Pathogen and Microbial Contamination Management in Micropropagation - Alan C. Cassells 1997-10-31
This book is based mainly on invited and offered papers presented at the Second International Symposium on Bacterial and Bacteria-like Contaminants of Plant Tissue Cultures held at University College, Cork, Ireland in September 1996, with additional invited papers. The First International Symposium on Bacterial and Bacteria-like Contaminants of Plant Tissue Cultures was held at the same venue in 1987 and was published as Acta Horticulturae volume 225, 1988. In the intervening years there have been considerable advances in both plant disease diagnostics and in the development of structured approaches to the management of disease and microbial contamination in micropropagation. These approaches have centred on attempts to separate, spatially, the problems of disease transmission and laboratory contamination. Disease-control is best achieved by establishing pathogen-free cultures while laboratory contamination is based on subsequent good working practice. Control of losses due to pathogens and microbial contamination in vitro addresses, arguably, the most importance causes of losses in the industry; nevertheless, losses at and post establishment can also be considerable due to poor quality microplants or micro-shoots. In this symposium, a holistic approach to pathogen and microbial contamination control is evident with the recognition that micropropagators must address pathogen and microbial contamination in vitro, and diseases and microplant failure at establishment. There is increasing interest in establishing beneficial bacterial and mycorrhizal association with microplants in vitro and in vivo.