

Boris Stilman
RESUME

www.stilman-strategies.com

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CURRENT POSITIONS

Professor of Computer Science

Dept. of Comp. Science & Eng., University of Colorado Denver (UC Denver), Denver, CO, **USA**

Chairman & CEO

STILMAN Advanced Strategies (STILMAN), LLC, Denver, CO, **USA**.

RESEARCH INTERESTS

Artificial Intelligence (AI):

General: Search, Knowledge Representation, Reasoning, Games, Strategies, Concurrent Systems, Multiagent Systems, Accuracy and Complexity of AI Algorithms, Planning.

Specific: Linguistic Geometry (LG), Applications of LG to Defense Systems, Role of LG in Human Culture, Robotics, Scheduling, Manufacturing, Network Security, Computer Games.

Software Engineering:

Software Development Environments, Teamwork Support, Software Maintenance, Software Testing, High Assurance Systems, Software Re-engineering.

Formal Languages and Compilers:

Attribute Languages and Grammars, Controlled Grammars with applications to LG, Grammars' Accuracy and Efficiency, Integrated Language and CASE Environments.

EDUCATION

1984

Ph. D. in *Computer Science* from National Research Inst. for Electrical Engineering, Moscow, **USSR**.

Ph. D. in *Electrical Engineering* from National Research Inst. for Electrical Engineering, Moscow, **USSR**.

1972

M. S. in *Mathematics* from Moscow State University (Diploma with Honors), Moscow, **USSR**.

PROFESSIONAL EXPERIENCE

1994 - to date

Professor of Computer Science (tenured).

Department of Computer Science & Engineering, UC Denver, Denver, CO, **USA**.

1991 - 1994

Associate Professor of Computer Science.

Department of Computer Science & Engineering, UC Denver, Denver, CO, **USA**.

1990 - 1991

Visiting Professor

School of Computer Science, McGill University, Montreal, **Canada**.

1988 - 1990

Chief of Department for Software Design

Principal Software Designer/Leading Scientist

Computer Tech. Division, National Research Geological Inst. for Oil Development, Moscow, **USSR**.

1972 - 1988

Senior Scientist (Group Leader), (1985–1988).

Senior Scientist, (1975–1985).

Senior Engineer-Mathematician, (1972–1975).

Lecturer in Computer Science

Dept. for Complex Search Problems, National Research Inst. for Electrical Engineering, Moscow, **USSR**.

ADDITIONAL PROFESSIONAL EXPERIENCE

1999 - to date

Chairman & CEO

STILMAN Advanced Strategies (STILMAN), LLC, Denver, CO, **USA**.

1996 (summer)*Visiting Professor*Summer School on Linguistic Geometry, St. Petersburg University, St. Petersburg, **Russia**.**1995 (summer)***Visiting Professor*Satellite Control and Simulation Division, U.S. Air Force Phillips Laboratory, Kirtland Air Force Base, Albuquerque, NM, **USA**.**1985 - 1989***Local Division Chief; Professor of Computer Science*The USSR Academy of Sciences Temporary Research Group SCHOOL-1, Moscow, **USSR**.**1981 - 1985***Professor of Computer Science*The USSR Academy of Sciences Scientific Council on Complex Problem Cybernetics, Moscow, **USSR**.**PROJECTS LED****1990 - to date****LINGUISTIC GEOMETRY: THEORY AND APPLICATIONS**

Participants:

USA

Government:

DARPA (1999-), Army Force XXI Battle Command Brigade and Below (FBCB2, 2007-), Army Command Post of the Future System (CPOF, 2010-), Army Stryker Combat Vehicles Program (2010-), Digital Common Ground System – Army (DCGS-A, 2005-), Army Research Institute (ARI, 2005-), Space Missile Center (SMC, 2005-2007), Missile Defense Agency (MDA, 2002-), Naval Surface Warfare Center (NSWC, 2003-), Defense Threat Reduction Agency (DTRA, 2004), Army RDECOM CERDEC (2003-), Joint Forces Command (JFCOM, 2005-), Air Force Research Lab, Wright Patterson AFB (AFRL WP, 2001-), Air Force Research Lab, Rome, NY (AFRL Rome, 2001-), Sandia Nat'l Labs (1995-96), Air Force Phillips Lab (1995);

Industry:

STILMAN (1999-), General Dynamics (2010-), Alion Sci. and Tech. (2002-), The Boeing Company (2000-), Rockwell Sci. Center (1998-2002), Science Applications Int'l Corp. (SAIC, 2004-), NewVectors (2004-), Ball Aerospace (2003), Lockheed Martin (1994-96, 2002-), Northrop Grumman (2006-), Sparta (2005-2007);

Academia:

Cornell U., Ithaca, NY (1992-1995, 1999-2001), Wayne State U., Detroit, MI (1999-2001), U. of West Florida, FL (2005-), UC Denver, Denver, CO (1991-), U. of Denver, Denver, CO (1996-99).

UK

Dstl/Ministry of Defence (2002-), BAE SYSTEMS (2002-2006), Alenia Marconi Systems (2002-2006), Thales (2002-2006), FLAMES (2005-), SELEX GALILEO, a Finmeccanica company (2006-), VR-Forces (2009-);

Japan Fujitsu Defense Group (2001-2003)**Russia** St. Petersburg University (1995-97)**Canada** McGill University, Montreal (1990-91)**1988 - 1990****EXPERT SYSTEM FOR OIL DEVELOPMENT AND EXPLORATION**

Participants:

Nat'l Research Geological Inst. for Oil Development, The USSR Ministry of Geology, State Committee for Sci. and Tech. (all - Moscow, **USSR**).

1985 - 1989**FORESTALL EDUCATION PROJECT: TRAINING METHODS AND AI SOFTWARE DESIGN**

Participants:

The USSR Academy of Sciences Temporary Research Group SCHOOL-1 and 52 Moscow High Schools of Kuibishevsky District, Moscow, **USSR**.

1972 - 1996

PIONEER PROJECT:

- *AI SYSTEMS FOR CONTROL, PLANNING, PLAYING CHESS* (experimental base of future LG, 1972-1988)
- *HIERARCHY OF FORMAL GRAMMARS FOR SEARCH REDUCTION* (predecessor of LG, 1979-1988)
- *"PROGRAMMER'S WORKBENCH"* (computer-aided software engineering system, 1981-1996)

Participants:

Nat'l Research Inst. for Electr. Eng. (1972-1988), State Comm. for Sci. and Tech. (1972-1988), Nat'l Research Geological Inst. for Oil Development (1988-1990) (all-Moscow, **USSR**), UC Denver, Denver, CO, (1991-).

MAJOR PROFESSIONAL ACHIEVEMENTS, HONORS & AWARDS**1990 - 2010**

- NUMEROUS INVITED PRESENTATIONS in 18 COUNTRIES

2010

- US Army Battle Lab *"... favorably impressed. RAID gives a quick analysis of the enemy situation. You can look at the display and see potential enemy actions that you might not have thought about."* Assessment by Mission Command Battle Lab, Capabilities Development Integration Directorate (CDID), Army Battle Command Battle Lab (BCBL), Ft. Leavenworth, KS, Dec 7, 2010, **USA**.
- SELEX GALILEO **\$90K**, PD/PI, Two licenses for *LG-PACKAGE 3.7.0 (GST)*, with STILMAN, SELEX C2C (Concept to Capability Center), Sept 2010, Luton, **UK**.
- US Army SBIR CPP **\$575K** for 1 year, PD/PI, *SBIR Commercialization Pilot Program (CPP)*. Awarded by Panel of Directors of Army Program Executive Offices. Further development and eventual deployment of *LG-RAID* for Stryker, FBCB2, CPOF and DCGS-A Programs of Record, with STILMAN, Program Management Office, Army SBIR, RD&E Command, Ft Belvoir, VA, July 2010, **USA**.
- US Army RDECOM **\$240K** for 1 year, PD/PI, Further development of *LG-RAID* technology for integration within *CPOF (Command Post of the Future) Battlefield Command System*, RDECOM (Research, Development and Engineering Command), Ft Monmouth, NJ, July 2010, **USA**.
- SELEX GALILEO **\$125K**, PD/PI, 1-Year Maintenance for *LG-PACKAGE 3.7.0*, with STILMAN, SELEX C2C (Concept to Capability Center), April 2010, Luton, **UK**.
- Stryker FoV *Dr. Jeffrey Mosley, Technical Lead for Embedded Training, Stryker FoV Program, endorses further development and integration of LG-RAID with Stryker FoV Training System. Meeting of TRADOC, Stryker FoV Program, FBCB2 Program and RAID Personnel, with STILMAN, STTC, Orlando, FL, Feb 2010, USA.*
- TRADOC *Col Dwayne Carman, TCM (TRADOC Capability Manager), endorses integration of LG RAID with CPOF (Command Post of the Future) Battlefield Command and Control System. Meeting of TCM for Platform Battle Command and Combat Identification, TRADOC (US Army Training and Doctrine Command), FBCB2 Program and RAID Personnel, with STILMAN, STTC, Orlando, FL, Feb 2010, USA.*
- US Army RDECOM *Maj. Gen. Nickolas Justice, RDECOM Commander, endorses further development of LG-RAID technology for expedited integration within various US Army systems, Program Management Review, with STILMAN, STTC (Simulation and Training Technology Center), Orlando, FL, Jan 2010, USA.*

