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#computers and intractability #NP completeness theory #computational complexity #theoretical computer science books #mathematical sciences series

The "Computers and Intractability: A Guide to the Theory of NP Completeness" is a seminal series of books within the mathematical sciences, offering a comprehensive exploration of computational complexity. This essential collection delves into the fundamental principles behind the intractability of problems, providing deep insights into the core concepts of theoretical computer science and the theory of NP completeness.

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Computers and Intractability: A Guide to the Theory of NP-Completeness (Series of Books in the Mathematical Sciences). M. Garey, and D. Johnson.

What is an NP-complete in computer science? [closed] - Stack Overflow

by MR Garey · Cited by 78824 — This book is intended as a detailed guide to the theory of NP-completeness, emphasizing those concepts and techniques that seem to be most useful for applying ...

NP-completeness - Wikipedia

Computers and intractability: a guide to the theory of NP-completeness ... A Series of books in the mathematical sciences; Other Titles: NP-completeness ...

Difference Between NP-Hard and NP-Complete Problem - BYJU'S

Title, Computers and Intractability: A Guide to the Theory of NP-completeness. A Series of books in the mathematical sciences ; Author, Michael R. Garey ; Edition ...

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Computers and intractability by Michael R. Garey

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Collaborating Finding Common Ground For Multiparty Problems

How to find common ground with people you disagree with - How to find common ground with people you disagree with by Stand Together 35,199 views 7 months ago 2 minutes, 44 seconds - Working across differences might seem impossible. Here's how to do it — without sacrificing your principles. For more stories ...
Cooperation vs Collaboration: When To Use Each Approach - Cooperation vs Collaboration: When To Use Each Approach by John Spencer 220,983 views 7 years ago 1 minute, 24 seconds - Collaboration, and cooperation are both vital for creative work. This short, sketchy video explores the difference between the two ...
Cooperation vs Collaboration
Differences between Cooperation and Collaboration
Conclusion
Collaborating at work: The collaboration skills you need to succeed - Collaborating at work: The collaboration skills you need to succeed by Hult Ashridge 33,775 views 9 years ago 10 minutes, 55 seconds - More work inside organisations is done through **collaboration**, rather than close teams. Here is how to be good at this way of ...
Introduction
Attitude to relationships
Behaviour prompts
Signaling
Analytical
Relationship diagnostic
2. Trusting Teams | THE 5 PRACTICES - 2. Trusting Teams | THE 5 PRACTICES by Simon Sinek 1,082,579 views 4 years ago 9 minutes, 17 seconds - How do we create an environment in which our people can work at their natural best? Leaders are not responsible for results, ...
Collaborating With Others - Collaborating With Others by Burnsie's RVT Vids 588 views 3 years ago 19 minutes - Let's take a look at some pointers in regard to **collaborating**, with others. By the end of the chapter you'll be able to explain why the ...
What are the biggest challenges to making collaboration work - What are the biggest challenges to making collaboration work by Management Today 963 views 5 years ago 5 minutes, 51 seconds - Think one of the biggest **challenges**, around making **collaboration**, work sometimes relates to the culture of the organization.
The Collaborative Challenge: Making Quality Decisions Together in the Age of Complexity - The Collaborative Challenge: Making Quality Decisions Together in the Age of Complexity by Matthew Koschmann 92,039 views 11 years ago 16 minutes - This video was developed by Matt Koschmann, a professor in the Department of Communication at the University of Colorado ...
Introduction

The Collaborative Challenge
Collaborative Inertia
Collaboration Design
Interaction
Communication
Example
How to Collaborate on Projects - How to Collaborate on Projects by ProjectManager 11,079 views 9 years ago 5 minutes, 26 seconds - Learn about project **collaboration**,, best practices and leveraging opportunities. Try our award-winning PM software for free: ...
good teamwork and bad teamwork - good teamwork and bad teamwork by Gerrit Maassen van den Brink 22,553,192 views 10 years ago 3 minutes, 21 seconds
The 10 Best Team Building Activities - Games and Ideas for Team Bonding - The 10 Best Team Building Activities - Games and Ideas for Team Bonding by Teamwork Definition 104,380 views 2 years ago 6 minutes, 5 seconds - Looking for some fun team building activities? Check out this video for 10 great ideas that will get your team working together and ...
Simon Sinek: How to start a cultural transformation? - Simon Sinek: How to start a cultural transformation? by DenkProducties 700,532 views 4 years ago 8 minutes, 42 seconds - During the Denkproducties seminar 'Purpose Driven Leadership' Simon Sinek talked about how to start a cultural transformation ...
The Biggest Mistake Companies Make When They'Re Doing Cultural Transformations
Law of Diffusion of Innovations
Law of Diffusion
Dilemma Podcast: The Palestine Collection Part I: The Problem of History - Dilemma Podcast: The Palestine Collection Part I: The Problem of History by Jay Shapiro 871 views 3 weeks ago 50 minutes - Dilemma Podcast Host Jay Shapiro breaks down arguments being presented by popular thinkers such as Sam Harris and from ...
Simon Sinek - Trust vs Performance (Must Watch!) - Simon Sinek - Trust vs Performance (Must Watch!) by Gabe Villamizar 1,003,671 views 1 year ago 2 minutes, 28 seconds - Get more of Simon Sinek and his books here https://urlgeni.us/amzn/e9ZV. This video is hands down one of my favorite Simon ...
Best Team Building Activities | Smart Skills - Best Team Building Activities | Smart Skills by Smart Skills TV 2,913,985 views 5 years ago 3 minutes, 14 seconds - Visit our website: www.Smart-Skills.com email: info@SmartSkills.com Smart Skills is the first corporation in the GCC and the Middle ...
Building Trusting Teams - Building Trusting Teams by Simon Sinek 214,251 views 1 year ago 3 minutes, 31 seconds - In crisis, good leaders have the ability to step in and maintain control - but the TRUST has to be built first. + + + Simon is an ...
HOW WE MAKE MONEY $$ FROM SAWDUST: a byproduct of the mill - HOW WE MAKE MONEY $$ FROM SAWDUST: a byproduct of the mill by Lumber Capital Log Yard 750,815 views 1 year ago 5 minutes, 42 seconds - Make sure to tune in every day this week for a video! Follow us on instagram @ lumbercapital07 If you would like to further support ...
How to MOTIVATE the UNMOTIVATED | Simon Sinek - How to MOTIVATE the UNMOTIVATED | Simon Sinek by Simon Sinek 588,851 views 3 years ago 1 minute, 55 seconds - We should not assume that a lack of motivation is an intrinsic **problem**,. As leaders, we should first evaluate whether or not we've ...
Cultivating Collaboration: Don't Be So Defensive! | Jim Tamm | TEDxSantaCruz - Cultivating Collaboration: Don't Be So Defensive! | Jim Tamm | TEDxSantaCruz by TEDx Talks 701,212 views 8 years ago 15 minutes - Ever see red? It's called being defensive, and turns out, it is the single greatest inhibitor to true **collaboration**,. Jim Tamm shares ...
260% increase in 1 year
Red Zone Environments Produce More Red Zone Behavior
Green Zone Environments Produce More Eggs
LITIGATION
1. Create your personalized EARLY WARNING SYSTEM 2. Create an ACTION STEP and practice it
Multigenerational Workforce: Finding Common Ground - Multigenerational Workforce: Finding Common Ground by College of the Holy Cross 142 views 6 years ago 1 hour, 1 minute - Presented by Andrea J. Fonte Weaver '92 Founder & Executive Director Bridges Together, Inc. taped on Wednesday, Nov.
Today, we will...

When you meet a Crusader.
Generalizations...
Silents: 1925-1945
A moment on statistics
Baby Boomers: 1946-1964
Some new vocabulary...
Generation X: 1965-1985ish
Age-segregation
Millenial: 1986-2000ish
On generations...
Recognize the individual - Whole Person & Multiple Intelligences
Maslow's Hierarchy of Needs
Erikson's Socio-Emotional Development
Recognize Impact of Ethnicity and Culture
Reduce prejudice....
Develop a Multigenerational Leadership Team
Foster a culture that leads to a multigenerational community in the workplace
Policies you might consider
Procedures to help create age-integration as work
Questions & Answers
We are here to help YOU and your team...
The 5 Conflict Styles - Which Is Yours? - The 5 Conflict Styles - Which Is Yours? by BRAINY DOSE 30,028 views 10 months ago 5 minutes, 14 seconds - In this video, we discuss the 5 conflict styles people use when it comes to dealing with conflict in interpersonal relationships.
Team Bonding Games - The Characteristic Game *5 - Team Bonding Games - The Characteristic Game *5 by Team Building Games 488,117 views 7 years ago 3 minutes, 10 seconds - Do you like this exercise? Let's give these variations a try: 1. Make sure the exercise is practiced playfully and everyone feels safe.
Collaborate with Your Competitors? - Collaborate with Your Competitors? by Network for Business Sustainability 1,362 views 8 years ago 5 minutes, 38 seconds - New NBS research by Dr. Lori DiVito from the Amsterdam University of Applied Science dives into competitor collaborations.
Introduction
Successful collaboration
Unexpected insight
Conclusion
Innovation and Environmentalism: Finding Common Ground - Innovation and Environmentalism: Finding Common Ground by TechPolicy 96 views 12 years ago 17 minutes - Turning from policy to politics, this discussion between leading experts will address the subtle but important differences between ...
Intro
Panel Introductions
Is there a united front
Why people are disgusted with Washington
Bridging the gap
Differences
Climate Change
Cap and Trade
Predicting Failure
Culture War
Government Role
Outro
How To Find Collaborators Who Add Value - How To Find Collaborators Who Add Value by Leigh A Hall 73 views 5 years ago 4 minutes, 9 seconds - If you're looking for collaborators, in any area, you may **find**, it difficult to **find**, good ones. Learn three strategies for **finding**, ...
Use Conferences
Cold Call
You Have To Reach Out
Can Competitors Collaborate On a Common Goal? - Can Competitors Collaborate On a Common Goal? by Association for Project Management 145 views 2 years ago 50 minutes - An APM webinar

