

Spacecraft Paper Models

Predictive Modeling of Dynamic Processes provides an overview of hydrocode technology, applicable to a variety of industries and areas of engineering design. Covering automotive crash, blast impact, and hypervelocity impact phenomena, this volume offers readers an in-depth explanation of the fundamental code components. Chapters include informative introductions to each topic, and explain the specific requirements pertaining to each predictive hydrocode. Successfully blending crash simulation, hydrocode technology and impact engineering, this volume fills a gap in the current competing literature available.

Fly high with paper models of some of the most astonishing aircraft and spacecraft ever designed! The Smithsonian's National Air and Space Museum hosts seven million visitors annually—a testament to our enduring fascination with flight. Noted origami artist John Szinger has created this unique collection of paper airplane and rocket models inspired by real life flying machines. Let your imagination soar with 14 original designs, including: A Supersonic Transport, recalling the golden age of commercial hypersonic travel The Space Pod, designed to safely return astronauts to earth through the intense heat of re-entry A graceful Hot Air Balloon—make several to create your own miniature ballooning festival An elusive Flying Saucer—try as they might, the government can't conceal this one A sci-fi inspired Art Deco Rocket with exaggerated fins and sleek lines And many other thrilling origami air and space models! Air and Space Origami Kit contains everything you need to create high quality air and space models: A colorful 64-page step-by-step origami instructions book 14 exciting air and space origami projects 48 sheets of downloadable, double-sided folding paper for printing at home Each model comes complete with a set of interesting facts about the vehicle, as well as detailed step-by-step instructions showing you how to fold it. Air and Space Origami Kit is perfect for aspiring astronauts and origami beginners of all ages!

Revised and Extended Edition of "Practical Work in Elementary Astronomy" by M.G.J. Minnaert

Paper Model Kits

Satellite Orbits

SAE Technical Paper Series

Build Your Own Paper Robots

Space Flyers Paper Airplane Book

NASA SP.

Paper Astronaut

Four easy-to-assemble spaceships, rendered in colorful Pop Art styles, are accompanied by playful illustrations and fun facts about our solar system, its exploration, and phenomena from comets to dark matter. The past five decades have witnessed often fierce international rivalry in space, but also surprising military restraint. Now, with an increasing number of countries capable of harming U.S. space assets, experts and officials have renewed a long-standing debate over the best route to space security. Some argue that space defenses will be needed to protect critical military and civilian satellites. Others argue that space should be a "sanctuary" from deployed weapons and military conflict, particularly given the worsening threat posed by orbital space debris. Moltz puts this debate into historical context by explaining the main trends in military space developments since Sputnik, their underlying causes, and the factors that are likely to influence their future course. This new edition provides analysis of the Obama administration's space policy and the rise of new actors, including China, India, and Iran. His conclusion offers a unique perspective on the mutual risks militaries face in space and the need for all countries to commit to interdependent, environmentally focused space security.

Welcome to the world of miniature aviation, intergalactic style. It’s entertainment on the fly for the office, backyard, classroom (don’t get caught!), or anywhere there might be a party, featuring 12 Lilliputian-size models that create 63 planes altogether. From the Dynamo to the Alien Clipper, Cosmojet to the Spectre, these intergalactic flyers are vibrantly colored and gorgeously designed to resemble various spacecraft. Fold up the straight-shooting Star Quest and an Aerobot that’s part spaceship, part robot. Includes step-by-step folding instructions and tips on how to send each plane soaring at its full aerodynamic potential.

Scale Spacecraft Modelling

Its Story and How to Make a Flying Paper Model

Spacecraft Dynamics and Control

Karakuri

63 Mini Planes to Fold and Fly

The Art, Science, and Reality of Working in Space

A Bibliography with Indexes

Originally published: Tokyo: Shubunsha, 2007.

Spacecraft Dynamics and Control: The Embedded Model Control Approach provides a uniform and systematic way of approaching space engineering control problems from the standpoint of model-based control, using state-space equations as the key paradigm for simulation, design and implementation. The book introduces the Embedded Model Control methodology for the design and implementation of attitude and orbit control systems. The logic architecture is organized around the embedded model of the spacecraft and its surrounding environment. The model is compelled to include disturbance dynamics as a repository of the uncertainty that the control law must reject to meet attitude and orbit requirements within the uncertainty class. The source of the real-time uncertainty estimation/prediction is the model error signal, as it encodes the residual discrepancies between spacecraft measurements and model output. The embedded model and the uncertainty estimation feedback (noise estimator in the book) constitute the state predictor feeding the control law. Asymptotic pole placement (exploiting the asymptotes of closed-loop transfer functions) is the way to design and tune feedback loops around the embedded model (state predictor, control law, reference generator). The design versus the uncertainty class is driven by analytic stability and performance inequalities. The method is applied to several attitude and orbit control problems. The book begins with an extensive introduction to attitude geometry and algebra and ends with the core themes: state-space dynamics and Embedded Model Control. Fundamentals of orbit, attitude and environment dynamics are treated giving emphasis to state-space formulation, disturbance dynamics, state feedback and prediction, closed-loop stability. Sensors and actuators are treated giving emphasis to their dynamics and modelling of measurement errors. Numerical tables are included and their data employed for numerical simulations. Orbit and attitude control problems of the European GOCE mission are the inspiration of numerical exercises and simulations. The suite of the attitude control modes of a GOCE-like mission is designed and simulated around the so-called mission state predictor. Solved and unsolved exercises are included within the text - and not separated at the end of chapters - for better understanding, training and application. Simulated results and their graphical plots are developed through MATLAB/Simulink code.