2009

- US Army SBIR *SBIR Commercialization Pilot Program (CPP). Selected among 25 (out of 500) SBIR Phase II Army projects using the criteria of program success and US Army needs. Further development and deployment of LG-RAID for FBCB2 and DCGS-A Army programs, with STILMAN, Program Management Office, Army SBIR, RD&E Command, Ft Belvoir, VA, Dec 2009, USA.*
- US Army FBCB2 *PM FBCB2 (Force XXI Battle Command, Brigade and Below) endorses further development of LG-RAID technology for potential integration within FBCB2 Battlefield Command and Control System to all the currently deployed 70 thousand FBCB2 stations, with STILMAN, PEO Command, Control, and Communications Tactical, Ft Monmouth, NJ, Nov 2009, USA*

- US Army DCGS-A *PM DCGS-A (Digital Common Ground System - Army) endorses further development of LG-RAID technology for potential integration within DCGS-A Battlefield Intelligence System to all 43 existing brigade command posts by FY12, with STILMAN, RDECOM CERDEC, Intelligence and Information Warfare Directorate, Ft Monmouth, NJ, Oct 2009, USA.*
- DARPA & ARL *One-year extension (redirecting \$500K), PD/PI, LG-RAID Installation and Evaluation as Experimental Testbed on SIPRNET at ARL (for World Wide Access for US Armed Forces), Modification to STILMAN's SBIR Phase II project, Aug 2009, ARL (Army Research Lab), Aberdeen Proving Ground, MD, USA.*
- US Army DCGS-A **\$300K** for 0.5 year, PD/PI, *Integration of LG-RAID with DCGS-A*, with STILMAN, Primary DCGS-A Integrated Lab via CSP Technologies, June 2009, Ft Monmouth, NJ, USA.
- SELEX GALILEO **\$72K**, PD/PI, Targeted Upgrades for *LG-PACKAGE 3.0.0 – 3.3.0*, with STILMAN, SELEX C2C (Concept to Capability Center), June 2009, Luton, UK.
- Boeing **\$15K**, PD/PI, B1 Attack Planner Demo, with Applied Systems Intelligence and STILMAN, The Boeing Co., April 2009, Los Angeles, USA.
- SELEX GALILEO **\$125K**, PD/PI, 1-Year Maintenance for *LG-PACKAGE 3.0.0*, with STILMAN, SELEX C2C (Concept to Capability Center), Jan 2009, Luton, UK.

2008

- US Army SBIR Phase II **\$250K** for 2 years, PD/PI, *RAID Experimentation in Marines Environment*, Matching Funds in support of the DARPA/Marine Corps Supplement to STILMAN's SBIR Phase II project, CERDEC RDECOM, Ft Monmouth, NJ, Oct 2008, USA.
- US Army SBIR Phase II *Experimentation with SHADOW System; Testing LG-RAID predictions for actual US Army operations in Iraq*, with STILMAN, Ft Monmouth, NJ – US Army in Iraq, Aug 2008, USA.
- DARPA, US Army SBIR Phase II **\$250K** for 2 years, PD/PI, *LG-RAID Experimentation in Marines Environment*, Supplement to STILMAN's SBIR Phase II project, DARPA/Marine Corps, July 2008, USA
- US Army DCGS-A **\$300K** for 0.5 year, PD/PI, *LG-RAID Integration into DCGS-A Prediction Tab*, with STILMAN, Primary DCGS-A Integrated Laboratory via CSP Technologies, Apr 2008, Ft Monmouth, NJ, USA.
- US Army SBIR Phase II *Ongoing Experimentation with EMI, a customized Game Mobile Interface (GMI); Provides access to LG-RAID via Internet Browser for US military experts located around the world*, with STILMAN, March 2008 – to date, USA.
- TRADOC & DARPA *RAID system was recommended for transition to the Army Battle Command Domain at the Meeting between COL Mosher, TCM (TRADOC Capability Manager) for Platform Battle Com-d and Combat Identification, and DARPA RAID Personnel*, with STILMAN, Ft Huachuca, AZ, Jan 2008.
- SELEX GALILEO **\$625K**, PD/PI, Unlimited Term Experimentation & Demonstration License & 1-Year Maintenance for *LG-PACKAGE 3.0.0*, with STILMAN, SELEX C2C (Concept to Capability Center), Jan 2008, Luton, UK.

2007

- SELEX GALILEO "Realistic Experiments Modeling Conceptual British "Future Rapid Effects System" (FRES)", *Assessment of FRES employing LG-PACKAGE 2.0.0 for SELEX, Ltd.*, at STILMAN, Denver, Nov.–Dec. 2007, USA.
- US Army NEBC **"Integration of RAID with BCBL-L was impressive and the results are amazing"**, *Assessment of Integrated System RAID/BCPL-L during Air Assault Expeditionary Force (AAEF) Spiral D Experiment*, 1-week event, US Army, with STILMAN, Nov 2007, Ft Benning, GA, USA.
- SELEX (USA) **\$26K**, PD/PI, FRES Vignettes Work-Package based on *LG-PACKAGE 2.0.0*, SELEX, Inc., with STILMAN, Oct. 2007, Arlington, VA, USA.
- US Army SBIR Phase II "RAID/FBCB2 will improve US Army Battle Command Systems", *Assessment of Integrated System RAID/FBCB2 during Air Assault Expeditionary Force (AAEF) Spiral D Experiment*,

- 2-month event, US Army, with STILMAN, Oct-Nov 2007, Ft Benning, GA, **USA**.
- US Army SBIR Phase II **\$996K** for 2 years, PD/PI, *LG Based Predictive Technology for Battle Command Simulation & Training*, CERDEC RDECOM with Fast Track sponsored by DARPA, with STILMAN, June 2007, **USA**.
- DARPA "RAID/DCGS-A will improve US Army Intelligence, Surveillance & Reconnaissance (ISR) plans", *Assessment of RAID/DCGS-A during DARPA/Army Wargaming Experiment 5 (review panel of human experts)*, 3-week event, with STILMAN, Primary DCGS-A Integrated Laboratory, Feb 2007, Ft Monmouth – Ft Dix, NJ, **USA**.
- US Army NEBC **\$200K**, PD/PI, 1-year Experimentation & Demonstration License for a subset of *LG-PACKAGE 2.0.0 – 2 copies of GST*, with STILMAN, CERDEC NEBC, Feb. 2007, Ft. Monmouth, **UK**.
- DARPA **\$195K** for 2 years, PD/PI, *LG Based Predictive Technology*, Matching Funds in support of STILMAN's application for SBIR Phase II, January 2007, **USA**.

2006

- Boeing **\$69K** for 0.5 year, PD/PI, The first in a series of upgrades to the License - *LG-PACKAGE (LG-BNC 1.2) for Boeing NETWORK COMMANDER*, with STILMAN, Dec. 2006, **USA**.
- NSWC CRADA (COOPERATIVE R&D AGREEMENT), PD/PI, *LG for Homeland and Force Protection*, Naval Surface Warfare Center (NSWC) and STILMAN, for 3 years, Dec. 2006, **USA**.
- Dstl "Exceeding Level of All Available Tools", *Successful Experiments with Advanced LG-Based Simulated Sensors, Communications & Command Hierarchy*, *LG-PACKAGE 2.0.0*, Nov-Dec 2006, with STILMAN, Defence Science and Technology Lab (Dstl), Farnborough, **UK**.
- US Army SBIR Phase I **\$70K** for 0.5 year, PD/PI, *LG Based Predictive Technology for Simulation & Training*, CERDEC RDECOM, with STILMAN, Sep 2006, **USA**.
- NSWC **\$30K**, PD/PI, *Run Time License for LG-RAIDER (Problem-oriented LG-PACKAGE for Littoral Ops)*, from STILMAN to Naval Surface Warfare Center (NSWC), Sep. 2006, **USA**.
- DARPA **\$1.9M**, PD/PI, *Real-time Adversarial Intelligence & Decision-making - RAID*, Based on the results of Experiment 4 (see below), DARPA awarded Phase III Funding of \$1.5M (plus additional \$400K) to STILMAN. To accelerate transition, DARPA converted RAID Phase III into Transition to the US Army DCGS-A Program of Record; Sept. 2006, **USA**.
- DARPA "By Far Exceeding Level of Advanced Experts. Recommended for Transition to US Army", *Validation of LG during DARPA RAID Wargaming Experiment 4 (against team of human experts)*, 3-week event, with STILMAN, Battle Command Training Center, July 2006, Ft Leavenworth, KS, **USA**.
- US Air Force SBIR Phase I **\$100K** for 0.5 year, PD/PI, *LG Techniques to Support Mission Awareness: LG-ORACLE*, AFRL, Wright Patterson AFB, with STILMAN and SAIC, April 2006, **USA**.
- DARPA "Exceeding Level of Advanced Experts", *Validation of LG during DARPA RAID Wargaming Experiment 3 (against team of human experts)*, 3-week event, with STILMAN, Intelligence Systems Integration Lab, Feb 2006, Ft Huachuca, NM, **USA**.