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Intro
PROJECT HIGHLIGHTS
THE MESH ID APPROACH TO CHANGE
SETTING THE SCENE
WHO SERVICES A FUND?
EXPONENTIAL GROWTH IN REGULATIONS
PAINFUL EXPERIENCE
PROJECT PROBLEM STATEMENT
PROJECT VISION
CHANGE IS GREAT (IN THEORY)
CHANGE IS HARD
CREATING A SENSE OF URGENCY
FORMING THE COALITION
EMPOWER BROAD BASED ACTION
GENERATE SHORT TERM WINS Iterative and value-based delivery (AGILE)
8/12 AGILE PRINCIPLES Early and continuous delivery of valuable software
ENGAGING AND ENABLING THE GROUP
CREATING CLEAR MILESTONES
MINIMAL VIABLE GOVERNANCE
CHALLENGES AND LESSONS LEARNT
SUCCESS FACTORS
PROJECT STATISTICS / SUCCESS METRICS
PROJECT OUTCOME
Can Allen Parr & a Seventh-Day Adventist find common ground? - Can Allen Parr & a Seventh-Day Adventist find common ground? by Justin Khoe 103,425 views 3 years ago 1 hour, 35 minutes - Allen Parr is someone who I have known and respected for years. I've been a subscriber and enthusiastic supporter for quite ...
Introduction
C.S. Lewis - Mere Christianity
Introducing Allan Parr's Videos
How did you get started?
How did we get connected?
How Old Are You?
What's the deal with this Hobby?
Channel Growth
Do What God Has Blessed You To Do
Your First Breakthrough Video
Interaction in the Comments
Chink In The Armor
Video Idea for SDA
Reactions Behind The Scenes
What Made This One Different?
I Might Have Missed The Mark Here
What Did You Learn?
How do you understand Investigative Judgement?
Connection With The Sabbath and Salvation.
Justin's Response
Explain Your Personal View vs The Traditional View of Adventism
Date Night
Adventism's Open View of Salvation
Does our view of the sabbath change your perspective?
That's How The Church Teaches It
How does the church see you as a moderate?
How do you decide who represents Adventism?
Justin Puts Heart on Sleeve (A Little Bit)
The Apology
One View To Take

How Do We Weigh Who Represents Who?
That's My Savior You're Talking About
There's No Condemnation
I Want To Understand Better
We Have A Lot of Growing To Do
Self Check
I Never Said...
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Conclusion - Subscribe So You Don't Miss Anything
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Age Diversity
Mentormentee
How it works
Collaborating for results - Collaborating for results by INSEAD 9,962 views 14 years ago 7 minutes, 10 seconds - As much as we think that **collaboration**, makes good business sense, there are times where it can go horribly wrong, so says ...
Importance of collaboration
Sony vs Apple
Traps of collaboration
How to collaborate
Collaborating With the Community - Collaborating With the Community by AACSB International 275 views 3 years ago 3 minutes, 56 seconds - Steve Elias, dean of the School of Business Administration at Fort Lewis College, discusses the importance of tuning in to the local ...
Work Together as a Team S4 E5 - Work Together as a Team S4 E5 by WonderGrove Kids 1,038,657 views 9 years ago 1 minute, 59 seconds - Be a team and work together! SUBSCRIBE: https://www.youtube.com/user/WonderGroveKids?sub_confirmation=1 ...
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hand, and risk and portfolio management on the other. Mathematical finance overlaps heavily with the fields of computational finance and financial engineering... 23 KB (2,425 words) - 07:48, 13 January 2024

computational finance. Many computational finance problems have a high degree of computational complexity and are slow to converge to a solution on classical... 66 KB (5,988 words) - 09:10, 18 March 2024

universities). Actuarial science applies probability, statistics, and economic theory to assess risk in insurance, finance and other industries and professions... 21 KB (2,163 words) - 06:39, 5 March 2024

low actuarial risk compensate plans with high actuarial risk. ACA revised and expanded Medicaid eligibility starting in 2014. All U.S. citizens and legal... 326 KB (30,371 words) - 13:03, 14 March 2024

Furrer, Hansjörg (2001). "Stochastic processes in insurance and finance". Stochastic Processes: Theory and Methods. Handbook of Statistics. Vol. 19. p. 367... 162 KB (17,935 words) - 17:32, 8 January 2024

Advanced modelling in finance using Excel and VBA. New Jersey: Wiley. ISBN 0-471-49922-6. These include: Jarrow and Rudd (1982); Corrado and Su (1996);... 115 KB (11,143 words) - 05:19, 14 March 2024

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Catherine; Embrechts, Paul (January 4, 2010). "The devil is in the tails: actuarial mathematics and the subprime mortgage crisis" (PDF). ASTIN Bulletin. 40... 308 KB (35,297 words) - 22:33, 29 February 2024
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Examples of actuarial modelling tasks - Examples of actuarial modelling tasks by Katrien Antonio 7,887 views 3 years ago 12 minutes, 3 seconds - Introduction, to loss **modelling**,.
Frequency of Events and the Severity of Events
Reserving
Evolution of Mortality Rates
Life Insurance Actuarial Modeling Pricing & Analysis (LIAMPA) Certification Course - Life Insurance Actuarial Modeling Pricing & Analysis (LIAMPA) Certification Course by Edvance Skill for Actuaries 66 views 8 months ago 3 minutes, 8 seconds - EdvanceSkill's Life **Insurance Modeling**, Pricing & Analysis (LI-AMPA) Certification Program focuses on core **actuarial**, skills ...
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Predictive Analytics & Actuaries: A Working Model for the Life Insurance Industry - Predictive Analytics & Actuaries: A Working Model for the Life Insurance Industry by Society of Actuaries 2,553 views 5 years ago 1 hour - Big data is driving disruption and new opportunities in the life **insurance**, industry – is your organization prepared? Tune in to hear ...
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Role
What Predictive Analytics Means
What Does Predictive Analytics Mean to You
What Does Predictive Analytics Mean to You
Predictive Models
Enterprise Analytics Team
Building Out the Team
Creating Data-Driven Cultures
Having Strong Executive Level Support
Examples of Bringing some Actuarial Perspective into the Marketing Side
Develop Metrics for Customer Lifetime Value
What's Next for Predictive Analytics and Life Insurance
New Data Sources
Product Design
Product Design Innovations
Challenges with Predictive Modeling and Life Insurance
Time Series for Actuaries Course - Time Series for Actuaries Course by MJ the Fellow Actuary 1,384

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Course Outline
Course Highlights
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CA1 Chapter 8 General Insurance. (Actuarial Science) - CA1 Chapter 8 General Insurance. (Actuarial Science) by MJ the Fellow Actuary 4,661 views 8 years ago 5 minutes, 53 seconds - I used material from UCT, Wits and ActED to create these videos. If you are studying at a university, let us know in the comment ...
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Indemnity
Features of Liability Insurance
Marine and Aviation
Employee Liability
Property Damage
Fidelity Guarantee
Business Interruption
Perils
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money
the exams are literally just a barrier to entry
fear of failure
what I'm doing now
some music I made + vid suggestions
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These actuaries often deal with long-term policies
This actuary helps with the pricing of your pensions
This actuary deals with a group of individuals
These actuaries help insurance companies manage their money
This actuary can work in many different industries!
This is a whole other side of insurance!
WHAT IS AN ACTUARY | NYC Actuary | Career as an Actuary | Actuarial Career - WHAT IS AN ACTUARY | NYC Actuary | Career as an Actuary | Actuarial Career by Darren Govender 20,255 views 1 year ago 13 minutes, 55 seconds - 00:00 **Introduction**, & morning routine 02:35 The not so simple answer 05:04 Traits & characteristics of an **Actuary**, 08:31 The roles ...
Introduction & morning routine
The not so simple answer
Traits & characteristics of an Actuary
The roles of an Actuary
Summary, Conclusion & Bloopers
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expect to earn from studying Actuarial Science| My current salary? by Her name is Ven 12,682 views 1 year ago 4 minutes, 59 seconds - Hi there! My name is Ven and I am an **actuarial**, student with the Institute and faculty of **actuaries**,. I currently work as an **Actuarial**, ...
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What is actuarial science?
Real world application
Here's why people become actuaries!
How to be a "good actuary"
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How insurance companies work
What do actuaries do
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Price segmentation
Why actuarial work
Hobbies
No actuarial emergency
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Step 1
Step 2
Step 3
Step 4
Step 5
Step 6
Step 7
Step 8
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How to get your FREE month
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Benefits that employers also provide
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AI for Science Talk – AI for Cosmology
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experts. by Notre Dame Science 276,862 views 11 years ago 39 minutes - Studying mathematics, statistics and business can lead to certification as an **actuary**,. Today's **actuaries**, help make critical business ...
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Financial Consequences
Present Value
Traditional Opportunities
Where might you work
Questions
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Better Risk Modelling and new Dynamic Prici
Result: Dynamic Pricing and Better Tariffs
Key Take Aways Actuarial Innovation Requires a Smart Decisioning Ecosystem
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Intro
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Why Cloud
Why Azure
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What I do in my role
What excites me about the work I do
Three skills I've learnt in my role
Start today. Change tomorrow.
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Introduction
What is insurance
Fraud detection
Premium
Collective Model
Uncertainty
Insurance
Fairness
Conclusion
Questions Answers
International Actuarial Note on IFRS 17 Insurance Contracts (October 18, 2021) - International Actuarial Note on IFRS 17 Insurance Contracts (October 18, 2021) by International Actuarial Association 478 views 2 years ago 1 hour, 2 minutes - Over the past 20 years, the IAA has given significant input to the development of the **International Financial**, Reporting Standard 17 ...
Intro
Welcome
Introducing the speakers

Insurance Accounting Committee
What is an INA
INA Overview
Section A Overview
Section B Discount Rates
Section C Risk Adjustment
Section D Level of Aggregation
Section E contractual service margin and loss component
Section E premium allocation approach
Section E reinsurance
Section C fair value
Section D
Section E
Next Steps
Influence Impact
Member Associations
Guidance Note
Is IFRS 17 compulsory
Where is IFRS 17 being adopted
is an ACTUARIAL SCIENCE DEGREE worth it? - is an ACTUARIAL SCIENCE DEGREE worth it? by Shane Hummus 80,971 views 3 years ago 10 minutes, 35 seconds - ---------- These videos are for entertainment purposes only and they are just Shane's opinion based off of his own life experience ...
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National Narratives
The Future
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The concept behind the model
The pricing sheets
Rows
Inputs Table
Frequency
Property
Solvency
Model Configuration
Pricing Calculation
Investment Income

