



Design • Analysis • Research

Company Profile

1. Introduction

Design, Analysis and Research Corporation (DARcorporation) was founded by Dr. Jan Roskam and Dr. Willem A.J. Anemaat in 1991 with the following objectives:

- Develop, market and support the Advanced Aircraft Analysis (AAA) computer program. This user-friendly program began under UNIX and the X Window System environment on workstations and has evolved to MS Windows on PCs.
- Develop, market and support AeroPack an aeronautical engineering specific software add-on to Punch Software Computer Aided Drafting programs Shark and Shark FX.
- Provide engineering consulting services in the general area of aircraft configuration design and analysis, stability and control and estimation of airplane models for flight simulators and aircraft technical analysis. Other services include Wind Tunnel and Water Tunnel testing and analysis.
- Design and analyze wind turbines. Wind tunnel testing of wind turbines.
- Detailed design of aircraft.
- Construction of proof-of-concept articles.
- Structural and functional testing of components.
- Publish, market and distribute the Airplane Design, Airplane Aerodynamics and Performance and Airplane Flight Dynamics textbooks written by Dr. Jan Roskam and Dr. C.T. Lan.
- Market and distribute aeronautical engineering textbooks for McGraw-Hill, Wiley, Springer, Cambridge, Dover Publications, College Press, Adaso/Adastra, Raymer and Schiffer. Currently DARcorporation offers over 150 different aeronautical engineering books.
- Edit and publish new books written by Dr. Jan Roskam and Dr. Willem Anemaat.

2. Business Organization

The objectives are performed with the following business organization:

- Dr. Willem A.J. Anemaat manages everyday activities at DARcorporation which include: programming for the AAA program, customer support and sales of all software, engineering support for consulting contracts, personnel and budgeting.
- Dr. Jan Roskam offers technical guidance for consulting contracts and features to be implemented in AAA.

DARcorporation currently has 11 employees: 9 engineers with an aeronautical/mechanical engineering background, one marketing/office manager and one administrative assistant. Other employees are hired as needed for the following functions: engineering consulting work, testing of the AAA and CAD programs, and everyday office duties. Several consultants are regularly hired for consulting projects involving structural analysis and miscellaneous stability and control work.

Research and development experience at DARcorporation is extensive. A majority of the research and development at DARcorporation has been carried out for the AAA program. Development of AAA and G.A.-CAD required extensive research into methods used for calculations, user interfaces, market desires and hardware required to run the program.

DARcorporation is located in a 4,000 ft² office facility and 3,000 ft² shop facility (DARworks) in west Lawrence, Kansas. DARcorporation has an extensive library with airplane design and analysis books and reports. This library consists of over 1,000 volumes including USAF, NASA and ESDU reports. DARcorporation has access to the library of The University of Kansas and experimental facilities at The University of Kansas and Wichita State University.

DARcorporation is a member of the Kansas UAV Consortium. Formed by Dr. Richard Colgren (University of Kansas) in 2004, the Consortium includes membership from 11 private companies (Akro Fireguard, AST, DARcorporation, eFishAntSea, Flitech, GUTWorks, LLC, Honeywell, J2M2, KalScott, Kohlman Systems Research, Thunder Mustang), 3 universities (Kansas State University, Pittsburg State University, University of Kansas) and 4 government entities (FAA, Kansas Space Grant Consortium, Office of Senator Pat Roberts, U. S. Air Force). This consortium was formed to exploit emerging UAV economic development activities for Kansas and the U.S., and to enable cost-effective technology transitions across industry, government and academic teams.

3. Consulting Services

DARcorporation provides consulting services in the general area of aircraft configuration design and analysis, stability and control and estimation of airplane models for flight simulators and aircraft technical analysis. Other services include Wind Tunnel and Water Tunnel testing and analysis. Design and analysis of wind turbines, wind tunnel testing of wind turbines and prototype manufacturing.