2005

- Boeing **\$25K**, PD, *LG-PROTECTOR 1.6*, Five STILMAN Demonstration Licenses of *LG-PROTECTOR 1.6* for the Boeing Integration Centers, with STILMAN, BIC East and BIC West, Boeing, Nov. 2005, **USA**.
- BAE SYSTEMS **\$17K**, PD, Workshop in Denver – R&D with *LG-PACKAGE/BAE*, BAE SYSTEMS(UK) & STILMAN, July 2005, **UK & USA**.
- DARPA **\$1.5M** (out of \$4.5M), PD/PI, *Real-time Adversarial Intelligence & Decision-making - RAID*, Based on the results of Experiment 2 (see below) DARPA awarded Phase II Funding to STILMAN; Sept. 2005, **USA**.
- DARPA "At the Level of Advanced Experts", *Validation of LG during DARPA RAID Wargaming Experiment 2 (against team of human experts)*, 3-week event, with STILMAN, Offices of

- SAIC, July-Aug 2005, Orlando, FL, **USA**.
 - US Army STTR Phase I **\$100K** for 6 mon., PD/PI, *LG Techniques for Distributed Interactive Training: LG-EXPERT*, from Army Research Institute (ARI), with STILMAN and U. of West Florida (UC Denver declined participation), July 2005, **USA**.
 - US Air Force SBIR Phase I **\$100K** for 9 mon., PD/PI, *LG for Integrated Adversarial Courses of Action Generation: LG-ADVERSARY*, from Air Force Research Lab (AFRL) and Space Missile Center (SMC), with STILMAN, March 2005, **USA**.
 - US JFCOM **\$350K** for 4 mon. PD/PI, *Identification of technological and functional enhancements to current capabilities used in JWFC's operational training of Joint Forces: LG-TRAINER*, with The Analysis Group (TAG), STILMAN & Overwatch Systems, March 2005, **USA**.
 - DARPA **\$400K** for 6 mon., PD/PI, R&D CONTRACT, *Automated Decision Support for Urban Area Operations, DARPA Project Force Multipliers for Urban Area Operations: LG-COMMANDER*, with The Analysis Group (TAG), STILMAN & Overwatch Systems, March 2005, **USA**.
 - DARPA "Approaching the Level of Advanced Experts", *First Experimental Validation of LG during DARPA RAID Wargaming Experiment 1 (against team of human experts)*, 2-week event, Offices of SAIC, Feb 2005, Orlando, FL, **USA**.
 - Boeing Permanent Experimentation and Demonstration Base for LG Applications at Boeing Integration Center (BIC West); employing various LG-PACKAGES, Anaheim, CA, Jan. 2005-, **USA**.
- 2004**
- Boeing **\$325K**, PD/PI, One-Year Experimentation & Demonstration License - *LG-PACKAGE/Boeing for Evaluation of Applications of LG to Network Centric Operations*, from STILMAN, Nov. 2004, **USA**.
 - DARPA **\$1.45M** (out of \$4.5M), PD/PI, *Linguistic Geometry Techniques for Adversarial and Deception Reasoning*, for *Real-time Adversarial Intelligence & Decision-making – RAID*; DARPA awarded Phase I funding to STILMAN, Prime Contractor for ARM-S (Adversarial Reasoning Module); other Primes: SAIC, Alion, Altarum, and Lockheed Martin; Sept. 2004, **USA**.
 - BAE SYSTEMS **\$270K**, PD/PI, R&D CONTRACT, One-Year Experimentation & Demonstration License - *LG-PACKAGE/BAE for Evaluation of Applications of LG to BAE Projects*, from STILMAN, Sept. 2004, **UK**.
 - Boeing **\$120K**, PD/PI, *Optimized LG-PROTECTOR 1.6 linked to Total Domain 2.1, New Generation of Boeing Blackboard Environment*, 4 Demo Licenses, from STILMAN, June 2004, **USA**.
 - Dstl **\$120K**, PD/PI, One-Year Experimentation and Demonstration License - *LG-PACKAGE/Dstl for "Scenario Preparation for Synthetic Environments" and "Control of Computer Generated Forces in Synthetic Environments"*, for Defence Science & Technology Lab (Dstl) of Ministry of Defence (MoD UK) from STILMAN, May 2004, **UK**.
- 2003**
- Boeing **\$23K**, PD, 1.5-Year Demo License, LG-PROTECTOR 1.5, from STILMAN, Dec. 2003, **USA**.
 - Boeing **\$72K** for 1 month, PD/PI, *LG Based Simulation Based Acquisition: Global Strike with CAV (Common Aerial Vehicle)*, from Boeing, with STILMAN, Nov. 2003, **USA**.
 - Boeing/DARPA **\$67K** for 20 days, PD/PI, *LG Based Simulation Based Acquisition of Repositionable Satellites: ORBITAL EXPRESS*, with STILMAN, Nov. 2003, **USA**.
 - US Army Phase I **\$70K** for 0.5 year, PD/PI, *Linguistic Geometry Intelligent Nodes for COA Generation and SBIR Analysis*, with STILMAN (UC Denver declined participation), Nov. 2003, **USA**
 - US Navy SBIR Phase I **\$70K** for 0.5 year, PD/PI, *LG for Combat System Automation Management*, from the Naval Surface Warfare Center (NSWC), with STILMAN, Nov. 2003, **USA**.
 - US MDA SBIR Phase I **\$70K** for 0.5 year, PD/PI, *Linguistic Geometry Techniques for Advanced Engagement Planning*, Missile Defense Agency (MDA), with STILMAN, July 2003, **USA**.
 - Boeing *STILMAN (with \$3M share) is included on the Boeing-led team of the top national defense*

contractors for a \$150M unsolicited proposal to the US Air Force (not awarded), with STILMAN, July 2003, **USA**.

- Boeing **\$27K** for 1 month, PD/PI, *Optimized LG-PROTECTOR 1.5 linked to New Generation of Boeing Software Environments*, with STILMAN, April 2003, **USA**.
- AFRL Wright Patt AFB **\$720K** for 1 year, PD/PI, *Linguistic Geometry Techniques for Enhancing Human Performance in Synthetic Battlespace*, with STILMAN, (awarded with zero funding), April 2003, **USA**.

2002

- US MDA SBIR **\$70K** for 0.5 year, PD/PI, *Linguistic Geometry Techniques for Missile Defense*, Missile Defense Agency (MDA), with STILMAN, Dec. 2002, **USA**.
- Boeing **\$12K** for 1 month, PD/PI, *Advanced Interface for LG-PROTECTOR 1.5 with Boeing Software Environment*, with STILMAN, Nov. 2002, **USA**.
- Boeing **\$2K**, PD/PI, *Demonstration License and CD for installing LG-PROTECTOR 1.4* at the Boeing Integration Center (BIC), Anaheim, CA, with STILMAN, Oct. 2002, **USA**.
- Boeing **\$78K** for 2 months, PD/PI, *LG-PROTECTOR 1.5 for Advanced Planning and MC2A Control for Integrated Defense Against Cruise Missile Attack including Sea-based Targets*, with STILMAN, Oct. 2002, **USA**.
- Fujitsu **\$15K** for 5 months, PD/PI, *Applications of LG to Military Command and Control*, from Fujitsu Defense Systems, with STILMAN, Aug. 2002, **Japan**.
- Boeing **\$80K** for 1 month, PD/PI, *LG-PROTECTOR 1.4 for Advanced Planning and MC2A Control for Integrated Defense Against Cruise Missile/Bomber Attack*, with STILMAN, June 2002, **USA**.
- Boeing **\$200K** for 2 months, PD/PI, *LG-PROTECTOR 1.3 for Advanced Planning and Fire Control for Integrated Defense Against Cruise Missile Attack*, with STILMAN, Feb. 2002, **USA**.

2001

- Boeing **\$232K** for 4 months, PD/PI, *LG-PROTECTOR 1.0 for Integrated Defense Against Cruise Missile Attack*, with STILMAN & Rockwell Science Center, Aug. 2001, **USA**.
- UCD **\$4K**, PI, THE 2001 UCD FACULTY RESEARCH AWARD, May 2001.
- Boeing **\$170K** for 6 months, PD/PI, *Strategy and Search Algorithms: Stilman's Linguistic Geometry Algorithms for Effect Based Operations*, with STILMAN & Rockwell, Jan. 2001, **USA**.