Profit
Reserves
Judgement
Cancer
Riskbased capital
Scenarios
Software used
Data analytics
Computational power
Commitment
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Tobochnik Solutions Manual Gould Physics

Sheep Explains Statistical Mechanics in a Nutshell. - Sheep Explains Statistical Mechanics in a Nutshell. by mathOgenius 18,876 views 3 years ago 6 minutes, 52 seconds - This Video is about Statistical Mechanics in a Nutshell.We will understand what is statistical mechanics and what to Maxwell ...
STATISTICAL MECHANICS
WHAT ARE THESE?
CAN YOU MAKE? 1 COMBINATION
QUANTUM NUMBERS ARE ADDRESS OF ENERGY LEVELS
Informal QFT 1 - Classical Gauge Field Theory - Informal QFT 1 - Classical Gauge Field Theory by ARBB 8,879 views 1 year ago 41 minutes - Sort of hacked together video. Sorry for the sort of rambling, I didn't have a script. For whatever reason the final minutes didn't ...
Pilot Wave Theory and Quantum Realism | Space Time | PBS Digital Studios - Pilot Wave Theory and Quantum Realism | Space Time | PBS Digital Studios by PBS Space Time 1,803,368 views 7 years ago 16 minutes - There's one interpretation of the meaning of quantum mechanics that manages to skip a lot of the unphysical weirdness of the ...
Pilot-Wave Theory
Pilot Wave Theory
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How Are the Magnetic Fields of Neutron Stars Created
Classical Mechanics | Lecture 1 - Classical Mechanics | Lecture 1 by Stanford 1,420,909 views 12 years ago 1 hour, 29 minutes - (September 26, 2011) Leonard Susskind gives a brief introduction to the mathematics behind **physics**, including the addition and ...
Introduction
Initial Conditions
Law of Motion
Conservation Law
Allowable Rules
Laws of Motion
Limits on Predictability
2.1 Two-State Systems (Thermal Physics) (Schroeder) - 2.1 Two-State Systems (Thermal Physics) (Schroeder) by Real Physics 6,175 views 4 years ago 16 minutes - In order to begin the long journey towards understanding entropy, and really, temperature, let's look at probabilities of coin flips.
Introduction
Quantum Mechanics

TwoState Systems
Statistical Mechanics Lecture 1 - Statistical Mechanics Lecture 1 by Stanford 680,374 views 10 years ago 1 hour, 47 minutes - (April 1, 2013) Leonard Susskind introduces statistical mechanics as one of the most universal disciplines in modern **physics**,.
Thermodynamics and Heat transfer Prof S Khandekar - Thermodynamics and Heat transfer Prof S Khandekar by TEQIP IIT Kanpur 1,449,358 views 5 years ago 28 minutes - ... down or not yes it will it will cool down we can just keep it like that and there is a certain **physics**, by which it will cool down you.
Statistical Mechanics Lecture 2 - Statistical Mechanics Lecture 2 by Stanford 173,311 views 10 years ago 54 minutes - (April 8, 2013) Leonard Susskind presents the **physics**, of temperature. Temperature is not a fundamental quantity, but is derived ...
Units
Entropy
Units of Energy
Thermal Equilibrium
Average Energy
OneParameter Family
Temperature
2001 Nobel Laureate Lecture in Physics - Wolfgang Ketterle, The Story of Bose-Einstein Condensates - 2001 Nobel Laureate Lecture in Physics - Wolfgang Ketterle, The Story of Bose-Einstein Condensates by MIT Video Productions 35,730 views 5 years ago 1 hour, 5 minutes - Please Subscribe for more great content! http://www.youtube.com/c/MITVideoProductions?sub_confirmation=1 ...
The concepts
The cooling methods
Evaporative cooling
A solution ...
The cloverleaf trap ...
Vortices
Tensor Calculus 16: Geodesic Examples on Plane and Sphere - Tensor Calculus 16: Geodesic Examples on Plane and Sphere by eigenchris 74,086 views 5 years ago 20 minutes - Previous Video (15) on Geodesics: https://www.youtube.com/edit?o=U&video_id=1CuTNveXJRc Video 12 on the Sphere metric: ...
compute these second order derivatives of the position vector r
look at geodesics in the flat plane
take a look at the formula for the christoffel symbols
step two solving the geodesic equation
get this formula for a geodesic curve
compute the metric tensor for the sphere
take the dot product of two 3d vectors
put in the inverse metric tensor components
solve the geodesic equations
work with the special case of a circle of latitude
Python Tutorial - How to make Text-Based Tables - Python Tutorial - How to make Text-Based Tables by sam boyer 2 153,626 views 8 years ago 3 minutes, 41 seconds - (See below for better code) A note from 2022: ok so notice how I'm 15 in this video, and how i'm clearly not taking the video ...
THERMAL AND STATISTICAL PHYSICS - THERMAL AND STATISTICAL PHYSICS by reema jayaprakash 527 views 2 years ago 8 minutes, 28 seconds - VIDEO LECTURE ON THERMAL AND STATISTICAL **PHYSICS**,.
previous year question paper of statistical physics and thermodynamics bsc, sem-3 pup - previous year question paper of statistical physics and thermodynamics bsc, sem-3 pup by important study material 754 views 4 months ago 16 seconds – play Short
2.4 Large Systems (Thermal Physics) (Schroeder) - 2.4 Large Systems (Thermal Physics) (Schroeder) by Real Physics 3,326 views 4 years ago 28 minutes - What happens when we use numbers so large that calculating the factorial is impossible? In this section, I cover some behaviors ...
Introduction
Types of Numbers
Multiplicity
Approximation
Gaussian

THERMAL AND STATISTICAL PHYSICS - THERMAL AND STATISTICAL PHYSICS by reema jayaprakash 367 views 2 years ago 10 minutes, 50 seconds - VIDEO LECTURE ON THERMAL AND STATISTICAL **PHYSICS**, - SESSION 2 WIEN'S LAW and RAYLEIGH JEANS LAW.
Ch 01 -- Problem 01 -- Classical Mechanics Solutions -- Goldstein - Ch 01 -- Problem 01 -- Classical Mechanics Solutions -- Goldstein by Professor Ricardo Explains 9,384 views 2 years ago 9 minutes, 6 seconds - In this video we present the **solution**, of the Derivation 1 of Chapter 1 (Classical Mechanics by Goldstein), using two different ...
Intro
Derivation
Kinetic Energy
Mass varies with time
PHYSICS-2 LECTURE 1 - PHYSICS-2 LECTURE 1 by Sreference Notes 10 views 3 years ago 38 minutes - STATISTICAL MECHANICS, ITS ROLE AND SYSTEMS.
Static Statistical Mechanics
Fundamental Motivation
Motivation Behind To Study the Statistical Mechanics
Difference between a Classical System and a Quantum Mechanical System
Distinguishable Particles
Maxwell Boltzmann Distribution
Classification of Fundamental Particles
Poly Exclusion Principle
Classical Statistics
Thermal Equilibrium at Absolute Temperature
Velocity of the Individual Particles
Role of Statistical Mechanics
Zero Temperature
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Spherical videos

Ab Initio Methods in Quantum Chemistry, Volume 67, Part 1

The Advances in Chemical Physics series provides the chemical physics and physical chemistry fields with a forum for critical, authoritative evaluations of advances in every area of the discipline. Filled with cutting-edge research reported in a cohesive manner not found elsewhere in the literature, each volume of the Advances in Chemical Physics series serves as the perfect supplement to any advanced graduate class devoted to the study of chemical physics.

Advances in Quantum Chemistry

Advances in Quantum Chemistry, Volume 88 presents the latest ongoing research at the forefront of Electronic structure theory. Chapters in the updated release include Spin-constrained Hartree-Fock and the generator coordinate method for the 2-site Hubbard model, Analytical evaluation of Hylleraas-CI Coulomb and Hybrid two-center Integrals over Slater orbitals, Hartree-Fock-Roothaan Theory of Molecular Compton Profiles Via Position Space Method, Analysis of Research Trend on the Molecular Integrals Over Slater Type Orbitals, An efficient approximation for accelerating convergence of numerical power series, Results for the 1D-Schroedinger equation, The aims and objectives of algebraic molecular orbital theory, and much more. Includes new theoretical methods Provides state-of-the art electron correlation, methods and effects Covers the challenge of excited electronic states

Advances in Quantum Chemistry

Advances in Quantum Chemistry, Volume 75 presents work and reviews of current progress in computational quantum mechanics as presented by some of the world’s leading experts. This latest release includes chapters on Mean-Field Methods for Time-Dependent Quantum Dynamics of Many-Atom Systems, Electron–Ion Impact Energy Transfer in Nanoplasmas of Coulomb Exploding Clusters,

Molecular Properties of Sandwiched Molecules Between Electrodes and Nanoparticles, Criterion for the Validity of D'Alembert's Equations of Motion, and A Time-Dependent Density Functional Theory Study of the Impact of Ligand Passivation on the Plasmonic Behavior of Ag Nanoclusters. Presents reports on current work in molecular and atomic quantum mechanics Contains work reported by many of the best scientists in the field Dedicated to one of the great practitioners in the field, Mark A. Ratner

Advances in Quantum Chemistry: Ratner Volume

Advances in Quantum Chemistry publishes surveys of current developments in the rapidly developing field of quantum chemistry--a field that falls between the historically established areas of mathematics, physics,chemistry, and biology. With invited reviews written by leading international researchers, each presenting new results, this quality serial provides a single vehicle for following progress in this interdisciplinary area. "Volume 28 collects papers written in honor of Geerd H.F. Diercksen. Diercksen is a pioneer in the field of quantum mechanics whose research includes studies of the structure and stability of hydrogen-bonded and Van der Waals dimers and small clusters, thevibrational and rotational spectra of diatomic and triatomic molecules, on static electric properties in solutions and of molecules absorbed on surfaces. His results are essential in molecular and atomic physics, in astrophysics, and in biochemistry.