DARcorporation personnel have experience with several software packages for airplane analysis and design. Shark FX-AeroPack a computer aided design tool for PC's is extensively used for drafting new designs and modifications. Unigraphics NX and SolidEdge are used for detailed design. Blue Ridge Numerics CFDesign, Fluent and VORSTAB are used for detailed aerodynamic analysis. NASTRAN is used for structural analysis. FAR23 Loads is used for loads prediction on G.A. airplanes. DARcorporation has experience with propeller models and software from Hartzell and Hamilton Standard. An extensive library with NACA, NASA and ESDU publications is available including data from several propeller manufacturers, engine manufacturers (including Pratt & Whitney) and airplane manufacturers.

DARcorporation uses existing airplanes to verify analysis and design methods for new airplanes. An extensive database of existing airplanes is available for comparative analysis.

Projects include:

- Modification of the horizontal tail of a commuter aircraft for Fairchild Aircraft.
Analysis of stick forces, longitudinal stability and control and verification with airworthiness standards. Analysis included ground effects, flap effects and propeller slipstream effects.
- Analysis of the effects of a refueling system on the KC-135R for AEL Industries (now BAE Systems).
Analysis of the stability and control including stick forces and gradients for a KC-135R with a fuselage mounted external refueling system.
- Water tunnel tests on a modified KC-135R for AEL Industries (now BAE Systems).
Analysis of flow effects on the horizontal tail for a modified KC-135R with a fuselage mounted external refueling system.
- Water tunnel tests on a Boeing 707-320B for AEL Industries (now BAE Systems).
Analysis of flow fields under the fuselage of a Boeing 707 for locating the best position of a refueling system.
- Stability and control derivatives for the Beech Bonanza for a MDM Systems, Inc. a simulator company.

All stability and control derivatives are determined for several flight conditions to create a flight simulator model.

- Stability and lift analysis of a 6-seater General Aviation aircraft for Hutterer Engineering.
Verification of a new design of a 6 passenger propeller airplane. Analysis included vertical tail sizing and wing sizing.
- Investigation of forward maneuver area air-delivery systems for the US Navy, US Marine Corps.
Creation of a simulation program for air dropping payload. Preliminary design of new airplanes to be used for delivering payload in war-zones.
- Derivation of a system of equations of motion for Precision Training Software, a simulator company. Mathematical equations are derived for a training simulator.
- Design verification of several fire-fighting airplanes for Air Tractor.
Preliminary design verification and performance analysis on a family of small airplanes.
- Design verification of a single engine airplane for Air Tractor.
Design verification and performance analysis on a family of small airplanes. Analysis of competitor airplanes and comparison with new designs. Stability and control verification, including control forces.
- New design of a two person kit airplane.
Preliminary design of two airplanes based on an existing kit airplane.
- NASA SBIR Phase II contract: development of G.A.-CAD: General Aviation Computer Aided Design. To revitalize the General Aviation industry, NASA Langley awarded DARcorporation a contract to design a preliminary design and analysis tool for PC's including structural design and drafting capability.
- Preliminary Design of a small freighter/passenger airplane for NEXUS.
- New design of an all composite two person kit airplane for DreamWings.
Design includes stability and control analysis for one airplane with three different engines.
- Design verification of a twin engine airplane for Air Tractor.
Analysis of competitor airplanes and comparison with new designs. Stability and control verification, including control forces.
- Design verification and stability and control analysis on the VisionAire Vantage business jet
- Stability and control derivatives for the Cessna Citation II for Alpha Systems, a simulator company. All stability and control derivatives are determined for several flight conditions to create a flight simulator model.
- Windtunnel tests and project management for a small business jet for VisionAire Corporation
- Water tunnel tests on a small business jet for VisionAire Corporation
- Complete loads analysis and control system design of a two-seat all composite ultralight/experimental airplane for DreamWings