A rich visual history of real and fictional space stations, illustrating pop culture's influence on the development of actual space stations and vice versa Space stations represent both the summit of space technology and, possibly, the future of humanity beyond Earth. Space Stations: The Art, Science, and Reality of Working in Space takes the reader deep into the heart of past, present, and future space stations, both real ones and those dreamed up in popular culture. This lavishly illustrated book explains the development of space stations from the earliest fictional visions through historical and current programs--including Skylab, Mir, and the International Space Station--and on to the dawning possibilities of large-scale space colonization. Engrossing narrative and striking images explore not only the spacecraft themselves but also how humans experience life aboard them, addressing everything from the development of efficient meal preparation methods to experiments in space-based botany. The book examines cutting-edge developments in government and commercial space stations, including NASA's Deep Space Habitats, the Russian Orbital Technologies Commercial Space Station, and China's Tiangong program. Throughout, Space Stations also charts the fascinating depiction of space stations in popular culture, whether in the form of children's toys, comic-book spacecraft, settings in science-fiction novels, or the backdrop to TV series and Hollywood movies. Space Stations is a beautiful and captivating history of the idea and the reality of the space station from the nineteenth century to the present day.

Models, Methods and Applications

Paper Rockets, Airplanes, Spaceships and More! [Origami eBook]

How to Make Mechanical Paper Models That Move

The Embedded Model Control Approach

The Space Shuttle

Technology for Large Space Systems

Strategic Restraint and the Pursuit of National Interests, Second Edition

Rockets and spacecraft were among the very first models made as commercial kits, and although never as numerous as aircraft, ships or road vehicles, the many kits produced over the years provide a fascinating niche in the world of model-making. The build-ups in this book reflect the current situation with spacecraft modelling; although there are still a number of conventional all-plastic kits available, there is also a growing range that uses more specialist materials, especially resins. The book explains the various techniques required when dealing with these non-traditional materials. Scale Spacecraft Modelling also covers scratch building and adaptation, the techniques needed to make those pristine models really dirty to match the ones you see in the movies, and the design and construction of realist dioramas and settings.

Online version: Technical papers portion of the SAE Digital Library references thousands of SAE Technical Papers covering the latest advances and research in all areas of mobility engineering including ground vehicle, aerospace, off-highway, and manufacturing technology. Sample coverage includes fuels and lubricants, emissons, electronics, brakes, restraint systems, noise, engines, materials, lighting, and more. Your SAE service includes detailed summaries, complete documents in PDF, plus document storage and maintenance

Presents projects, instructions, and color templates for fourteen paper robots.

Future Wings

The Paper Spacecraft Mission Manual

Glenn the Astronaut

How to Create and Build Unique and Exciting Model Rockets That Work!

100s of Mecha Model Designs on CD to Print Out and Assemble

Science Experiments Index for Young People

Scientific and Technical Aerospace Reports

A collection of original paper spacecraft designs, among them replicas of the latest spaceships and rockets, as well as some creative new designs. Features step-by-step instructions and simple diagrams, together with tips on decorating finished models.

An introduction to the space shuttle -- its history, the construction of its major systems, a typical mission, and what it means in terms of future space travel. Includes instructions for making a simple flying paper model of the spacecraft.

An index to science experiments and activities in almost 700 books, with descriptions, location codes, and cross-indexing.

The First Visit to an Ice Dwarf and the Kuiper Belt

The Step-by-step Paper Spacecraft Book

Paper Captain

Supplement

A Teacher's Guide with Activities

Predictive Modeling of Dynamic Processes

A Tribute to Professor Klaus Thoma

Features lavishly detailed, die-cut models of float-worthy paper boats inspired by such legendary vessels as the British H.M.S. Victory, the U.S.S. Monitor, and the German U-505, in a volume complemented by historical information. Original. 17,500 first printing.

These colorful, easily assembled spaceships require neither rocket fuel nor dilithium crystals ? just scissors, tape, and paper clips. Best of all, they really fly! Simple instructions and diagrams with numbered folds assure aerodynamic perfection. Sixteen futuristic models include the Star Shuttle, Lunar Freighter, and Orbital Zoom Glider. 16 color illustrations.