Advances in Quantum Chemistry

Advances in the Theory of Atomic and Molecular Systems, is a collection of contributions presenting recent theoretical and computational developments that provide new insights into the structure, properties, and behavior of a variety of atomic and molecular systems. This volume (subtitled: Conceptual and Computational Advances in Quantum Chemistry) focuses on electronic structure theory and its foundations. This volume is an invaluable resource for faculty, graduate students, and researchers interested in theoretical and computational chemistry and physics, physical chemistry and chemical physics, molecular spectroscopy, and related areas of science and engineering.

Advances in the Theory of Atomic and Molecular Systems

The Advances in Chemical Physics series provides the chemical physics and physical chemistry fields with a forum for critical, authoritative evaluations of advances in every area of the discipline. Filled with cutting-edge research reported in a cohesive manner not found elsewhere in the literature, each volume of the Advances in Chemical Physics series serves as the perfect supplement to any advanced graduate class devoted to the study of chemical physics.

Advances in Chemical Physics, Volume 49

The description of quantum systems is fundamental to an understanding of many problems in chemistry and physics. This volume records a representative slection of the papers delivered at the second European Workshop on Quantum Systems in Chemistry and Physics which was held at Jesus College, Oxford, April 6-9, 1997. The purpose of this international Workshop was to bring together chemists and physicists with a common interest--the quantum mechanical many-body problem--and to encourage collaboration and exchange of ideas on the fundamentals by promoting innovative theory and conceptual development rather than improvements in computatorial techniques and routine applications. Key Features * Covers the following topics: * Density matrices and density functional theory * Electron correlation * Relativistic effects * Valence theory * Nuclear motion * Response theory * Condensed matter * Chemical reactions

Quantum Systems in Chemistry and Physics

Advances in Quantum Chemistry presents surveys of current developments in this rapidly developing field that falls between the historically established areas of mathematics, physics, chemistry, and biology. With invited reviews written by leading international researchers, each presenting new results, it provides a single vehicle for following progress in this interdisciplinary area. This volume continues the tradition with high quality and thorough reviews of various aspects of quantum chemistry. It contains a variety of topics that include an extended and in depth discussion on the calculation of analytical first derivatives of the energy in a similarity transformed equation of motion couples cluster method.

Advances in Quantum Chemistry

Advances in Quantum Chemistry presents surveys of current developments in this rapidly developing field. With invited reviews written by leading international researchers, each presenting new results, it provides a single vehicle for following progress in this interdisciplinary area. * Publishes articles, invited reviews and proceedings of major international conferences and workshops * Written by leading international researchers in quantum and theoretical chemistry * Highlights important interdisciplinary developments

Advances in Quantum Chemistry

Advances in Quantum Chemistry publishes articles and invited reviews by leading international researchers in quantum chemistry. Quantum chemistry deals particularly with the electronic structure of atoms, molecules, and crystalline matter and describes it in terms of electron wave patterns. It uses physical and chemical insight, sophisticated mathematics and high-speed computers to solve the wave equations and achieve its results. Advances highlights these important, interdisciplinary developments.

Advances in Quantum Chemistry

Advances in Quantum Chemistry presents surveys of current developments in this rapidly developing field that falls between the historically established areas of mathematics, physics, and chemistry. With invited reviews written by leading international researchers, as well as regular thematic issues, each volume presents new results and provides a single vehicle for following progress in this interdisciplinary area. Volume 47 is a tribute in honor of Professor Osvaldo Goscinski. The volume will look at the accomplishments of a man who has led a remarkable development within the field and developed and strengthened scientific networks in Quantum Chemistry and Chemical Physics. Provides a tribute in honor of Professor Osvaldo Goscinski, a man who has led a remarkable development within the field

Advances in Quantum Chemistry

Advances in Quantum Chemistry: Lowdin Volume presents a series of articles exploring aspects of the application of quantum mechanics to atoms, molecules, and solids. Celebrates Per-Olov Lowdin, who would have been 100 in 2016 Contains papers by many who use his ideas in theoretical chemistry and physics today

Advances in Quantum Chemistry: Lowdin Volume

Advances in Quantum Chemistry presents surveys of current developments in this rapidly developing field that falls between the historically established areas of mathematics, physics, chemistry, and biology. With invited reviews written by leading international researchers, each presenting new results, it provides a single vehicle for following progress in this interdisciplinary area. Publishes articles, invited reviews and proceedings of major international conferences and workshops Written by leading international researchers in quantum and theoretical chemistry Highlights important interdisciplinary developments

Advances in Quantum Chemistry

Advances in Quantum Chemistry presents surveys of current developments in this rapidly developing field that falls between the historically established areas of mathematics, physics, chemistry, and biology. With invited reviews written by leading international researchers, each presenting new results, it provides a single vehicle for following progress in this interdisciplinary area. The intention of this and the next volume in this series is to present the latest developments in the field of energy deposition as it is actually viewed by many of the major researchers working in this area. It is hard to incorporate all of the important players and all of the topics related to energy deposition in the limited space available; however the editors have tried to present the state of the art as it is now. High quality and thorough reviews of various aspects of quantum chemistry

Advances in Quantum Chemistry

These two volumes collect forty-four selected papers from the scientific contributions presented at the Third European Workshop on Quantum Systems in Chemistry and Physics, held in Granada (Spain), April 19–22, 1998. Ninety-nine scientists from Bulgaria, Columbia, Cuba, Denmark, Finland, France, Germany, Hungary, Israel, Italy, Mexico, Netherlands, Norway, Poland, Russia, Slovakia, Spain, Sweden, United Ki- dom, Uruguay and Venezuela attended the workshop, discussing the state of the

art, new trends, and future evolution of the methods and applications. The workshop took place at the ‘Los Alixares’ Hotel, where 45 lectures were given by prominent members of the scientific community; in addition, 49 posters were presented in two very animated sessions. The success of this workshop is due, without doubt, to the excellent tradition initiated at the previous workshops, organised by Prof. R. McWeeny in San Miniato, Pisa (Italy), 1996, and by Prof. S. Wilson in Oxford (United Kingdom), 1997. These workshops create occasions for meetings and disc- sions on the current state of the art, emerging methods and applications and new trends in this area of science. The three meetings were sponsored and partially supported by the European Union (EU) in the frame of the Cooperation in Science and Technology (COST) chemistry actions.

Quantum Systems in Chemistry and Physics

The Advances in Chemical Physics series provides the chemical physics and physical chemistry fields with a forum for critical, authoritative evaluations of advances in every area of the discipline. Filled with cutting-edge research reported in a cohesive manner not found elsewhere in the literature, each volume of the Advances in Chemical Physics series serves as the perfect supplement to any advanced graduate class devoted to the study of chemical physics.

Ab Initio Methods in Quantum Chemistry, Volume 69, Part 2

Advances in Quantum Chemistry presents surveys of current developments in this rapidly devel- oping field that falls between the historically established areas of mathematics, physics, chemistry, and biology. With invited reviews written by leading international researchers, each presenting new results, it provides a single vehicle for following progress in this interdisciplinary area. This volume concerns the proceedings of the 4th International Conference on the DV-Xá Method. The focus is on key issues of materials science, surfaces, boundaries, defects, metals, ceramics and organic materials and spectroscopy. The DV-Xá method is a Density Functional-like development, which has reached an unparalleled theoretical and practical sophistication in Japan and Korea. Publishes articles, invited reviews and proceedings of major international conferences and workshops Written by leading international researchers in quantum and theoretical chemistry Highlights important interdisciplinary developments

Advances in Quantum Chemistry

Quantum Systems in Physics, Chemistry and Biology, Theory, Interpretation, and Results, Volume 78, the latest release in the Advances in Quantum Chemistry series presents surveys of current topics in this rapidly developing field that has emerged at the cross section of the historically established areas of mathematics, physics, chemistry and biology. It features detailed reviews written by leading international researchers. Presents surveys of current topics in this rapidly-developing field that has emerged at the cross section of the historically established areas of mathematics, physics, chemistry and biology Features detailed reviews written by leading international researchers

Advances in Quantum Chemistry

Advances in the Theory of Quantum Systems in Chemistry and Physics is a collection of 32 selected papers from the scientific contributions presented at the 15th International Workshop on Quantum Systems in Chemistry and Physics (QSCP-XV), held at Magdalene College, Cambridge, UK, from August 31st to September 5th, 2010. This volume discusses the state of the art, new trends, and the future of methods in molecular quantum mechanics and their applications to a wide range of problems in chemistry, physics, and biology. The breadth and depth of the scientific topics discussed during QSCP-XV are gathered in seven sections: I. Fundamental Theory; II. Model Atoms; III. Atoms and Molecules with Exponential-Type Orbitals; IV. Density-Oriented Methods; V. Dynamics and Quantum Monte-Carlo Methodology; VI. Structure and Reactivity; VII. Complex Systems, Solids, Biophysics. Advances in the Theory of Quantum Systems in Chemistry and Physics is written for research students and professionals in Quantum systems of chemistry and physics. It also constitutes and invaluable guide for those wishing to familiarize themselves with research perspectives in the domain of quantum systems for thematic conversion or simply to gain insight into the methodological developments and applications to physics chemistry and biology that have actually become feasible by the end of 2010.

Quantum Systems in Physics, Chemistry and Biology - Theory, Interpretation and Results

This book reviews the most significant advances in concepts, methods, and applications of quantum systems in a broad variety of problems in modern chemistry, physics, and biology. In particular, it discusses atomic, molecular, and solid structure, dynamics and spectroscopy, relativistic and correlation effects in quantum chemistry, topics of computational chemistry, physics and biology, as well as applications of theoretical chemistry and physics in advanced molecular and nano-materials and biochemical systems. The book contains peer-reviewed contributions written by leading experts in the fields and based on the presentations given at the Twenty-Fourth International Workshop on Quantum Systems in Chemistry, Physics, and Biology held in Odessa, Ukraine, in August 2019. This book is aimed at advanced graduate students, academics, and researchers, both in university and corporation laboratories, interested in state-of-the-art and novel trends in quantum chemistry, physics, biology, and their applications.