- Simulation model of an Air Tractor 502B for SimCom.
- Design studies for Air Tractor on single-, twin- and three-engine airplanes
- Weight and moment of inertia prediction of the Cessna Caravan for Kohlman Systems Research
- Aerodynamic model and weight/moments of inertia of the Socata TBM 700 for SimCom
- Preliminary design of a two-seat single engine jet-trainer
- Preliminary design of a family of 4-6 seat twin-engine jets
- Preliminary sizing of a small business twin-engine jet for Safire
- Performance analysis of a single engine turboprop trainer
- Performance analysis and stability and control verification of a 7-seat single engine turboprop
- Aerodynamic model and weight/moments of inertia of the Piper Malibu Mirage for SimCom
- Aerodynamic model and weight/moments of inertia of the Piper Meridian for SimCom
- Loads analysis on a small cargo turboprop airplane
- Computer aided drafting work on a twin-engine propeller all-composite experimental airplane for DreamWings
- Development of techniques to interface CAD with CAM to manufacture plugs and molds for DreamWings
- Performance analysis on a small cargo turboprop airplane
- Loads analysis on the Valkyrie composite experimental airplane for DreamWings
- Structural design of the Valkyrie composite experimental airplane for DreamWings
- Control system design for the DeamWings Valkyrie
- Preliminary design and analysis on the Kelly Space and Technology Second Generation Reusable Launch Vehicle under the NASA NRA8-27 contract.
- Aerodynamic model and weight/moments of inertia of the Raytheon KingAir 350 for SimCom
- Aerodynamic model and weight/moments of inertia of the Bombardier CRJ for SimCom
- Design verification, aerodynamic, stability and control support for a small business jet for Safire Aircraft.
- Performance analysis of a water bomber for Air Tractor.
- Preliminary design of a supersonic business jet for OrthoAir.
- Performance analysis for a twin-engine turboprop freighter airplane.
- Weights and performance analysis of a tiltrotor concept
- Horizontal tail analysis for a 2-seat amphibious airplane
- Aerodynamic model and weight/moments of inertia of the Mitsubishi MU-2 for SimCom
- Wind tunnel test for Safire Aircraft Company
- Preliminary design of a 4-seat business jet
- Loads analysis for the Snow S-22

- Conceptual design of a single engine 4-seat G.A. airplane
- Preliminary design of a personal air vehicle capable of vertical take-off
- Preliminary design of a twin engine 6-seat G.A. airplane
- Weights sizing and performance sizing for a small amphibious personal airplane
- Wind tunnel test management for Safire Aircraft
- Ground test development and test management for a propeller propulsion system
- Aerodynamic performance of windmill blades for K. Wetzel & Company
- Firewall forward design of an ATP turboprop powered Vans RV-6A for Rivers Aeronautical
- Aerodynamic model and weight/moments of inertia of the Piper Saratoga for The University of Kansas.
- Aerodynamic model and weight/moments of inertia of the Piper Aztec for The University of Kansas.
- Equations of motion for the tilt-boom concept for Freewing Flight Technologies, Inc.
- Airfoil and wing aerodynamic analysis for Thomas International.
- CFD analysis of a small business jet.
- Design verification of a UAV concept.
- Preliminary design of a jet powered UAV concept
- Preliminary design of a Sport Pilot class airplane for Composicraft.
- UAV database development for Thomas International.
- Patent support work for a VTOL concept.
- Parametric windmill blade design in Unigraphics for Wetzel Engineering
- Preliminary design verification of a 4-seat G.A. airplane.
- Speedbrake design for a small business jet.
- Competitor analysis for a small business jet manufacturer.
- VTOL Propulsion ground test.
- CAD drawings of the wing ribs of the WWII Mitsubishi Zero.
- CAD for a roadable aircraft concept.
- Windtunnel test and CFD work for a new propeller/windmill concept.
- Preliminary design of a transonic business jet.
- Design and wind tunnel testing of a wind measuring device.
- Test support for a VTOL UAV.
- Preliminary design of a roadable aircraft for Aerocar.
- CAD drawings for the horizontal tail of the WWII Mitsubishi Zero.
- Control system design for a VTOL UAV.
- Propeller/Rotor design for Freewing Flight Technologies, Inc.
- Preliminary design of the Milner AirCar.
- Design evaluation of the Hensley Wolf twin propeller pusher 4-seater.