2000

- Boeing **\$10K**, for 4 months, PI, *Application of LG to Air Traffic Management*, Sept. 2000, **USA**.
- Boeing **\$20K**, for 4 months, PI, *Application of LG for Mid-Air Collision Avoidance Automation*, with STILMAN, Sept. 2000, **USA**.
- DARPA **\$160K** for 1 year, PI, *JFACC Experiment Commander (Experiment Enabled LG Software Prototype)* with STILMAN, from Rockwell Science Center/DARPA, DARPA JFACC Project, Feb. 2000, **USA**.

1999

- STILMAN CO-FOUNDER, STILMAN Advanced Strategies, LLC, Denver, CO, Sept 1999, **USA**.
- DARPA **\$1.6M** for 1.5 years, PI, *Agile Symbolic Mission Control and Hostile Counteraction Strategies*, DARPA JFACC Project, with Rockwell Sci. Center (prime), UCD, Wayne State University, and STILMAN; UCD share is **\$159K**, STILMAN share is **\$160K**, Sept. 1999, **USA**.
- UCD **\$4K**, PI, THE 1999 UCD FACULTY RESEARCH AWARD, May 1999.
- DARPA PI, *Mission-Based Control of Coordinated Systems* to DARPA, \$2.3M for 3 years, with Rockwell Science Center (prime), Wayne State University, and St. Claude University, — found to be **selectable** without actual funding, April 1999, **USA**.

1998

- UCD THE 1998 UCD RESEARCHER OF THE YEAR (the top research award).
- UCD THE 1998 UCD COLLEGE OF ENGINEERING RESEARCHER OF THE YEAR.

1997

- UCD THE 1997 UCD CHANCELLOR'S LECTURESHIP AWARD (the top UCD research award).
- UCD **\$5K**, PI, THE 1997 UCD FACULTY RESEARCH AWARD, May 1997.
- WHO'S WHO AMONG AMERICAN TEACHERS, *The Best Teachers in America Selected by the Best Students*, March 1997, **USA**.

1996

- UCD PI, THE 1997-98 UCD FACULTY RESEARCH FELLOWSHIP AWARD (top research award, 1-year release from teaching), **USA**.
- US DOE Sandia **\$217K** for 3 years, PI/PD, *Linguistic Geometry: Theory and Applications*, from DOE (US Dept. of Energy) thru Sandia National Labs, supplemented with **\$36K** from UCD, (utilized only \$72K; terminated in Dec 1996 due to the budget cut at DOE), Albuquerque, NM, **USA**.

1995

- US AFOSR **\$14K** for 12 weeks, PI, FACULTY RESEARCH ASSOCIATESHIP AWARD, Air Force Office of Scientific Research (AFOSR), 1995 *Summer Faculty Research Program* at the US Air Force Phillips Laboratory, Kirtland AFB, Albuquerque, NM, May-August 1995, **USA**.
- UCD **\$4K**, PI, THE 1995 UCD FACULTY RESEARCH AWARD, May 1995, **USA**.
- UCD THE 1995 UCD COLLEGE OF ENGINEERING RESEARCHER OF THE YEAR, **USA**.
- UCD THE 1995 UCD COLLEGE OF ENGINEERING OUTSTANDING FACULTY (teaching award, voted by students), **USA**.

1994

- UCD EARLY TENURE AWARD AND PROMOTION TO FULL PROFESSOR, July 1994, **USA**.

1993

- UCD **\$5K**, PI, THE 1993 UCD FACULTY RESEARCH AWARD, May 1993, **USA**.

1991

- UCD **\$3K**, PI, THE 1991 UCD JUNIOR FACULTY RESEARCH AWARD, 1991, **USA**.

1990

- NSERC & McGill U. **\$10K** for 1 year, Co-PI, *Research in Search Problems in AI*, NSERC of Canada and McGill University, July 1990, Montreal, **Canada**.

1988

- USSR Academy of Sciences **100K rub.** for 3 years, PI/PD, *Intelligent Teaching System*, Forestall Education Project, USSR Academy of Sciences, **USSR**.
- USSR Academy of Sciences **1.2M rub.** for 3 years, PI/PD, *National Distributed AI-based System for Geological Information Processing*, USSR Academy of Sciences and Department of Geology, **USSR**.

1985

- State Comm. for Sci. & Tech **600K rub.** for 3 years, PI, *AI Methods and Software Tools for Long-range Planning*, USSR State Committee for Science and Technology and USSR Department of Energy, with M. Botvinnik, V. Mirniy and A. Reznitskiy, **USSR**.

1982

- State Comm. for Sci. & Tech **600K rub.** for 3 years, PI, *AI Methods and Software for Solving Complex Search Problems*, USSR State Committee for Science and Technology and USSR Department of Energy, with M. Botvinnik, V. Mirniy and A. Reznitskiy, **USSR**.

1981

- USSR Academy of Sciences NATIONAL YOUNG INVESTIGATOR AWARD, *New Approach to Solving Artificial Intelligence Problems & Application to Power Control*, USSR Academy of Sci., with A. Reznitskiy, **USSR**.

1978

- Control Data Corp. Co-PI, *Efficient Methods for Solving Practical Search Problems: Acceleration of Project PIONEER*, Control Data Corp. (CDC), Grant for 0.5 year, with M. Botvinnik and A. Yudin, (not utilized due to Soviet Gov. restrictions), **USA**.
- U. of Dortmund Co-PI, *Theory of Complex Systems and its Application to PIONEER Project*, Grant for 0.5 year,

with A. Yudin, Dortmund, (not utilized due to Soviet Gov. restrictions), **Germany**.

- U. of Mannheim Co-PI, *Completion of PIONEER Project*, Grant for 0.5 year, with M. Botvinnik and A. Yudin, (not utilized due to Soviet Gov. restrictions), **Germany**.

1977

- Nat'l Sci. Inf. Center Co-PI, for 1 year, *Project PIONEER, Computer Time on Burroughs B-6700*, National Scientific Information Center, with M. Botvinnik and A. Yudin, **USSR**.

1972

- State Planning Committee Co-PI, for 5 years, *Project PIONEER, Computer Time on ICL 4-70*, USSR State Planning Committee, with M. Botvinnik and A. Yudin, **USSR**.
- Moscow State University M.S. DIPLOMA WITH HONORS, *Outstanding Student Achievements and Research in Mathematics*, Dept of Mechanics & Mathematics (Meh-Mat MGU), Moscow, **USSR**.

1967

- Math. High School No. 7 CERTIFICATE WITH GOLD MEDAL, *Outstanding Student Achievements in Mathematics*, High School No. 7 for children gifted in Mathematics, Moscow, **USSR**.

1966

- Moscow State University MOSCOW MATHEMATICAL OLYMPIAD PRIZE, Moscow State University (MGU) & Moscow Mathematics Society, **USSR**.

SIGNIFICANT RECENT PUBLICATIONS

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- Stilman, B., A Linguistic Approach to Geometric Reasoning, *An Int. J.: Computers & Mathematics with Applications*, Vol. 26, No. 7, pp. 29-58, 1993.

COURSES TAUGHT RECENTLY

SEMESTER-LONG COURSES

University of Colorado Denver, Denver, CO, **USA**.

Complex Intelligent Systems

Linguistic Geometry

Artificial Intelligence

Compiler Design

Universal Compiler: Theory & Construction

Introduction to Software Engineering

Knowledge Representation for Intelligent Systems

Introduction to Artificial Intelligence

Software Engineering

SHORT COURSES

2010 *Linguistic Geometry Paradigm*

9th Mexican International Conference on Artificial Intelligence - MICAI'10, Pachuca, **Mexico**

2005 *Linguistic Geometry: From Search to Construction*

14th International Congress on Computing - CIC'05, Mexico City, **Mexico**

2001 *Advanced Strategies for Abstract Board Games: Foundations of Linguistic Geometry*

14th Australian Joint Conference on Artificial Intelligence - AI'01, Adelaide, **Australia**

2000 *Winning War Games: Efficient Control with Linguistic Geometry*

ICSC Symposium on Engineering of Intelligent Systems – EIS'2000, Paisley, Scotland, **UK**

1998 *Linguistic Geometry for Computationally Challenging Problems*

IEEE Int. Conference on Systems, Man, and Cybernetics — SMC'98, San Diego, CA, **USA**

1997 *Linguistic Geometry for Modeling and Simulation*

15th IMACS World Congress, Berlin-Brandenburg Academy of Sciences, Berlin, **Germany**

Problem Solving with Linguistic Geometry

Rockwell International Corp., Rockwell Science Center, Thousand Oaks, CA, **USA**

1996 *Linguistic Geometry: Theory and Applications (SUMMER SCHOOL)*

Dept. of Applied Mathematics, St. Petersburg University, St. Petersburg, **Russia**

1995 *Foundations of Linguistic Geometry and Applications to Robotics*

Automation and Robotics Center of the University of Wales, Cardiff, **UK**

Introduction to Linguistic Geometry

Satellite Control and Simulation Division, Phillips Lab, Kirtland AFB, Albuquerque, NM, **USA**