Advances in Quantum Chemistry

Advances in Quantum Chemistry presents surveys of current developments in this rapidly developing field that falls between the historically established areas of mathematics, physics, and chemistry. With invited reviews written by leading international researchers, as well as regular thematic issues, each volume presents new results and provides a single vehicle for following progress in this interdisciplinary area. The intention of this volume, as with the previous volume in this series is to present the latest developments in the field of energy deposition as it is actually viewed by many of the major researchers working in this area. It is not possible to incorporate all of the important players and all of the topics related to energy deposition in the limited space available; however the editors have tried to present the state of the art as it is now.

Advances in the Theory of Quantum Systems in Chemistry and Physics

Advances in Quantum Chemistry presents surveys of current topics in this rapidly developing field one that has emerged at the cross section of the historically established areas of mathematics, physics, chemistry, and biology. It features detailed reviews written by leading international researchers. In this volume the readers are presented with an exciting combination of themes. Presents surveys of current topics in this rapidly-developing field that has emerged at the cross section of the historically established areas of mathematics, physics, chemistry and biology Features detailed reviews written by leading international researchers Topics include: New advances in Quantum Chemical Physics; Original theory and a contemporary overview of the field of Theoretical Chemical Physics; State-of-the-Art calculations in Theoretical Chemistry

Advances in Quantum Chemistry

Novel Electronic Structure Theory: General Innovations and Strongly Correlated Systems, Volume 76, the latest release in the Advances in Quantum Chemistry series presents work and reviews of current work in quantum chemistry (molecules), but also includes scattering from atoms and solid state work of interest in physics. Topics covered in this release include the Present Status of Selected Configuration Interaction with Truncation Energy Error, Recent Developments in Asymptotic Expansions from Numerical Analysis and Approximation Theory, The kinetic energy Pauli enhancement factor and its role in determining the shell structure of atoms and molecules, Numerical Hartree-Fock and Many-Body Calculations for Diatomic Molecules, and more. Provides reports on current work in molecular and atomic quantum mechanics Contains work reported by many of the best scientists in the field Presents the latest release in the Advances in Quantum Chemistry series

Advances in Methods and Applications of Quantum Systems in Chemistry, Physics, and Biology

The Advances in Chemical Physics series provides the chemical physics and physical chemistry fields with a forum for critical, authoritative evaluations of advances in every area of the discipline. Filled with cutting-edge research reported in a cohesive manner not found elsewhere in the literature, each volume of the Advances in Chemical Physics series serves as the perfect supplement to any advanced graduate class devoted to the study of chemical physics.

Advances in Quantum Chemistry

Ideas of Quantum Chemistry, Volume One: From Quantum Physics to Chemistry shows how quantum mechanics is applied to molecular sciences to provide a theoretical foundation. Organized into

digestible sections and written in an accessible style, it answers questions, highlighting the most important conclusions and essential mathematical formulae. Beginning with an introduction to the magic of quantum mechanics, the book goes on to review such key topics as the Schrödinger Equation, exact solutions, and fundamental approximate methods. The crucial concept of molecular shape is then discussed, followed by the motion of nuclei and the orbital model of electronic structure. This updated volume covers the latest developments in the field and can be used either on its own as a detailed introduction to quantum chemistry or in combination with Volume Two to give a complete overview of the field. Provides fully updated coverage on an extensive range of both foundational and complex topics Uses an innovative structure to emphasize relationships between topics and help readers tailor their own path through the book Includes new sections on Time-Energy Uncertainty and Virial Theorem

Chemical Physics and Quantum Chemistry

Advances in Quantum Chemistry presents surveys of current developments in this rapidly developing field that falls between the historically established areas of mathematics, physics, chemistry, and biology. With invited reviews written by leading international researchers, each presenting new results, it provides a single vehicle for following progress in this interdisciplinary area. Publishes articles, invited reviews and proceedings of major international conferences and workshops Written by leading international researchers in quantum and theoretical chemistry Highlights important interdisciplinary developments

Novel Electronic Structure Theory: General Innovations and Strongly Correlated Systems

Advances in Quantum Chemistry publishes surveys of current developments in the rapidly developing field of quantum chemistry--a field that falls between the historically established areas of mathematics, physics, chemistry, and biology. With invited reviews written by leading international researchers, each presenting new results, this quality serial provides a single vehicle for following progress in this interdisciplinary area.

Advances in Quantum Chemistry

Advances in the Theory of Atomic and Molecular Systems, is a collection of contributions presenting recent theoretical and computational developments that provide new insights into the structure, properties, and behavior of a variety of atomic and molecular systems. This volume (subtitled “Dynamics, Spectroscopy, Clusters, and Nanostructures”) deals with the topics of “Quantum Dynamics and Spectroscopy”, “Complexes and Clusters”, and “Nanostructures and Complex Systems”. This volume is an invaluable resource for faculty, graduate students, and researchers interested in theoretical and computational chemistry and physics, physical chemistry and chemical physics, molecular spectroscopy, and related areas of science and engineering.

Advances in Chemical Physics, Volume 67

The use of quantum chemistry for the quantitative prediction of molecular properties has long been frustrated by the technical difficulty of carrying out the needed computations. In the last decade there have been substantial advances in the formalism and computer hardware needed to carry out accurate calculations of molecular properties efficiently. These advances have been sufficient to make quantum chemical calculations a reliable tool for the quantitative interpretation of chemical phenomena and a guide to laboratory experiments. However, the success of these recent developments in computational quantum chemistry is not well known outside the community of practitioners. In order to make the larger community of chemical physicists aware of the current state of the subject, this self-contained volume of Advances in Chemical Physics surveys a number of the recent accomplishments in computational quantum chemistry. This stand-alone work presents the cutting edge of research in computational quantum mechanics. Supplemented with more than 150 illustrations, it provides evaluations of a broad range of methods, including: * Quantum Monte Carlo methods in chemistry * Monte Carlo methods for real-time path integration * The Redfield equation in condensed-phase quantum dynamics * Path-integral centroid methods in quantum statistical mechanics and dynamics * Multiconfigurational perturbation theory-applications in electronic spectroscopy * Electronic structure calculations for molecules containing transition metals * And more Contributors to New Methods in Computational Quantum Mechanics KERSTIN ANDERSSON, Department of Theoretical Chemistry, Chemical Center, Sweden DAVID M. CEPERLEY, National Center for Supercomputing Applications and Department of Physics, University of Illinois at Urbana-Champaign, Illinois MICHAEL A. COLLINS,

Research School of Chemistry, Australian National University, Canberra, Australia REINHOLD EGGER, Fakultät für Physik, Universität Freiburg, Freiburg, Germany ANTHONY K. FELTS, Department of Chemistry, Columbia University, New York RICHARD A. FRIESNER, Department of Chemistry, Columbia University, New York MARKUS P. FÜLSCHER, Department of Theoretical Chemistry, Chemical Center, Sweden K. M. HO, Ames Laboratory and Department of Physics, Iowa State University, Ames, Iowa C. H. MAK, Department of Chemistry, University of Southern California, Los Angeles, California PER-ÅKE Malmqvist, Department of Theoretical Chemistry, Chemical Center, Sweden MANUELA MERCHán, Departamento de Química Física, Universitat de Valéncia, Spain LUBOS MITAS, National Center for Supercomputing Applications and Materials Research Laboratory, University of Illinois at Urbana-Champaign, Illinois STEFANO OSS, Dipartimento di Fisica, Università di Trento and Istituto Nazionale di Fisica della Materia, Unità di Trento, Italy KRISTINE PIERLOOT, Department of Chemistry, University of Leuven, Belgium W. THOMAS POLLARD, Department of Chemistry, Columbia University, New York BJÖRN O. ROOS, Department of Theoretical Chemistry, Chemical Center, Sweden LUIS SERRANO-ANDRÉS, Department of Theoretical Chemistry, Chemical Center, Sweden PER E. M. SIEGBAHN, Department of Physics, University of Stockholm, Stockholm, Sweden WALTER THIEL, Institut für Organische Chemie, Universität Zürich, Zürich, Switzerland GREGORY A. VOTH, Department of Chemistry, University of Pennsylvania, Pennsylvania C. Z. Wang, Ames Laboratory and Department of Physi

Ideas of Quantum Chemistry

Advances in Quantum Chemistry publishes articles and invited reviews by leading international researchers in quantum chemistry. Quantum chemistry deals particularly with the electronic structure of atoms, molecules, and crystalline matter and describes it in terms of electron wave patterns. It uses physical and chemical insight, sophisticated mathematics and high-speed computers to solve the wave equations and achieve its results. Advances highlights these important, interdisciplinary developments.

Advances in Quantum Chemistry

Advances in Quantum Chemistry presents surveys of current developments in this rapidly developing field that falls between the historically established areas of mathematics, physics, chemistry, and biology. With invited reviews written by leading international researchers, each presenting new results, it provides a single vehicle for following progress in this interdisciplinary area. Publishes articles, invited reviews and proceedings of major international conferences and workshops Written by leading international researchers in quantum and theoretical chemistry Highlights important interdisciplinary developments

Electronic Structure of Clusters

Advances in Quantum Chemistry presents surveys of current topics in this rapidly developing field that has emerged at the cross section of the historically established areas of mathematics, physics, chemistry, and biology. It features detailed reviews written by leading international researchers. This volume focuses on the theory of heavy ion physics in medicine. Advances in Quantum Chemistry presents surveys of current topics in this rapidly developing field and this volume focuses on the theory of heavy ion physics in medicine

Advances in Quantum Chemistry

Electron Correlation in Molecules – ab initio Beyond Gaussian Quantum Chemistry presents a series of articles concerning important topics in quantum chemistry, including surveys of current topics in this rapidly-developing field that has emerged at the cross section of the historically established areas of mathematics, physics, chemistry, and biology. Presents surveys of current topics in this rapidly-developing field that has emerged at the cross section of the historically established areas of mathematics, physics, chemistry, and biology Features detailed reviews written by leading international researchers The volume includes review on all the topics treated by world renown authors and cutting edge research contributions.