- Preliminary design of a 4-seat G.A. Airplane.
- CFD analysis for the Milner AirCar.
- Wind tunnel test program management for a small business jet.
- Design review for the Nexaer LS1
- Aerodynamic design and wind tunnel testing of a flying toy
- Wind Tunnel data analysis for a small business jet
- Design method development and design of a low-speed wind turbine for Hi-Q Products
- Preliminary design of a twin pusher G.A. airplane
- Initial structural analysis for Milner AirCar
- Design review for D-Star Engineering
- Design review for Finite Engineering
- Design review for Trolltune Corporation
- Design of a VTOL UAV for Freewing
- CFD Analysis on a wind mill rotor for Dynastrosi Laboratories
- Wind Tunnel program management for Piper Aircraft Corporation on the PiperJet.
- Design review on a UAV
- Design review for an LSA
- Wind tunnel testing on a vertical axis wind mill for Dynastrosi Laboratories
- Wind tunnel testing of several low speed horizontal axis wind turbines for Hi-Q products
- CFD analysis on a vertical axis wind mill
- Wind Mill performance analysis for Wind Energy Corporation
- Wind Mill wind tunnel testing for Wind Energy Corporation
- Wind Mill structural analysis for Wind Energy Corporation
- CFD analysis for Milner AirCar
- Design and wind tunnel testing of several low speed wind mills for Hi-Q Products
- SkyDrill Vertical Axis wind turbine aerodynamic design, wind tunnel testing and structural design
- Design of a scaled Supermarine Spitfire
- Manufacturing of the Hi-Q #61 1KW Wind Mill
- Installation and full scale Testing of the Hi-Q #61 Wind Mill
- SkyDrill Vertical Axis wind turbine detailed design for manufacturing
- CFD analysis of a bird deflector system for jet engines
- Air Tractor Stability and Control Analysis
- The University of Kansas/NASA DC-8 Performance Effects of Antenna installations
- 100 KW Horizontal Axis Wind Mill Aerodynamic Design
- SkyDrill: Wind Mill System Dynamics Structural Analysis
- Samson Motorworks: Switchblade Preliminary Design Analysis

- Samson Motorworks: Switchblade wing mechanism Design
- Samson Motorworks: Display Mockup Construction
- Performance Sizing of a Supermarine Spitfire

4. Key Personnel

Information on education, experience, and publications on DARcorporation key personnel are as follows:

Dr. Jan Roskam

Dr. Roskam retired as the Dean E. Ackers Distinguished Professor in Aerospace Engineering at The University of Kansas in Lawrence, Kansas in 2003. He is the author of a two-volume text called: *Airplane Flight Dynamics and Automatic Flight Controls* and an eight volume text called: *Airplane Design*. He has co-authored (with Dr. C. Edward Lan) a text called: *Airplane Aerodynamics and Performance*. These texts are used by more than fifty universities and by aerospace companies in the USA and abroad. In addition he has authored or co-authored over 150 papers, articles and technical reports.

Dr. Roskam is a Fellow in the AIAA (American Institute of Aeronautics and Astronautics) and a Fellow in the SAE (Society of Automotive Engineers) as well as an Associate Fellow in the Royal Aeronautical Society (England).

Before joining K.U. in 1967, Dr. Roskam had twelve years of experience working for Aviolanda Aircraft Co. (in The Netherlands), for Cessna Aircraft Co. (in Wichita, Kansas) and for The Boeing Company (in Wichita, Kansas and in Seattle, Washington). He received his MSAE (1954) from the Delft University of Technology (The Netherlands) and his Ph.D. in Aeronautics and Astronautics (1965) from The University of Washington (Seattle).