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 204. Kott, A., “*A RAID into the Mind of the Enemy*”, *Press Release, 4 pp.*, DARPA, Arl-on, VA, 11/2007, USA.
 205. “*STILMAN to adapt DARPA RAID Technology for FBCB2*”, *DEFENCE SYSTEMS DAILY, WEB Journal*, defence-data.com, Oct 22, 2007, UK.
 206. *DARPA RAID Experiment 4*, Invitation from DARPA/STILMAN – Int. Distribution, July 2006, USA.
 207. *Review of LG-PACKAGE by Naval Surface Warfare Center – Presolicitation Notice*, May 16, 2006, USA.
 208. Review of LG in A. Kott, M. Ownby, “*Tools for Real-Time Anticipation of Enemy Actions in Tactical Ground Operations*”, *Proc. of the 10th Int. Command and Control Research and Technology Symp. “The Future of C2”*, 2005.
 209. “*Advanced Technology Concepts for Command and Control*”, 457 pp., Xlibris, 2004, Edited by Dr. A. Kott, DARPA Program Manager, Contributions to the DARPA JFACC Project. Chapter 2, Section, *Board Games as Paradigm*, pp. 87-88, Chapter 14, *Battle as a Board Game*, pp. 361-380. Review of the Rockwell Team contribution to the DARPA JFACC project. The Team includes Rockwell Science Center, STILMAN Advanced Strategies, Univ. of Colorado at Denver, Wayne State University, USA.
 210. *LINGUISTIC GEOMETRY WORKSHOP, with STILMAN Comments, REPORT*, 17 pp., Dstl (Defence Science and Technology Laboratory), Ministry of Defence of UK, April 28, 2003. Review of LG technology at the 2-day Workshop with scientists and representatives from military branches of British Government, NATO, and major international companies (28 participants), Farnborough, UK.
 211. “*CU-Denver Professor a PIONEER: Linguistic geometry mimics human decision-making*” (AI at UCD for DOD) by Karin Kowalski, *UCD Advocate - News*, p. 2-3, September 18, 2002, USA.
 212. “*25 Ways to Fight Terrorism: PLAYING WAR GAMES*”, by Warren Cohen, pp. 25-31, *ASEE PRISM*, Feb. 2002, Washington, DC. Research on LG Wargaming at UCD is listed as one of the 25 most important projects directed against terrorism developed in the US engineering schools across the country. This is the *only project* on the list developed in Colorado, USA.
 213. “*Firm aims to checkmate enemy*” by J. Beauprez, *THE DENVER POST*, Business Section, C1-C2, Oct. 11, 2001, USA (a month after the 9/11 tragedy; originally, this interview was scheduled for 9/11, 2001).
 214. “*CU Denver Researchers Say Nothing Artificial about AI*”, Interview with Boris Stilman in CU Press Release, by Ernest Gurule, June 29, 2001, USA.
 215. ACM Magazine “*Computing Reviews*,” Jan, 2001. Review of *Boris Stilman, Linguistic Geometry: From Search to Construction*. Boston: Kluwer Acad. Publ. (now Springer), 2000. ISBN 0-7923-7738-9. Pp. xiv+395, by Dr. H. Van Dyke Parunak, (ERIM, Ann Arbor, MI), USA.
 216. Amazon.com, Sep, 2000. Review of *Boris Stilman, Linguistic Geometry: From Search to Construction*. Boston: Kluwer Acad. Publ. (now Springer), 2000. ISBN 0-7923-7738-9, by “rufus96” CA, USA.
 217. Review of LG in *Asymmetric Wargaming: Toward A Game Theoretic Perspective*, Report by G. M. Whittaker, The MITRE Corp., 2000, USA.
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RECENT PROFESSIONAL CONTRIBUTIONS

2010

- ORGANIZER, SCIENTIFIC ADVISOR; LG-RAID for Army Training: Constructive Simulation Driver*, with extensive discussion and demonstrations, Workshop with Army Training Support Center (ATSC) and STILMAN, together with officers and experts from ATSC; Col J. Moore, Dr. V. Yakhnis, O. Umanskiy, V. Pugachev, **1-day event**, Ft. Eustis, VA, Dec 8, 2010, **USA**.
- ORGANIZER, SCIENTIFIC ADVISOR; LG-RAID for Army Battle Command*, with discussion and demonstrations, Workshop with Army Battle Command Battle Lab (BCBL), Capabilities Development Integration Directorate (CDID) and STILMAN, together with Col Johnson (Deputy Director-BCBL), John Ralietz (Program Manager-BC), MAJ Cain, other officers and experts from Army Battle Lab; Col J. Moore, O. Umanskiy, V. Pugachev, **1-day event**, Ft. Leavenworth, KS, Dec 7, 2010, **USA**.
- INVITED KEYNOTE SPEAKER, PANELIST; 9th Mexican Int. Conf. on Artificial Intelligence – MICAI'2010*, with discussion, *Discovering Role of Linguistic Geometry*, **1-hour Keynote Talk**, Nov 10, 2010, Pachuca, **Mexico**.
- INVITED TUTORIAL PRESENTER, PANELIST; 9th Mexican Int. Conf. on Artificial Intelligence – MICAI'2010*, with software demonstrations and discussion, *Linguistic Geometry Paradigm: From Search to Construction*, **4-hour Tutorial**, Nov 8, 2010, Pachuca, **Mexico**.
- ORGANIZER, SCIENTIFIC ADVISOR; Mission Command TCM Synchronization Conference and S&T Operational and Working Group*; Presentations, Discussions and Demonstrations of LG-RAID, **2-day event** (by invitation only); Multiple meetings with several US Army TRADOC Capability Managers, Col D. Carman, Col J. Gubler, L. Eifert (COR for STILMAN, STTC), Col J. Moore O. Umanskiy, V. Yakhnis, and defense leaders, engineers and scientists from Battle Command Battle Lab (BCBL) and CPOF Program; Holiday Inn Expo Center, Kansas City, MO, Sep 28-29, 2010, **USA**.
- ORGANIZER, SPEAKER, PANELIST; LG Based Predictive Technology for Battle Command, Simulation, and Training*, with discussion and demonstration, CPP Kick-off Meeting with Stryker PoV and STILMAN, together with Dr. J. Mosley, (V.P. for Ground Vehicle Technology), Dr. Yakhnis, O. Umanskiy, V. Pugachev, and several experts from Stryker Program (online and over the phone), **1-day event**, STILMAN Quarters, Denver, CO, June 2, 2010, **USA**.
- ORGANIZER, SCIENTIFIC ADVISOR; LG-RAID for Army Operations*, with discussion, training and demonstrations, Workshop with Army Battle Lab and STILMAN, together with Col J. Moore, V. Pugachev, officers and experts from Army Battle Lab, **2-day event**, Ft. Leavenworth, KS, May 4-5, 2010, **USA**.
- ORGANIZER, SPEAKER, PANELIST; LG-PACKAGE and LG-RAID applications for UK Forces: Present and Future Plans*, with discussion and demonstration, Workshop with SELEX, together with M. Breach (SELEX), Sir Sandy Wilson, Dr. Yakhnis, O. Umanskiy – (all STILMAN), and officers and experts from SELEX (Luton, UK), **2-hour Teleconf.**, April 29, 2010, **USA-UK**.
- ORGANIZER, SCIENTIFIC ADVISOR; Workshop, Demonstration of LG-RAID and Training, LG: Foundations and Defense Applications*, Multiple presentations at the **2-day event** with, M. Mittrick (ARL), L. Eifert (COR for STILMAN, STTC), Col J. Moore, O. Umanskiy, V. Pugachev, and engineers and scientists from Army Research Lab (ARL), Aberdeen Proving Ground, MD, April 13-14, 2010, **USA**.
- ORGANIZER, PANELIST; LG-Based Predictive Technology for Battle Command, Simulation, and Training*, with discussion and demonstration, Workshop with TCM Battle Command, together with Dr. Yakhnis, O. Umanskiy, L. Eifert (COR for STILMAN, STTC), and officers and experts from TCM Battle Command (Ft. Leavenworth, KS), **2-hour Teleconf.**, March 23, 2010, **USA**.
- INVITED SPEAKER, PANELIST; US Army CPP Review Board for 2010* with discussion; Review of the 25 Commercialization Pilot Program Awards (including STILMAN's award "*LG Based Predictive Technology for Battle Command, Simulation, and Training*") with MILCOM Venture Partners, Navigant Consulting, SBIR Office and STILMAN, Panel of 18 Directors of all the Army Program Executive Offices, invited for our topic review Dr. Stilman, Dr. Yakhnis, O. Umanskiy, **3-day event** (STILMAN involved for 1 hour over the phone), March 17, 2010, **USA**.