Advances in the Theory of Atomic and Molecular Systems

Advances in Quantum Chemistry

Parametric Design for Architecture

Architects use CAD to help them visualize their ideas. Parametric design is a fast-growing development of CAD that lets architects and designers specify the key parameters of their model and make changes interactively. Whenever changes are made the rest of the model updates automatically. Through a detailed description of various parametric, generative and algorithmic techniques, this book provides a practical guide to generating geometric and topological solutions for various situations, including explicit step-by-step tutorials. While the techniques and algorithms can be generalized to suit to any parametric environment, the book illustrates its concepts using the scripting languages of one of the most powerful 3D visualization and animation design software systems (Autodesk 3ds Max MAXScript), one of the most popular open-source Java-based scripting environments (Processing), and a brand new language specifically tailored for parametric and generative design (Autodesk DesignScript). This clear, accessible book will have a wide appeal to students and practitioners who would like to experiment with parametric techniques.

Parametric Design in Architecture

Fundamentals, methods, and applications of parametric design for architects Parametric design is a form of computer-aided design, in which geometrical elements, such as architectural components, are defined and interconnected by variable attributes known as parameters. It counts as one of the most advanced methods in schools of architecture, and is quickly becoming a standard in day-to-day architectural practice. Long the domain of mechanical engineering and automotive design, then explored by international avant-garde architecture, parametric models can now be used as innovative tools for creative and efficient design work.This book explains parametric design, shows how it works, and focuses on its functional advantages and practical applications. The author, Carlos R. Barrios, is an architect with a background in computer science and fine arts. He has accompanied the development of parametric design at MIT in Cambridge and in cooperation with large practices such as SOM, KPF, and Foster + Partners, and has conveyed the principles and applications for many years in teaching. Systematically structured, illustrated with international built examples and instructive drawings by the author, this book provides a thorough point of reference on a complex subject.

Elements of Parametric Design

Pushed by practices wanting to produce novelty, computer-aided design systems are increasingly parametric - they represent designs that change with their input data. Such systems give more control and capability to designers, but require much more comprehensive understanding to be used effectively. This book teaches what new knowledge and skills designers need in order to master the parametric and how they can learn and use them.

Parametric Design in Architecture

This book explains parametric design, shows how it works, and focuses on its functional advantages and practical applications. The author, Carlos R. Barrios, is an architect with a background in computer science and fine arts. He has accompanied the development of parametric design at MIT in Cambridge and in cooperation with large practices such as SOM, KPF, and Foster + Partners, and has conveyed the principles and applications for many years in teaching. Systematically structured, illustrated with international built examples and instructive drawings by the author, this book provides a thorough point of reference on a complex subject.

VERSUS: Heritage for Tomorrow

Vernacular architecture represents a great resource that has considerable potential to define principles for sustainable design and contemporary architecture. This publication is the result of an overall aim to produce a valuable tool for analysis regarding vernacular heritage through different assessments, in order to define principles to consider for sustainable development. This was possible through a comprehensive reflection on the principles established and the strategies to recognise in different world contexts. The present publication was the result of an in-depth approach by 46 authors from 12 countries, concerned with the analysis and critical assessment of vernacular heritage and its sustainable perspective. The book presents 8 chapters addressing operational definitions and synopses advances, regarding the main areas of vernacular heritage contribution to sustainable architecture. It also presents 15 chapters and 53 case studies of vernacular and contemporary approaches in all the 5 continents, regarding urban, architectural, technical and constructive strategies and solutions. VERSUS, HERITAGE FOR TOMORROW: Vernacular Knowledge for Sustainable Architecture is the

result of a common effort undertaken by the partners ESG | Escola Superior Gallaecia, Portugal, as Project leader; CRAterre | École Nationale Supérieure d'Architecture de Grenoble, France; DIDA | Università degli Studi di Firenze, Italy; DICAAR | Università degli Studi di Cagliari, Italy; and UPV | Universitat Politècnica de València, Spain. This is the final outcome of VerSus, an European project developed from 2012 to 2014, in the framework of the Culture 2007-2013 programme.

Socially Intelligent Agents

Socially situated planning provides one mechanism for improving the social awareness ofagents. Obviously this work isin the preliminary stages and many of the limitation and the relationship to other work could not be addressed in such a short chapter. The chief limitation, of course, is the strong commitment to de?ning social reasoning solely atthe meta-level, which restricts the subtlety of social behavior. Nonetheless, our experience in some real-world military simulation applications suggest that the approach, even in its preliminary state, is adequate to model some social interactions, and certainly extends the sta- of-the art found in traditional training simulation systems. Acknowledgments This research was funded by the Army Research Institute under contract TAPC-ARI-BR References [1] J. Gratch. Emile: Marshalling passions in training and education. In Proceedings of the Fourth International Conference on Autonomous Agents, pages 325–332, New York, 2000. ACM Press. [2] J. Gratch and R. Hill. Continous planning and collaboration for command and control in joint synthetic battlespaces. In Proceedings of the 8th Conference on Computer Generated Forces and Behavioral Representation, Orlando, FL, 1999. [3] B. Grosz and S. Kraus. Collaborative plans for complex group action. Arti?cial Intelli gence, 86(2):269–357, 1996. [4] A. Ortony, G. L. Clore, and A. Collins. The Cognitive Structure of Emotions. Cambridge University Press, 1988. [5] R.W.PewandA.S.Mavor,editors. Modeling Human and Organizational Behavior. National Academy Press, Washington D.C., 1998.

Time Space Existence

The fourth edition of the biennial architecture exhibition 'TIME SPACE EXISTENCE' presents a wide selection of works from architects, photographers, sculptors and universities from all over the world. In addition, projects realized in cooperation with institutions and museums. The participating architects and artists come from diverse cultural backgrounds and different career stages, i.e. established architects next to professionals whose works might be less known. What they have in common is their dedication to architecture in the broadest sense of their profession. The exhibition shows a vast spectrum of presentations (models, concepts, research outcomes, thoughts, dreams and ideas), placing classical architectural installations in dialogue with surprising artistic elements. Exhibition: 16th Architecture Biennial, Palazzo Mora, Palazzo Bembo and Giardini Marinaressa Venice, Italy (26.05. - 25.11.2018).

Fabric Structures in Architecture

Fabric Structures in Architecture covers the varying ways textiles and their properties are used in building construction, with particular focus given to tensile structures. The text begins with the fundamental principles of textiles, including the origins of fabric architecture, then progressing to a discussion of the modern textiles of today. It covers relevant textile materials and their properties, including coatings and membranes. In addition, a range of design considerations are discussed, with detailed information on installation and failure modes. A series of case studies from around the world accompany the discussion, illustrating the applications of textiles in architecture. Offers key coverage of the fundamental principles, from the origins of fabric architecture to modern textile Provides analysis of relevant textile materials and their properties, including coatings and membranes Contains expert insights in to the applications of textiles in architecture, presenting a series of relevant case-studies from around the world

A handbook on flood hazard mapping methodologies

Passive and Low Energy Architecture contains the proceedings of the Second International PLEA Conference held in Crete, Greece, on June 28 to July 1, 1983. The book is organized into four parts as the topics of the conference. The first part brings together papers dealing with case studies of individual buildings or groups of buildings, completed or to be built, and of community planning. The case studies cover examples from 13 countries in Europe, North and Latin America, North Africa, the Middle East, and Asia. The second part contains papers on experimental work and technical developments with passive and low energy systems and components. The third section focuses on the

ill-defined but crucial to designers, area of design aids. The fourth section centers on implementation and management of these energy systems, including topics of international programs, education, and training of design professionals. The book will be useful to energy conscious designers, architects, engineers, and planners in this field of interest.

Passive and Low Energy Architecture

This book describes the diagnoses; staging and management of patients with colorectal liver metastases initially considered unresectable and portrays the different strategies to increase resectability along with their tactics and tricks. Colorectal carcinoma is the third most commonly diagnosed cancer in the world and according to recent cancer statistics around 1.23 million patients are diagnosed each year. Of these patients, approximately 50% will develop liver metastases during the course of their disease and around 15-25% are found to have stage IV disease at diagnosis. Liver resection has been recognized as the treatment of choice for these patients, offering overall 5-year survival rates of up to 50-60% and the only hope for cure. However, at diagnosis only 10-20% of these patients are possibly amenable to surgical resection with curative intent. The possibility to achieve an R0 resection is many times limited by the amount and quality of the future liver remnant (FLR), being posthepatectomy liver failure (PHLF) the most feared and severe complication after major liver resections. With the years, diverse strategies have been developed with the intention to increase resectability by increasing the future liver remnant and/or reducing tumor size, e.g. ALPPS. Along with these techniques, associated surgeries are developed including multivisceral resections, which broadens even more the resectability for patients.

Extreme Hepatic Surgery and Other Strategies

Action selection is the task of doing the right thing at the right time. It requires the assessment of available alternatives, executing those most appropriate, and resolving conflicts among competing goals and possibilities. Using advanced computational modelling, this book explores cutting-edge research into action selection in nature from a wide range of disciplines, from neuroscience to behavioural ecology, and even political science. It delivers new insights into both detailed and systems-level attributes of natural intelligence and demonstrates advances in methodological practice. Contributions from leading researchers cover issues including whether biological action selection is optimal, neural substrates for action selection in the vertebrate brain, perceptual selection in decision making, and interactions between group and individual action selection. This first integrated review of action selection in nature contains a balance of review and original research material, consolidating current knowledge into a valuable reference for researchers while illustrating potential paths for future studies.

Modelling Natural Action Selection

Proceedings of the 6th International Conference on Industrial Engineering and Industrial Management and the XVI Congreso de Ingeniería de Organización (CIO 2012). The aim of CIO is to establish a forum for the open and free exchange of ideas, opinions and academic experiences about research, technology transfer or successful business experiences in the field of Industrial Engineering. The CIO 2012 is an annual meeting promoted by “Asociación para el Desarrollo de la Ingeniería de Organización” (Industrial Engineers Association, ADINGOR) with a Scientific Committee composed of 61 international referees and more than 200 professionals from 7 countries. A selection of the lectures and presentations made over three days by researchers and practitioners from different countries are presented here. A range of topics is covered including: A selection of the lectures and presentations made over three days by researchers and practitioners from different countries are presented here. A range of topics is covered including: · Business Administration & Economic Environment · Technological & Organizational Innovation · Logistics & Supply Chain Management · Production & Operations Management · Management Systems & Sustainability The conference in Industrial Engineering (CIO) and its proceedings are an excellent platform for the dissemination of the outputs of the scientific projects developed in the frame of the International Research and Development plans.