Before founding DARcorporation, Dr. Roskam was a consultant to companies in the USA and in Europe and also served as a consultant to NASA, USAF and DARPA. Dr. Roskam has been actively involved in the design and development of the following aircraft: Aviolanda AT-21, Cessna T-37, Boeing TFX design, Boeing SST design, Learjet Models 25, 35/36 and 55, Cessna Citation I, SIAI Marchetti S-211 and Piaggio 180-Avanti.

Jan Roskam managed the low speed and transonic speed windtunnel programs for the SIAI Marchetti S-211 and Piaggio 180-Avanti.

In 1991 Jan Roskam established DARcorporation and functioned as president until 2004. He supervises the technical aspects of all consulting work. Dr. Roskam approves all consulting work and is involved with all engineering meetings for consulting projects.

Professional Experience:

1954-1957 Assistant Chief Designer, Aviolanda Aircraft Company, The Netherlands

1957-1959 Preliminary Design Engineer and Senior Aerodynamics Engineer, Cessna Aircraft Company, Wichita, KS

1959-1967 Senior Group Engineer, The Boeing Company, Wichita, KS and Seattle, WA

1967-1974 Professor of Aerospace Engineering, The University of Kansas, Lawrence, KS

1967-1984 Director, Flight Research Laboratory, Center for Research Inc., Lawrence, KS

1972-1976 Chairman, Department of Aerospace Engineering, The University of Kansas, Lawrence, KS

1972-2001 President, Roskam Aviation and Engineering Corporation, Lawrence, KS

1974-2003 Ackers Distinguished Professor of Aerospace Engineering, The University of Kansas, Lawrence, KS

1976-1985 Member of various Advisory Committees to NASA

1985-1988 Member, Aerospace Engineering Board, National Research Council

1987-1993 Member, USAF X-29 Future Applications Committee

1990-1993 Member, Laboratory Advisory Group, Flight Dynamics Laboratory, WPAFB, Dayton, OH

1991-2004 President, Design, Analysis and Research Corporation (DAR), Lawrence, KS

Principal Consulting Work:

The Boeing Company, Seattle, WA and Wichita, KS

Gates Learjet Corporation, Wichita, KS

Beech Aircraft Corporation, Wichita, KS

Cessna Aircraft Company, Wichita, KS

Bell Helicopter Company, Fort Worth, TX

Teledyne Brown Engineering, Huntsville, AL

SRI International, Stanford, CA

Piper Aircraft Corporation, Vero Beach, FL

SIAl-Marchetti S.p.A., Sesto Calende, Italy

Rinaldo Piaggio S.p.A., Finale Ligure, Italy
Grumman Corporation, Bethpage, NY
Smith Aircraft Corporation, Bay St.Louis, MS
Airbus Industrie, Blagnac, France

Honors:

Tau Beta Pi, Sigma Gamma Tau, Sigma Xi, Omicron Delta Kappa
Gould Award for excellence in undergraduate teaching: 1969 and 1996
SAE Forest McFarland Award: 1983
AIAA General Aviation Award: 1986
University of Kansas Higuchi Award: 1986
AIAA John Leland Atwood Award: 1987
Fellow, AIAA: 1989
Fellow, SAE: 1990
SAE Distinguished Speaker Award: 1990
AIAA Distinguished Lecturer: 1989-1990
University of Kansas Ned Fleming Teaching Award
Outstanding Aerospace Engineering Educator by the aerospace engineering seniors in 1990, 1992, 1996, 1998 and 2000
Governor of Kansas General Aviation Award for 1993
Design Awards for leading a team of 30 students and faculty from KU, WSU and KState to a first place win in the first NASA/FAA General Aviation Aircraft Design Competition of 1995, 1997 and 1998.