ORGANIZER; SCIENTIFIC ADVISOR; Workshop: Presentation and Demonstration of LG-RAID integrated with FBCB2 system to TCM Battle Command, **Multiple discussions at the 1-day event** with Col D. Carman (TCM Battle Command), Col Gubler, L. Eifert (COR for STILMAN, STTC), Col J. Moore, O. Umanskiy, V. Pugachev, engineers and scientists from TCM Battle Command and FBCB2 program, The Ft Hood Battle Command Training Center, Ft. Hood, TX, Feb 24, 2010, **USA**.

ORGANIZER; SCIENTIFIC ADVISOR; Workshop: Presentation and Demonstration of LG-RAID integrated with FBCB2 system, *LG: Foundations and Defense Applications*, **Multiple discussions at the 1-day event** with Col D. Carman (TCM Battle Command), Dr. J. Mosley (V.P. for Ground Vehicle Technology), P. Lucyk, L. Eifert (COR for STILMAN, STTC), Col J. Moore, O. Umanskiy, V. Pugachev, engineers and scientists from Simulation and Training Technology Center (STTC), PEO STRI, TCM Battle Command and FBCB2 program, US Army Program Executive Office of Simulation, Training and Instrumentation (PEO STRI), Orlando, FL, Feb 10, 2010, **USA**.

ORGANIZER; SCIENTIFIC ADVISOR; STTC Program Management Review (PMR): Presentation and Demonstration of LG-RAID integrated with FBCB2 system on Applique V4 Computer, *LG: Foundations and Defense Applications*, **Multiple presentations and discussions at the 2-day event** with MG Justice (Commander of RDECOM), P. Lucyk, R. Alexander (Chief Engineer of FBCB2), Col J. Moore, O. Umanskiy, V. Pugachev, engineers and scientists from STTC and FBCB2 program, US Army SFC Paul Ray Smith Simulation and Training Technology Center - STTC, Orlando, FL, Jan 21, 2010, **USA**.

2009

SCIENTIFIC ADVISOR, REVIEWER; Completion of integration of LG-PACKAGE with VR-Forces simulation software (Phase I), Dec 29, 2009, Anticyp (UK) - SELEX Galileo (UK), Denver, CO, **USA**.

INVITED KEYNOTE SPEAKER, PANELIST; The 3d Int. on Workshop on Artificial Intelligence in Science and Technology – AISAT'2009, with software demonstrations and discussion, *Linguistic Geometry: Theory and Experiments*, **1-hour Talk**, Nov 24, 2009, Hobart, Tasmania, **Australia**.

INVITED SPEAKER, PANELIST; The 3d Int. on Workshop on Artificial Intelligence in Science and Technology – AISAT'2009, with software demonstrations and discussion, *Linguistic Geometry for Defense Systems*, **2-hour Talk**, Nov 24, 2009, Hobart, Tasmania, **Australia**.

ORGANIZER; SCIENTIFIC ADVISOR; Workshop and Demonstration of LG-RAID integrated with FBCB2 system on Applique V4 Computer, with software demonstrations and discussions, *LG: Foundations and Defense Applications*, **Multiple presentations at the 1-day event** with P. Lucyk, R. Alexander (Chief Engineer of FBCB2), L. Eifert (COR for STILMAN, STTC), Dr. A. Kott (ARL), Col J. Moore O. Umanskiy, V. Pugachev, and engineers and scientists from FBCB2 program, Sep 30, 2009, FBCB2 (Force XXI Battle Command Brigade and Below) Offices, Ft. Monmouth, NJ, **USA**.

INVITED SPEAKER, PANELIST; 2009 SBIR Beyond Phase II Conference & Technology Showcase (sponsored by the US Department of Defense, by invitation only - for companies successfully completing SBIR Phase II projects), with software demonstrations and discussions, *LG: Foundations and Defense Applications*, **Multiple presentations at the 4-day event** together with Dr. Yakhnis, O. Umanskiy, Sep 21-24, 2009, Orlando World Center Marriott, Orlando, FL, **USA**.

INVITED SPEAKER, PANELIST; LG Based Predictive Technology for Battle Command, Simulation, and Training, with discussion and demonstration, Workshop with MILCOM Venture Partners and STILMAN, together with Dr. Yakhnis, O. Umanskiy, J. Buffa, and 4 experts from MILCOM Partners, **2-hour event**, Sep 22, 2009, Orlando World Center Marriott, Orlando, FL, **USA**.

SCIENTIFIC ADVISOR, REVIEWER; Completion of installation and testing of LG GMI (Game Mobile Interface) on the FBCB2 (JCR BCPL SDK) computer Applique EV4, Aug 31, 2009, STILMAN Quarters, Denver, CO, **USA**.

SPEAKER, PANELIST; Installation of LG-RAID on SIPRNET within the scope of the "LG Based Predictive Technology for Battle Command, Simulation, and Training" project, with discussion and demonstration, Kick-off Meeting with ARL and STILMAN, Dr. A. Kott, Dr. B. Broome, M. Thomas (scribe), M. Mittrick (all – ARL), Dr. M. Bauer (STTC), O. Umanskiy, Dr. V. Yakhnis (STILMAN), **2-hour Teleconference**, Aug 27, 2009, ARL (Army Research Lab)-STTC (Simulation & Training Technology Center)-

STILMAN, Aberdeen Proving Ground – Orlando -Denver, **USA**.

INVITED SPEAKER, Mind and the Natural World, *Linguistic Geometry and Human Consciousness*, **2-hour Talk**, May 29, 2009, Dept of Psychology, University of Colorado at Denver, Denver, **USA**.

ORGANIZER, SPEAKER, Workshop on Directions for the LG Applications Development, with Dr. V. Yakhnis, Dr. T. Altman, Sir Sandy Wilson, Dr. E. Novotny; **1-day event**, March 18, 2009, STILMAN Headquarters, Denver, CO, **USA**.

ORGANIZER, SPEAKER, LG Day at UCD: Demonstrations of Advanced Defense Applications of Linguistic Geometry by Chief Software Architect O. Umanskiy, **3-hour event**, March 16, 2009, UCD and STILMAN, Denver, CO, **USA**.

INVITED SPEAKER, PANELIST; LG Based Predictive Technology for various Army Projects, with discussion and demonstration, Teleconference with Simulation Training and Technology Center (STTC) and STILMAN, with Dr. M. Bauer (SBIR Phase II Program Manager), Dr. A. Kott, Dr. Yakhnis, O. Umanskiy, **2-hour event**, Feb 26, 2009, Orlando-Denver, **USA**.

ORGANIZER, SCIENTIFIC ADVISOR, Workshop with TRADOC Capability Manager, Platform Battle Command and Combat Identification TCM PBC CID, *RAID-LG Technology for US Army*, with TCM Col Carman, Dr. A. Kott, J. Speer, P. Lucyk, Col J Moore, O. Umanskiy, V. Pugachev, **4-hour event**, Feb 12, 2009, Simulation Training and Technology Center (STTC), Orlando, FL, **USA**.

2007

MAJOR SCIENTIFIC ADVISOR, REVIEWER, Air Assault Expeditionary Force (AAEF) *Spiral D Experiment – TRANSITION OF RAID to US Armed Forces (Integration of DARPA RAID with FBCB2 System)*, US Army Test & Evaluation Command, **major 2-month event**, Oct – Nov, 2007, Soldier Battle Lab, US Army Infantry Center, Fort Benning, GA, **USA**.

ORGANIZER, SPEAKER, PANELIST

BRITISH SEMINAR SERIES IX

Oct 5, 2007 - *LG-PACKAGE: Current Capabilities, Future Enhancements; COA Generation for MOUT*; **0.5-day Workshop**, with T. Arnold, D. O'Byrne, M. Breach, SELEX S&AS, Capability Green, Luton, **UK**.

Oct 4, 2007 - *LG strategies for US & British Defense Systems*, **6-hour Workshop** with Sir "Sandy" Wilson, D. Hemsley, 12 scientists & managers, Systems Consultants Services Ltd, Henley, **UK**.

ORGANIZER, SCIENTIFIC ADVISOR; Workshop with US Intelligence Officers, *RAID-LG Technology for Defense Systems*, with TCM Col Mosher, Col J Moore, V. Pugachev, Sep 11, 2007, Ft Huachuca, AZ, **USA**.

INVITED SPEAKER, PANELIST; VIII Argentine Symposium on Computing Technology, with software demonstrations and discussion, *Linguistic Geometry Tools: Discovering Past, Controlling Present and Shaping Future*, **1-hour Talk**, 36 JAIIO (36th Int. Conference on Computer Science), Aug 30, 2007, Mar del Plata, **Argentina**.

INVITED SPEAKER, PANELIST; IX Argentine Symposium on Artificial Intelligence (ASAI), with software demonstrations and discussion, *Linguistic Geometry Paradigm: From Fighting Wars ... to Computing Them*, **2-hour Talk**, 36 JAIIO (36th Int Conference on Informatics), Aug 28, 2007, Mar del Plata, **Argentina**.