Annals of Industrial Engineering 2012

This book contains an introduction and 20 studies, each describing a recent research investigation in the area of sustainable and resilient buildings, built environment infrastructure and renewable energy. Contributions are from many different countries of the world and on a range of topics, representing a

sample of research within the ‘sustainable energy and buildings’ field. The book begins with chapters on the sustainable design of buildings, followed by descriptions of issues relating to the renovation, restoration and reconstruction of existing buildings, or in one case a railway wagon. The next part of the book covers factors that form barriers or impediments to low or zero carbon buildings, followed by studies of issues relating to policy and certification. There then follow four chapters on various topics related to sustainable buildings – undergraduate courses, insurance issues, biophilia relating to buildings and thermal conductivity measurement. There are several chapters relating to renewable energy, followed by two chapters with a sustainable transport theme, one relating to electric vehicles, and the other about a sustainable road infrastructure. The final chapter is on the manufacture of sustainable building components for the UK housing sector. The book is of use to engineers, scientists, researchers, practitioners, academics and all those who are interested to develop and use sustainability science and technology for the betterment of our planet and humankind, and to mitigate climate change reality.

Emerging Research in Sustainable Energy and Buildings for a Low-Carbon Future

This book is composed by the papers accepted for presentation and discussion at The 2019 International Conference on Information Technology & Systems (ICITS'20), held at the Universidad Distrital Francisco José de Caldas, in Bogotá, Colombia, on 5th to 7th February 2020. ICIST is a global forum for researchers and practitioners to present and discuss recent findings and innovations, current trends, professional experiences and challenges of modern information technology and systems research, together with their technological development and applications. The main topics covered are: information and knowledge management; organizational models and information systems; software and systems modelling; software systems, architectures, applications and tools; multimedia systems and applications; computer networks, mobility and pervasive systems; intelligent and decision support systems; big data analytics and applications; human–computer interaction; ethics, computers & security; health informatics; information technologies in education.

Information Technology and Systems

This concise volume in the Encyclopaedia of Sports Medicine series, published under the auspices of the International Olympic Committee, provides a dependable source of current knowledge available on tendinopathy and covers both the basic science and clinical aspects of the subject. Despite its high incidence, the precise etiopathogenesis and effective treatment of tendinopathy remain elusive. Tendinopathy in Athletes draws on the expertise of an international and prolific collection of contributors, both clinicians and scientists, who provide new insights into this specialized area. This book: provides a comprehensive resource for both clinicians and researchers with information organized logically, with an easy-to-follow progression from the basic scientific findings to clinical applications discusses the full range of treatment modalities, including new molecular and biological approaches, plus surgical and alternative approaches to tendinopath contains “What We Need to Know” sections that suggest future areas of research for young investigators. As tendinopathy remains one of the most common injuries encountered, both in sports and at the workplace, this essential volume is sure to be a source of frequent consultation.

Tendinopathy in Athletes

Soft Computing has come of age. In particular, Artificial Neural Networks, Fuzzy Logic and Evolutionary Computing now play an important role in many domains where traditional techniques have been found wanting. As this volume confirms, hybrid solutions that combine more than one of the Soft Computing approaches are particularly successful in many problem areas. This volume contains papers presented at the International Conference on Recent Advances in Soft Computing 2000 at De Montfort University in Leicester. The contributions cover both theoretical developments and practical applications in the various areas of Soft Computing.

Developments in Soft Computing

This book covers the underlying science and application issues related to aggregation operators, focusing on tools used in practical applications that involve numerical information. It will thus be required reading for engineers, statisticians and computer scientists of all kinds. Starting with detailed introductions to information fusion and integration, measurement and probability theory, fuzzy sets,

and functional equations, the authors then cover numerous topics in detail, including the synthesis of judgements, fuzzy measures, weighted means and fuzzy integrals.

Modeling Decisions

Covering technological aspects as well as the suitability and applicability of various kinds of uses, this handbook shows optimization strategies, techniques and assembly pathways to achieve the combination of complex, even three-dimensional structures with simple manufacturing steps. The authors provide information on markets, commercialization opportunities and aspects of mass or large-scale production as well as design tools, experimental techniques, novel materials, and ideas for future improvements. Not only do they weigh up cost versus quantity, they also consider CMOS and LIGA strategies. Of interest to physicists, electronics engineers, materials scientists, institutional and industrial libraries as well as graduate students of the relevant disciplines.

LIGA and its Applications

Riding, training and caring for horses are visceral experiences that require the immersion of both body and mind. This book provides an in-depth understanding of human–horse relationships and interactions as embodied in equestrian sport and leisure. As a closely focused ethnographic study of the horse world, it explores the key themes of partnership and collaboration in human–horse communication, the formation of individual and collective identities performed through involvement in the horse world, and human–horse interaction as an embodied way of being. This book argues that encounters between humans and horses can reveal the ways that human society has been and continues to be structured through intersection with nonhuman others. Equestrian sport and leisure provides an apt context for considering how such concepts of interspecies communication and collaboration are negotiated, managed, (mis)understood and performed, resulting in a uniquely embodied way of knowing and being in the world. Human–Animal Relationships in Equestrian Sport and Leisure is fascinating reading for anyone interested in equestrianism, human-animal studies, theories of embodiment, the sociology of sport, or sport and social theory.

Human–Animal Relationships in Equestrian Sport and Leisure

Covering the period 1890 - 1932 this book focuses on various recognised masters explaining the detailing and construction techniques used in their buildings.

The Details of Modern Architecture

Membrane Computing was introduced as a computational paradigm in Natural Computing. The models introduced, called Membrane (or P) Systems, provide a coherent platform to describe and study living cells as computational systems. Membrane Systems have been investigated for their computational aspects and employed to model problems in other fields, like: Computer Science, Linguistics, Biology, Economy, Computer Graphics, Robotics, etc. Their inherent parallelism, heterogeneity and intrinsic versatility allow them to model a broad range of processes and phenomena, being also an efficient means to solve and analyze problems in a novel way. Membrane Computing has been used to model biological systems, becoming with time a thorough modeling paradigm comparable, in its modeling and predicting capabilities, to more established models in this area. This book is the result of the need to collect, in an organic way, different facets of this paradigm. The chapters of this book, together with the web pages accompanying them, present different applications of Membrane Systems to Biology. Deterministic, non-deterministic and stochastic systems paired with different algorithms and methodologies show the full potential of this framework. The book is addressed to researchers interested in applications of discrete biological models and the interplay between Membrane Systems and other approaches to analyze complex systems.

Ultra-cold Fermi Gases

The first report that rapid eye movements occur in sleep in humans was published in 1953. The research journey from this point to the realization that sleep consists of two entirely independent states of being (eventually labeled REM sleep and non-REM sleep) was convoluted, but by 1960 the fundamental duality of sleep was well established including the description of REM sleep in cats associated with “wide awake” EEG patterns and EMG suppression. The first report linking REM sleep to a pathology occurred in 1961 and a clear association of sleep onset REM periods, cataplexy,

hypnagogic hallucinations and sleep paralysis was fully established by 1966. When a naïve individual happens to observe a full-blown cataplexy attack, it is both dramatic and unnerving. Usually the observer assumes that the loss of muscle tone represents syncope or seizure. In order to educate health professionals and the general public, Christian Guilleminault and I made movies of full-blown cataplectic episodes (not an easy task). We showed these movies of cataplexy attacks to a number of professional audiences, and were eventually rewarded with the report of a similar abrupt loss of muscle tone in a dog. We were able to bring the dog to Stanford University and with this as the trigger, we were able to develop the Stanford Canine Narcolepsy Colony. Breeding studies revealed the genetic determinants of canine narcolepsy, an autosomal recessive gene we termed canarc1. Emmanuel Mignot took over the colony in 1986 and began sequencing DNA, finally isolating canarc1 in 1999.

Applications of Membrane Computing in Systems and Synthetic Biology

The conservation of cultural heritage is a major commitment for all countries around the world, since it is a complex task and a matter of great responsibility. Amongst other sectors of society, science has a contribution to make to heritage preservation. This book is the result of the international conference Heritage, Weathering and Conservation (HWC2006), held in Madrid, Spain, in 2006. It brought together prominent scientists and professionals from a variety of disciplines who have been active in the field and have raised the profile of heritage preservation. The main aspects addressed at this conference were those related to the causes of decay of cultural materials (stone, ceramics, metals, paintings, mortars, timber, adobes, etc); the characterization of their properties and the assessment of analytical techniques for their study, with a focus on non-destructive techniques. Many of the studies stress the importance of salt crystallization, atmospheric pollution and biodeterioration and relate these specific factors to decay. A variety of case studies are included, as well as an examination of policies and management. This book will be useful to professionals and scientists working in a variety of fields related to heritage: geologists, geographers, chemists, physicists, biologists, architects, engineers, restorers, historians, archaeologists, policy makers and the general public.

Hypocretins

Medium-sized language communities face competition between local and global languages such as Spanish, Russian, French and, above all, English. The various regions of Spain where Catalan is spoken, Denmark, the Czech Republic, and Lithuania show how their medium-sized languages (a term used to distinguish them as much from minority codes as from more widely-spoken codes) coexist alongside or struggle with their big brothers in multilingual families. This comparative analysis offers unique insight into language contact in present-day Europe.

Heritage, weathering and conservation 2006

This important and insightful book provides, for the first time, a broad presentation of ongoing research into public participation in landscape conservation, management and planning, following the 2000 European Landscape Convention which came into force in 2004. The book examines both the theory of participation and what lessons can be learnt from specific European examples. It explores in what manner and to what extent the provisions for participation in the European Landscape Convention have been followed up and implemented. It also presents and compares different experiences of participation in selected countries from northern, southern, eastern and western Europe, and provides a critical examination of public participation in practice. However, while the book’s focus is necessarily on Europe, many of the conclusions drawn are of global relevance. The book provides a valuable reference for researchers and advanced students in landscape policies and management, as well as for professionals and others interested in land-use planning and environmental management.