Short Courses:

Taught through KU Division of Continuing Education: Dr. Roskam is active in teaching short courses on the subjects of Airplane Design, Airplane Performance, and Airplane Stability and Control through the KU Division of Continuing Education. These courses were taught in the following countries: USA, France, England, Germany, Singapore, Canada and Australia.

Taught through NSF: A two-week short course, sponsored by NSF (National Science Foundation) on Airplane Design for a group of twenty US university professors at KU from

Airplane Design at KU, in 1990, July 13-24 (2 weeks), attendees: 19 university professors. In 1991 he did the same course for a group of 20 university professors (July 22 - August 2, 1991).

Dr. Roskam has taught over 150 short courses.

Service:

1. Expert Member, Search Committee for a Professorship in Aeronautics at the Royal Institute of Technology (KTH), Stockholm, Sweden.
2. Served as committee member on the PhD committee for Mr. J. Middel of Delft University of Technology, The Netherlands at the request of Professor E. Torenbeek, chairman of that committee. Was invited and accepted to review the dissertation and to attend its public defense in Delft, The Netherlands on April 13, 1992
3. U.S. Editor of the Aircraft Design Journal, a quarterly journal published by Elsevier Publishing, United Kingdom. First issue published in March 1998. This was a three-year appointment. Prof. E. Torenbeek of Delft University of Technology in The Netherlands is the European Editor.
4. Member, ETAB (Emerging Technologies Applications Board) for the SAE (Society of Automotive Engineers) 1993-1995.
5. Member, AIAA (American Institute of Aeronautics and Astronautics) Aircraft Design Technical Committee (1982-1994)
6. Member, SAE General Aviation Aircraft Committee for the organization of the 1997 SAE Business Aircraft Meeting, April 29-May 3, 1997 in Wichita, Kansas.
7. Organizer of the Session on Aircraft Design Methodology at the SAE Business Aircraft Meeting, May 17-19, Wichita, Kansas, 1993
8. AIAA Distinguished Lecturer, 1989 - 1991
9. Member, Fellow-Peer-Review committee for AIAA (1990-2000)
10. Member, X-29 Applications Committee, USAF (1991)
11. Member of the USAF/DARPA X-29 Future Applications Committee (1992)

Community Service:

Member, Board of Trustees, Ottawa Public Education Trust (1990 through 1994).

Dr. Willem A.J Anemaat

Dr. Anemaat holds an MSAE degree (1987) from the Delft University of Technology (D.U.T.) in The Netherlands. He received his Ph.D. degree in Aerospace Engineering in 2007 from The University of Kansas.

From 1984-1987 he worked as a research assistant on "CAPPA", a computer aided performance prediction system for civil transport aircraft design. He also worked on the "ADAS", Aircraft Design and Analysis System at Delft University of Technology. He developed a computer aided preliminary design methodology for horizontal tail planes and canards.

From 1987-1988 Dr. Anemaat worked on a computer aided engine design system, also at D.U.T. During that same time period he worked as a partner at Test Force Engineering of The Netherlands on selection criteria for aerial advertising aircraft and he performed drag and performance analyses for aircraft towing advertising banners.

Dr. Anemaat served from 1988-1990 as a special research assistant to Dr. Roskam at The University of Kansas, developing the Advanced Aircraft Analysis (AAA) computer program. Since 1991 he has held the position of Chief Engineer at DARcorporation and Vice President since 1996. His primary duties are the supervision of all DARcorporation activities and day-to-day guidance of all programming, support and sales activities for the AAA computer program, G.A.-CAD development and consulting projects. In 2004 Dr. Anemaat became President of DARcorporation.

In 1993 Dr. Anemaat led a team of DARcorporation engineers to perform analysis and redesign work of the flight control system for a commuter airplane.

In 1994 Dr. Anemaat served as the Principal Investigator on a NASA SBIR Phase I research project to develop a PC-based user-friendly General Aviation aircraft design and analysis system. Mr. Anemaat performed water tunnel tests on a modified KC-135R airplane in 1994 and led a team of DARcorporation engineers to perform analysis on a modified refueling system for the KC-135R. In 1995 Dr. Anemaat served as the project manager on a U.S. Marine Corps study on aerial delivery of cargo systems, responsible for financing and scheduling. Also in 1995, Dr. Anemaat was the project manager on a water tunnel study on a Boeing 707-320B model.