SPEAKER, PANELIST; Workshop with DARPA RAID Program Manager Dr. A. Kott, with software demonstrations and discussion, *Transition of LG Applications to US Armed Forces*, **0.5-day event** together with Dr. T. Altman, O. Umanskiy, June 27, 2007, STILMAN Offices, Denver, CO, **USA**.

ORGANIZER, SPEAKER, PANELIST

BRITISH SEMINAR SERIES VIII

June 15, 2007 - *LG-based Defense Systems*, **3-hour Workshop** with, D. Hemsley, 4 scientists & managers, Systems Consultants Services Ltd, Henley, **UK**.

June 14, 2007 - *Advantages of the LG-based Technology*, **1-day Workshop** (with software demonstrations and discussion), with Sir "Sandy" Wilson, Dr. V. Yakhnis, R. Boyd, and 45 scientists and engineers from MBDA - Missile Ballistic Defence Agency, MBDA, Stevenage, **UK**.

- June 13, 2007 - *LG: Foundations and Applications; 0.5-day Workshop*, with ACM Sir Brian Burrige, ACM Sir "Sandy" Wilson, T. Arnold, D. O'Byrne, Dr. V. Yakhnis, R. Boyd, SELEX, London, **UK**.
- June 12, 2007 - *LG-PACKAGE 2.0: Evaluation of Enhancements; Survey of Applications of LG to MOUT; 1-day Workshop*, with Sir "Sandy" Wilson, B. Patel, S. Gale, Dr. D. Tilley, B. Wardman, and other scientists and engineers from MoD UK, Dstl, MoD, Farnborough, **UK**.
- June 11, 2007 - *Capabilities of LG for the SELEX Concept to Capability Center (C2C); 1-day Workshop*, with Sir "Sandy" Wilson, Dr. V. Yakhnis, T. Arnold, D. O'Byrne, M. Breach, SELEX S&AS, Capability Green, Luton, **UK**.
- SPEAKER, PANELIST*; LG: From Theory to Advanced Software Products, with software demonstrations and discussion, *DARPA Service Chiefs' Program, 3-hour event* together with Dr. T. Altman, O. Umanskiy, C. Earl (Special Assistant to DARPA Director), 8 DARPA Interns, May 15, 2007, STILMAN Headquarters, Denver, CO, **USA**.
- INVITED SPEAKER, PANELIST*; Mathematical Foundations of Linguistic Geometry, with discussion, *Workshop at DARPA IPTO, 2-hour Workshop* together with Dr. V. Yakhnis, Lt Col Dr B. Surdu, K. Kittka, and Dr. Morfeld (Director of IPTO), DARPA IPTO (Information Processing Technology Office), May 3, 2007, Arlington, VA, **USA**.
- INVITED SPEAKER, PANELIST*; with software demonstrations and extensive discussion, *Applications of LG to Naval Systems, 0.5-day Workshop within the Scope of NSWC/STILMAN CRADA*, with Dr. V. Yakhnis, M. Kuchinski (NSWC), C. Blakelock (NSWC), and other managers, scientists and engineers, May 4, 2007, Naval Surface Warfare Center (NSWC), Dahlgren, VA, **USA**.
- INVITED SPEAKER, PANELIST*, Foundations and Applications of LG (to Defense Systems), **3-hour Workshop**, with Dr. V. Yakhnis, top managers of SELEX, Inc., May 3, 2007, Offices of SELEX, Inc, Arlington, VA, **USA**.
- MAJOR SCIENTIFIC ADVISOR, REVIEWER, DARPA RAID Experiment 5*, Integrated RAID/ARM-S system with DCGS-A (The 1st step in Transition), **major 3-week event**, April 24 – May 10, 2007, US Army DCGS-A Lab (Digital Common Ground System – Army), Ft. Monmouth, NJ, **USA**.
- INVITED SPEAKER, PANELIST*; Linguistic Geometry: Foundations & Applications, with discussion, *Workshop at DARPA IPTO, 2-hour Workshop* together with Dr. V. Yakhnis, Lt Col Dr B. Surdu, K. Kittka, DARPA IPTO, April 13, 2007, Arlington, VA, **USA**.
- INVITED SPEAKER, PANELIST*, Applications of LG to Various Defense Systems, **3-hour Workshop**, with Sir "Sandy" Wilson, Dr. V. Yakhnis, top managers of SELEX, Inc. & SELEX Ltd., April 12, 2007, Offices of Finmeccanica, Washington, DC, **USA**.
- MAJOR SCIENTIFIC ADVISOR, REVIEWER, TRIAL RUN: DARPA RAID Experiment 5*, SAIC Offices, March 5-9, 2007, Orlando, FL, **USA**.
- ORGANIZER, SPEAKER, PANELIST*, Assessment of LG Capabilities Employing 2 Scenarios (from SELEX), **2-day Workshop** with O. Umanskiy, M. Breach (SELEX, UK), T. Barnes (SELEX, UK), Feb 9-10, 2007, Offices of STILMAN, Denver, CO, **USA**.
- INVITED SPEAKER, PANELIST*, LG Based Predictive Technology for Battle Command, Simulation and Training, **1-day SBIR Phase I Project Kick-off Meeting**, Jan. 18, 2007, SAIC Offices, Orlando, FL, **USA**.

2006

- ORGANIZER, SPEAKER*; Technical Exchange, Software/Hardware Exhibition at the Interservice/Industry Training, Simulation & Education Conference – I/ITSEC; Brief Meetings with US Marine Corps, US JFCOM, Canadian Forces, General Dynamics, Raytheon, Northrop Grumman, Boeing, Lockheed Martin, SAAB, Thales, Dec. 6, 2006, Orlando, FL, **USA**.
- ORGANIZER, SPEAKER*; Workshop with British Officers (UK), *LG Technology for Defense Systems*, together with Brig A. Macklin, J. Brennan, J. Searle, Maj G. Osmond, Maj T. Mouat, Lt C. Armstrong, Wg Com J. Broadbent, I/ITSEC, Dec 5, 2006, Orlando, FL, **USA**.
- ORGANIZER, SPEAKER*; Workshop with Dstl, MoD, QuinetiQ (UK), *LG, Theory and Technology; LG-PACKAGE 2.0.0*, together with B. Patel (Dstl), S. Armstrong (QuinetiQ), R. McNee (MoD), Maj C.

- Morgan (MoD), IITSEC, Dec 5, 2006, Orlando, FL, **USA**.
- ORGANIZER, SPEAKER*; Workshop with Dstl (UK), *Experiments with LG-PACKAGE 2.0.0: Evaluation and Advanced Training*, **2-day event**, with Dr. T. Altman, Dr. V. Yakhnis, O. Umanskiy, B. Wardman, Nov. 2-3, 2006, Denver, CO, **USA**.
- ORGANIZER, SPEAKER*; Workshop with SELEX (UK), *LG: Applications to Defense Systems*, **1-day event**, with Dr. T. Altman, Dr. V. Yakhnis, O. Umanskiy, P. Collins (SELEX), T. Brignall (SELEX), Oct 24, 2006, Denver, CO, **USA**.
- INVITED SPEAKER, PANELIST*; Workshop with Army RES/NEBC2, Viecore, CACI, C2WD, with software demonstrations and discussion, *LG-Based COA for Running Estimate Service*, **0.5-day event** together with Dr. V. Yakhnis, O. Umanskiy, R. Szymanski (RES/NEBC2), and other scientists and engineers (22 participants), RDECOM CERDEC C2D, Oct 20, 2006, Ft Monmouth, NJ, **USA**.
- INVITED SPEAKER, PANELIST*; Workshop with Army C2ORE, with software demonstrations and discussion, *LG-Based Control of Robotic Entities*, **0.5-day event** together with Dr. V. Yakhnis, O. Umanskiy, S. Koo (C2ORE), R. Mendelsohn (SAIC), and other scientists and engineers (10 participants), C2ORE, RDECOM CERDEC C2D, Oct 20, 2006, Ft Monmouth, NJ, **USA**.
- INVITED SPEAKER, PANELIST*; Workshop with Army DCGS-A, with software demonstrations and discussion, *LG Services for DCGS-A, including Advanced Sensor Fusion*, **0.5-day event** together with Dr. V. Yakhnis, O. Umanskiy, A. Hansen, and other scientists and engineers (12 participants), C2D/CERDEC, Oct 19, 2006, Ft Monmouth, NJ, **USA**.
- INVITED SPEAKER, PANELIST*, with Dr. V. Yakhnis, "Red and Blue COA Generation and the Battlespace Visualization", *Oral Presentation of Proposal*, Sept. 13, 2006, ONR Panel of Reviewers "Sea Strike Science and Technology (S&T) Transparent Urban Structures", MITRE, Woodbridge, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with AFRL, SAIC, with software demonstrations and extensive discussion, *LG-Based Red Driver for Combat Simulation Systems*, **1-day event** together with Dr. V. Yakhnis, O. Umanskiy, W. McQuay (AFRL), L. Straube (SAIC), T. Broadstock (SAIC), and other managers, scientists and engineers, AFRL, Aug 25, 2006, Wright Patterson AFB, OH, **USA**.
- SPEAKER, PANELIST*, with Dr. V. Yakhnis, O. Umanskiy, "RAID Experiment 4: Lessons Learned; Phase III (Integration with DCGS-A) Requirements", **1-day event**, *DARPA RAID PI Tech. Meeting*, August 3-4, 2006, Battle Command Training Center, 35th Infantry Division, Ft. Leavenworth, KS, **USA**.
- ORGANIZER, SPEAKER, PANELIST*, with Dr. V. Yakhnis, "LG Technology in the DARPA RAID Project; LG outside RAID", Multiple Meetings, Presentations and Demonstrations to various VIP visitors (50 people) during *DARPA RAID Experiment 4*, with Dr. Yakhnis, **2-week event**, July 23 – Aug. 4, 2006, Battle Command Training Center, 35th Infantry Division, Ft. Leavenworth, KS, **USA**.
- MAJOR SCIENTIFIC ADVISOR, REVIEWER, DARPA RAID Experiment 4*, US Army Intelligence Systems Integration Laboratory, **major 3-week event**, July 12 – Aug. 4, 2006, Battle Command Training Center, 35th Infantry Division, Ft. Leavenworth, KS, **USA**.
- INVITED SPEAKER, PANELIST*; Workshop with Northrop Grumman, with software demonstrations and extensive discussion, *LG Technology for Commanders*, **0.5-day event** together with Dr. A. Murdoch, K. Goetz, N. Love, and other scientists and engineers (25 people), Northrop Grumman Electronic Systems, Northrop Grumman, May 31, 2006, Baltimore, MD, **USA**.
- INVITED SPEAKER, PANELIST*; Workshop with Boeing, with software demonstrations and extensive discussion, *LG Technology for Boeing Network Commander*, **0.5-day event** together with Dr. V. Yakhnis, O. Umanskiy, D. Manser, L. Gustafson, and other managers and engineers, Boeing AMS, Boeing Integration Center (BIC West), May 16, 2006, Anaheim, CA, **USA**.
- INVITED SPEAKER, PANELIST*; Workshop with Boeing, with software demonstrations and extensive discussion, *LG Technology for Effect Based Operations*, **0.5-day event** together with Dr. V. Yakhnis, O. Umanskiy, R. Hurrenburg, J. Malone, J. Willis, M. Less, M. Lucian, K. Carlsen, L. Gustafson, J. Morrow, S. Schwartz, and other managers, scientists and engineers, Boeing Phantom Works and Integrated Defense Systems, May 15, 2006, Huntington Beach, CA, **USA**.
- ORGANIZER, SPEAKER*; Asymmetric Warfare and LG Decision Aids, Talk at M&D C2 with