Family Multilingualism in Medium-sized Language Communities

This book will serve as a key resource for all clinicians working in orthopedics, sports medicine, and rehabilitation for the sport of tennis. It provides clinically useful information on evaluation and treatment of the tennis player, covering the entire body and both general medical and orthopedic musculoskeletal topics. Individual sections focus on tennis-related injuries to the shoulder, the elbow, wrist, and hand, the lower extremities, and the core/spine, explaining treatment and rehabilitation approaches in detail. Furthermore, sufficient sport science information is presented to provide the clinical reader with extensive knowledge of tennis biomechanics and the physiological aspects of training and rehabilitation. Medical issues in tennis players, such as nutrition and hydration, are

also discussed, and a closing section focuses on other key topics, including movement dysfunction, periodization, core training, and strength and conditioning specifics. The expansive list of worldwide contributors and experts coupled with the comprehensive and far-reaching chapter provision make this the highest-level tennis medicine book ever published.

The European Landscape Convention

Obesity: Oxidative Stress and Dietary Antioxidants cover the science of oxidative stress in obesity and associated conditions, including metabolic syndrome, bariatric surgery, and the potentially therapeutic usage of natural antioxidants in the diet or food matrix. The processes within the science of oxidative stress are not described in isolation, but in concert with other processes, such as apoptosis, cell signaling and receptor mediated responses. This approach recognizes that diseases are often multifactorial and oxidative stress is but a single component. The book is designed for nutritionists, dietitians, food scientists, physicians and clinical workers, health care workers and research scientists. Covers the basic processes of oxidative stress, from molecular biology, to whole organs Highlights antioxidants in foods, including plants and other components of diet Provides the framework for further, in-depth analysis or studies via well-designed clinical trials or via the analysis of pathways, mechanisms and componentsa

Tennis Medicine

This book contains case histories intended to show how societies and landscapes interact. The range of interest stretches from the small groups of the earliest Neolithic, through Bronze and Iron Age civilizations, to modern nation states. The coexistence is, of its very nature reciprocal, resulting in changes in both society and landscape. In some instances the adaptations may be judged successful in terms of human needs, but failure is common and even the successful cases are ephemeral when judged in the light of history. Comparisons and contrasts between the various cases can be made at various scales from global through inter-regional, to regional and smaller scales. At the global scale, all societies deal with major problems of climate change, sea-level rise, and with ubiquitous problems such as soil erosion and landscape degradation. Inter-regional differences bring out significant detail with one region suffering from drought when another suffers from widespread flooding. For example, desertification in North Africa and the Near East contrasts with the temperate countries of southern Europe where the landscape-effects of deforestation are more obvious. And China and Japan offer an interesting comparison from the standpoint of geological hazards to society - large, unpredictable and massively erosive rivers in the former case, volcanoes and accompanying earthquakes in the latter. Within the North African region localized climatic changes led to abandonment of some desertified areas with successful adjustments in others, with the ultimate evolution into the formative civilization of Egypt, the "Gift of the Nile". At a smaller scale it is instructive to compare the city-states of the Medieval and early Renaissance times that developed in the watershed of a single river, the Arno in Tuscany, and how Pisa, Siena and Florence developed and reached their golden periods at different times depending on their location with regard to proximity to the sea, to the main trunk of the river, or in the adjacent hills. Also noteworthy is the role of technology in opening up opportunities for a society. Consider the Netherlands and how its history has been formed by the technical problem of a populous society dealing with too much water, as an inexorably rising sea threatens their landscape; or the case of communities in Colorado trying to deal with too little water for farmers and domestic users, by bringing their supply over a mountain chain. These and others cases included in the book, provide evidence of the successes, near misses and outright failures that mark our ongoing relationship with landscape throughout the history of Homo sapiens. The hope is that compilations such as this will lead to a better understanding of the issue and provide us with knowledge valuable in planning a sustainable modus vivendi between humanity and landscape for as long as possible. Audience: The book will interest geomorphologists, geologists, geographers, archaeologists, anthropologists, ecologists, environmentalists, historians and others in the academic world. Practically, planners and managers interested in landscape/environmental conditions will find interest in these pages, and more generally the increasingly large body of opinion in the general public, with concerns about Planet Earth, will find much to inform their opinions. Extra material: The color plate section is available at http://extras.springer.com

Obesity

At the dawn of the twenty-first century, digital technologies have enabled new techniques for the development of architecture. In Catalytic Formations, Ali Rahim suggests that these digital design techniques have the potential to affect the wider cultural landscape in profound ways. Digital technologies allow architecture to engage in a feedback loop with its context -- to absorb influences and produce concrete effects on its users. This book offers both a philosophy and specific techniques for how architects can catalyze cultural advancements. Also included are provocative examples from Rahim's work at Contemporary Architecture Practice and projects by Zaha Hadid, Greg Lynn, FORM, and other cutting edge architects.

Landscapes and Societies

Designers are becoming more directly involved in the fabrication process from the earliest stages of design. This book showcases the design and research work by some of the leading designers, makers and thinkers today. This highly illustrated text brings together a wealth of information and numerous examples from practice which will appeal to both students and practitioners.

Catalytic Formations

Personal Structures presents an ongoing project that deals with questions concerning time, space and existence.This is the second book in the Time. Space. Existence series and involves the personal participation of 46 artists from different parts of the world, in a combination of internationally renowned artists and others whose oeuvre is less known.The concepts time, space and existence are highlighted in very personal ways and from unusual points of view. The many photographs of the artworks and encounters with the artists convey fascinating insights into their being, ideas and work.Seven art projects with established artists centralise their thoughts to a great extent. In addition, the book emphasises two Personal Structures exhibitions that were part of the Venice Biennale in 2011 and 2013.This publication also contains several interviews, artists' statements, and symposium contributions that discuss the theme of this book in detail.Personal Structures was initiated in 2002 by the Dutch artist Rene Rietmeyer. His observation that even in the most distant places artists are occupied with time, space and existence, led to the idea of bringing several of these artists together in publications, symposia and exhibitions.English and Japanese text.

Manufacturing Material Effects

This alphabetical reference covers the entire spectrum of the recording of sound, from Edison's experimental cylinders to contemporary high technology. The major focus is on the recorded sound industry in the US, with additional material on Canada, Europe, Australia, and New Zealand. The coverage is particularly strong on the earliest periods of recorded sound history--1877-1948, the 78 rpm era and 1949-1982, the LP era. In addition to performers and their work, entries also cover important commercial organizations, individuals who made significant technical contributions, societies and associations, sound archives and libraries, magazines, catalogs, award winners, technical topics, special and foreign terms, copyright laws, and other areas of interest. Annotation copyright by Book News, Inc., Portland, OR

Personal Structures

Provides in-depth knowledge on lead-free piezoelectrics - for state-of-the-art, environmentally friendly electrical and electronic devices! Lead zirconate titanate ceramics have been market-dominating due to their excellent properties and flexibility in terms of compositional modifications. Driven by the Restriction of Hazardous Substances Directive, there is a growing concern on the toxicity of lead. Therefore, numerous research efforts were devoted to lead-free piezoelectrics from the beginning of this century. Great progress has been made in the development of high-performance lead-free piezoelectric ceramics which are already used, e.g., for power electronics applications. Lead-Free Piezoelectric Materials provides an in-depth overview of principles, material systems, and applications of lead-free piezoelectric materials. It starts with the fundamentals of piezoelectricity and lead-free piezoelectrics. Then it discusses four representative lead-free piezoelectric material systems from background introduction to crystal structures and properties. Finally, it presents several applications of lead-free piezoelectrics including piezoelectric actuators, and transducers. The challenges for promoting applications will also be discussed. Highly attractive: Lead-free piezoelectrics address the growing concerns on exclusion of hazardous substances used in electrical and electronic devices in order to protect human health and the environment Thorough overview: Covers fundamentals, different classes

of materials, processing and applications Unique: discusses fundamentals and recent advancements in the field of lead-free piezoelectrics Lead-Free Piezoelectric Materials is of high interest for material scientists, electrical and chemical engineers, solid state chemists and physicists in academia and industry.

Encyclopedia of Recorded Sound in the United States

The sensing, processing, and visualizing that are currently in development within the environment boldly change the ways design and maintenance of landscapes are perceived and conceptualised. This is the first book to rationalize interactive architecture and responsive technologies through the lens of contemporary landscape architectural theory. Responsive Landscapes frames a comprehensive view of design projects using responsive technologies and their relationship to landscape and environmental space. Divided into six insightful sections, the book frames the projects through the terms; elucidate, compress, displace, connect, ambient, and modify to present and construct a pragmatic framework in which to approach the integration of responsive technologies into landscape architecture. Complete with international case studies, the book explores the various approaches taken to utilise responsive technologies in current professional practice. This will serve as a reference for professionals, and academics looking to push the boundaries of landscape projects and seek inspiration for their design proposals.

Lead-Free Piezoelectric Materials

The old opposition between a digital culture of sensuous, ephemeral images and a tectonic culture of pragmatic building has given way to a new collaboration between the two domains, a 'digital tectonics'. Computer linked fabrication techniques of many kinds have become an integral part of the design process, while new digital tools are allowing engineers and architects to understand in far more detail the behaviour of load carrying surfaces, and to generate new architectural forms. Digital and computer-linked design techniques is one of the hottest topics in architecture and in an ever-expanding world of digital technology this book tackles the practical elements of the field.

Responsive Landscapes

This study is part of the project 'Context and Modernity' at the Faculty of Architecture, Delft University of Technology.

Digital Tectonics

This book is an introduction to the field of multi-way analysis for chemists and chemometricians. Its emphasis is on the ideas behind the method and its pratical applications. Sufficient mathematical background is given to provide a solid understanding of the ideas behind the method. There are currently no other books on the market which deal with this method from the viewpoint of its applications in chemistry. Applicable in many areas of chemistry. No comparable volume currently available. The field is becoming increasingly important.

Bio-ecological Zones of Bangladesh

Time-based Architecture