Dr. Anemaat has been the project manager on all DAR wind tunnel tests for VisionAire Aircraft, Safire Aircraft, Brunet Aircraft, Piper Aircraft and several wind mill projects. His tasks involved

setting up the test plan, arranging wind tunnels, model manufacturing supervision, model verification, arranging for test engineers and data analysis.

Dr. Anemaat is proficient in the following computer languages and operating systems: ALGOL, FORTRAN, Pascal, Prolog, C, Borland Delphi and UNIX on all major vendors' workstations, Microsoft Windows.

Dr. Anemaat was the Principal Investigator from 1994-1997 on a NASA SBIR Phase II contract to develop G.A.-CAD, a personal computer based design system for General Aviation aircraft.

Dr. Anemaat served as project manager on all consulting projects performed by DARcorporation. Dr. Anemaat handles all scheduling, budgeting and progress reports for these projects. Dr. Anemaat is proficient in Microsoft Project and uses tracking tools in Microsoft Excel and time-tracking in M.Y.O.B.

Dr. Anemaat is the software architect for the Advanced Aircraft Analysis software and schedules all development, testing and releases of the software.

Dr. Anemaat is currently member of the SAE WATC (Wichita Aviation Technology Conference and Exposition) Committee. In 2000 he was the session chair of the CAD/CAM session. He was the program technical chair for the 2008 SAE WATC and will be the program overall chair for the 2010 WATC. He is a member of the AIAA Aircraft Design Technical Committee. He is also a regular reviewer of airplane design related articles for the AIAA Journal of Aircraft and is a judge for AIAA Design competitions. Dr. Anemaat was member of the AIAA Journal of Aircraft Editorial Advisory Board from 2004 until 2009. In 2009 Dr. Anemaat became an Associate Editor for the AIAA Journal of Aircraft dealing with Aircraft Design topics. Dr. Anemaat is an AIAA Associate Fellow. In 2005 Dr. Anemaat became member of the Kansas UAV Consortium Executive Board.

Publications list:

- W. A. Anemaat; Computer Aided Performance Prediction for Airplane Design Version 2.00. June 1986, Report LR-488, Delft University of Technology, Faculty of Aerospace Engineering.
- J. Roskam, S. Malaek, W. Anemaat, D. Gerren; Advanced Aircraft Analysis: A User Friendly Approach to Preliminary Design and Analysis. AIAA Techfest XVI Nov. 2-4, 1989.
- J. Roskam, S.M. Malaek and W. Anemaat; AAA (Advanced Aircraft Analysis) : A User-friendly Approach to Preliminary Aircraft Design, ICAS-90-2.10.2, ICAS, Sept. 1990.