This four-volume set (CCIS 643, 644, 645, 646) constitutes the refereed proceedings of the 16th Asia Simulation Conference and the First Autumn Simulation Multi-Conference, AsiaSim / SCS AutumnSim 2016, held in Beijing, China, in October 2016. The 265 revised full papers presented were carefully reviewed and selected from 651 submissions. The papers in this first volume of the set are organized in topical sections on modeling and simulation theory and methodology; model engineering for system of systems; high performance computing and simulation; modeling and simulation for smart city.

A Collection of Origami Vehicles

Paper Model Kit

Large Space Structures & Systems in the Space Station Era

Air and Space Origami Ebook

The Politics of Space Security

Cut and Fold Paper Spaceships That Fly

NASA EP.

Mars Observer SpacecraftPaper Model KitMars Observer SpacecraftPaper Model KitPaper AstronautThe Paper Spacecraft Mission ManualRizzoli Publications

From the creator of Paper Pilot and Paper Captain, Paper Astronaut is a beautifully illustrated voyage into deep space, combining stunning archival photographs and colorful technical drawings with expertly designed die-cut models that readers can actually cut out and assemble. Published for the fortieth anniversary of the moon landing in 1969—and introduced by Buzz Aldrin—the book includes histories of twenty feats of aeronautic engineering drawn from half a century of space programs around the world, from Apollo 11 to the Soviet space station Mir and China’s Shenzou 7 capsule, and featuring the most iconic designs of fifty years of space exploration. Each spacecraft is accompanied by amazing stories, fascinating facts and statistics about the universe around them, and mesmerizing photographs of the vessels in space. Sixty-four pages of the book are devoted to finely crafted die-cut paper models of the featured rockets, presented with clear instructions for assembly and helpful advice for deploying your galactic fleet.

Space Racers contains everything you need to press out and make your own paper rocket models. From the rocket that made the first manned space flight, Vostok K, to the future of space travel, the Skylon space plane. Use the easy to use, step-by-step instructions to build eight historically accurate rockets and two imaginary rockets, which are left blank for your own designs. A separate booklet introduces you to the exhilarating world of rocket science and space exploration, and includes fun and detailed fact files for each rocket. This is an exciting kit for space enthusiasts aged eight to adult.

16th Asia Simulation Conference and SCS Autumn Simulation Multi-Conference, AsiaSim/SCS AutumnSim 2016, Beijing, China, October 8-11, 2016, Proceedings, Part I

36th Aerospace Sciences Meeting & Exhibit

Exercises in Astronomy

Space Racers

International Aerospace Abstracts

Make Your Own Paper Rockets

This modern presentation guides readers through the theory and practice of satellite orbit prediction and determination. Starting from the basic principles of orbital mechanics, it covers elaborate force models as well as precise methods of satellite tracking code in C++ and relevant data files for applications. The result is a powerful and unique spaceflight dynamics library, which allows users to easily create software extensions. An extensive collection of frequently updated Internet resources is provided through Propel young astronauts to worlds of fun with this exciting sticker paper doll collection. One astronaut doll, 13 terrific, reusable stickers, including four space suits, models of a Gemini spacecraft, space shuttle, more.

Create a collection of vehicles through the art of origami. Over one thousand illustrations will guide you in folding these works of art for yourself. This is one of those rare collections that is geared towards the advanced origami folder and is sure to provide chapters to aid you with paper choice and preparation. Each model is prefaced with some insight into the creative process. A wide range of subjects are tackled, including the whimsical Catching a Plane and Prehistoric Car. Everything from two wheelers to farthing to the modern Satellite.

Mars Observer Spacecraft

Space Stations

Revised and Extended Edition of "Practical Work in Elementary Astronomy" by M.G.J. Minnaert

Make Your Own Press-Out Spaceships

Paper in Motion

January 12-15, 1998, Reno, NV.

Mission To Pluto

In July of 2015 a robotic spacecraft reached Pluto after a nine-and-half-year journey. New Horizons is the first spacecraft mission to Pluto and revealed its five moons as never before seen. Images from the mission show a reddish surface covered in ice-water mountains, moving glaciers, and hints of possible ice volcanoes and an underground ocean. Pluto is geologically alive and changing! This addition to the Scientists in the Field series goes where no person or spacecraft has ever gone before. Follow along with the team of scientists as they build New Horizons, fly it across the solar system, and make new discoveries about a world three billion miles away.

NASA Scientific and Technical Reports and Publications for 1969 - A Selected Listing

Model Rocket Design and Construction

U.S. Government Research Reports
Theory, Methodology, Tools and Applications for Modeling and Simulation of Complex Systems
With 4 Sticker Uniforms
Space-based Astronomy
NASA's Great Observatories