- J. Roskam and W. Anemaat; An Easy Way to Analyze Longitudinal and Lateral-Directional Trim Problems with AEO and OEI; Paper presented at the SAE Aerospace Atlantic Meeting, Dayton Ohio, April 1994.
- W.A. Anemaat, T. Kofford, K. Schueler, S. Smith, J. Locke, J. Roskam; A Personal Computer Aided Design System for General Aviation Aircraft Configurations. DAR Corporation, Report DAR94-013, NASA SBIR 93-1 Phase I Research Study. Contract No. NAS1-20172.
- W.A. Anemaat; G.A.-CAD, A Personal Computer Aided Design System for General Aviation Aircraft Configurations. SAE Paper 951158, presented at the SAE General, Corporate & Regional Aviation Meeting & Exposition Wichita, Kansas, May 1995.
- J. Roskam, W.A. Anemaat; General Aviation Aircraft Design Methodology in a PC Environment. SAE Paper 965520, presented at the 1996 World Aviation Congress, October 21-24, 1996, Los Angeles, CA.
- W.A. Anemaat, K.L. Schueler, C.T. Kofford; General Aviation Airplane Design Tools for PC's. SAE Paper 971473, presented at the SAE General, Corporate & Regional Aviation Meeting & Exposition Wichita, Kansas, April 1997.
- J. Locke, K.L. Schueler, W.A. Anemaat; General Aviation Preliminary Structural Design in a PC Environment. SAE Paper 971501, presented at the SAE General, Corporate & Regional Aviation Meeting & Exposition Wichita, Kansas, April 1997.
- Paulo C. Greco Jr., William Anemaat, Chris Hardin, and Kurt Zimmerman; Effect of wing sweep direction on suckdown for a hovering STOVL model. AIAA Paper 97-2315 presented at the AIAA Applied Aerodynamics Conference, 15th, Atlanta, GA, June 23-25, 1997
- J. Roskam, W.A. Anemaat; Undergraduate Flight Dynamics Education in a PC Software Environment. AIAA Paper AIAA-97-3572, presented at the 1997 GNC, AFM, and MST Conference and Exhibit New Orleans, Louisiana, August 1997.
- W.A. Anemaat, K.L. Schueler; Airplane Configuration Layout Design Using Object-Oriented Methods. SAE Paper 975510 presented at the 1997 World Aviation Congress, October 14-16, 1997, Anaheim, CA.
- W.A. Anemaat; AGDA: Airplane Geometry Design Assistant. SAE Paper 985508 presented at the 1998 World Aviation Congress, September 28-30, 1998, Anaheim, CA.
- J.P. Pegram, W.A. Anemaat; Preliminary Estimation of Airplane Moments of Inertia using CAD Solid Modeling. SAE Paper 2000-01-1700 presented at the SAE General Aviation Technology Conference and Exposition, May 9-11, 2000, Wichita, KS
- W.A. Anemaat, B. Kaushik; Minimizing Center of Gravity Range in Airplane Preliminary Design Using Advanced Aircraft Analysis. SAE Paper 2006-01-2400 presented at the SAE General Aviation Technology Conference and Exposition, August 29-30, 2006, Wichita, KS

- W.A. Anemaat, DARcorporation; R.D. Hale, Univ. of Kansas; N. Ramabadran, TechnoSoft Inc. A Knowledge-Based Design Framework for Aircraft Conceptual and Preliminary Design. SAE Paper 2006-01-2403 presented at the SAE General Aviation Technology Conference and Exposition, August 29-30, 2006, Wichita, KS
- W.A. Anemaat, B. Kaushik, K. Wiedenmann; Preliminary Design of a Tandem Seater Light Sport Airplane. SAE Paper 2006-01-2394 presented at the SAE General Aviation Technology Conference and Exposition, August 29-30, 2006, Wichita, KS
- W.A. Anemaat, DARcorporation; R.D. Hale, Univ. of Kansas; N. Ramabadran, TechnoSoft Inc.; AAARaven: Knowledge-Based Aircraft Conceptual and Preliminary Design. AIAA-2007-2291 presented at the 48th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, 23-26 April 2007, Honolulu, Hawaii
- W.A. Anemaat, K. Po, B. Kaushik; Aircraft Performance Prediction: Comparison of Classical Handbook Methods to Detailed Time Integration Computer-Aided Methods. SAE Paper 2008-01-2253 presented at the SAE Wichita Aviation Technology Congress and Exhibition, August 19-21, 2008, Wichita, KS
- W.A. Anemaat, K. Po, B. Kaushik; A Method to Predict Deep Stall for Preliminary Design. SAE Oral Only Presentation 08WATC-0065 presented at the SAE Wichita Aviation Technology Congress and Exhibition, August 19-21, 2008, Wichita, KS

Patents:

20070034001 - Wind gauges and wind gauge kits with John N. Hutson and Joshua Montgomery.