Demonstrations, with O. Umanskiy, M. Molz, R. Rasch; May 11, 2006, US Army M&D C2 Lab, Orlando, FL, **USA**.

MAJOR SCIENTIFIC ADVISOR, REVIEWER, TRIAL RUN: DARPA RAID Experiment 4, SAIC Offices, May 8-11, 2006, Orlando, FL, **USA**.

ORGANIZER, SPEAKER, PANELIST

BRITISH SEMINAR SERIES VII

April 21, 2006 - *LG strategies for Defense Systems*, **3-hour Workshop** with Sir "Sandy" Wilson, M. White, I. Milne, top managers, Northrop Grumman, London, **UK**.

- *LG Foundations*, **3-hour Workshop** (with software demonstrations and discussion), with Sir "Sandy" Wilson, M. StJohn-Green, other scientists (7 participants), Government Communications HQ, Cheltenham, **UK**.

April 20, 2006 - *LG-PACKAGE: Future Enhancements, COA Generation for MOUT*; **0.5-day Workshop**, with Sir "Sandy" Wilson, S. Gale, Dr. D. Tilley, B. Wardman, and other scientists and engineers, Dstl, MoD, Farnborough, **UK**.

- *Report: Experiments with LG-PACKAGE; Future Plans*, **3-hour Workshop**, (6 participants) with Sir "Sandy" Wilson, P. Collins, A. Daw, and other scientists and engineers, BAE SYSTEMS, Farnborough, **UK**.

April 19, 2006 - *LG: Foundations and Applications; Training and Mission Rehearsal*, **0.5-day Workshop**, with Sir "Sandy" Wilson, Lt Col G Deakin, Wg Cdr P. Wilkins, Lt Col N. Chapman, Maj M. Winston-Davis, AVM Maddox, Joint Services Staff College (Defence Academy), Shrivenham, **UK**.

April 18, 2006 - *Integration of LG and Flames*, **3-hour Workshop**, with Sir "Sandy" Wilson, F. Pew, J. Robertson, Flames Offices, St Albans, **UK**.

- *Advantages of the LG-based technology*, **0.5 day Workshop** (with software demonstrations and discussion), with Sir "Sandy" Wilson, A. Gabby, P. Armstrong, P. Norriss, VEGA, London, **UK**.

ORGANIZER, SPEAKER; LG Systems for Advanced Training, Tech. Meeting for the STTR Army LG-EXPERT Project with Demonstrations, with Dr. V. Yakhnis, O. Umanskiy, S. Shadrik, March 17, 2006, US Army Research Institute, Ft Knox, KY, **USA**.

SPEAKER, PANELIST, with Dr. V. Yakhnis, O. Umanskiy, "RAID Experiment 3: Lessons Learned", *DARPA RAID PI Tech. Meeting*, March 14-16, 2006, Kansas City, MI, **USA**.

INVITED SPEAKER, PANELIST; Joint Technological Opportunities in Applying LG to the National Defense Projects, *Meetings with SPARTA*, with Dr. V. Yakhnis, O. Umanskiy, J. Walsh, C. Whitlock, other scientists and engineers, March 8-9, 2006, SPARTA, Huntsville, AL, **USA**.

SPEAKER, PANELIST, with Dr. V. Yakhnis, Presentations and Discussion on Results of the *DARPA RAID Experiment 3*, US Army Intelligence Sys-s Integration Lab, March 1-3, 2006, Ft Huachuca, NM, **USA**.

MAJOR SCIENTIFIC ADVISOR, REVIEWER, DARPA RAID Experiment 3, US Army Intelligence Systems Integration Lab, **major 3-week event**, Feb 10 - March 3, 2006, Ft Huachuca, NM, **USA**.

2005

ORGANIZER, SPEAKER; Final Review, DARPA Tech. Meeting, LG-COMMANDER Demonstration: *Force Multipliers for Urban Operations*, with TAG, Overwatch Systems, and STILMAN, with Dr. V. Yakhnis, O. Umanskiy, J. Ramming, Col Gulotta, Dec. 22, 2005, ITspatial Offices, McLean, VA, **USA**.

ORGANIZER, SPEAKER; Technical Exchange, Software/Hardware Exhibition at the Interservice/Industry Training, Simulation & Education Conference – IITSEC, with D. Halloran, Sir Sandy Wilson, Nov. 29, 2005, Orlando, FL, **USA**.

ORGANIZER, SPEAKER; Tech. Meeting with Dstl (UK), *Experiments with LG-PACKAGE: Required Enhancements*, with S. Gale, Sir Sandy Wilson, Nov. 29, 2005, Orlando, FL, **USA**.

ORGANIZER, SPEAKER; Tech. Meeting for the JFCOM Project with TAG, ITspatial (now Overwatch) & STILMAN, *Final Demonstration of LG-TRAINER*, **3-hour event**, with Dr. V. Yakhnis, O. Umanskiy, JFCOM-J7, Oct. 7, 2005, Suffolk, VA, **USA**.

ORGANIZER, SPEAKER; Tech. Meeting for the Boeing NETWORK COMMANDER Project, *Required Enhancements to LG-PACKAGE*, **4-hour event**, with Dr. V. Yakhnis, L. Gustafson, other scientists

- and engineers, Sept. 30, 2005, Boeing Integrated Defense Systems, Huntington Beach, CA, **USA**.
ORGANIZER, SPEAKER; Tech. Meeting for the SBIR Air Force Project (with AFRL, Wright Patterson AFB and SMC, Los Angeles AFB), *LG-ADVERSARY for Generating Strategies for SEAS*, **4-hour event**, with Dr. V. Yakhnis, O. Umanskiy, R. Weber, other scientists and engineers, Sept. 29, 2005, Space Missile Center, Los Angeles, CA, **USA**.
- ORGANIZER, SPEAKER*; DARPA IPR Tech. Meeting, LG-COMMANDER Demonstration: *Force Multipliers for Urban Operations*, with TAG, ITspatial (now Overwatch), and STILMAN, with Dr. V. Yakhnis, O. Umanskiy, J. Ramming, Col J. Moore, Col Gulotta, Sept. 15-16, 2005, ITspatial Offices, Falls Church, VA, **USA**.
- INVITED KEYNOTE SPEAKER, TUTORIAL INSTRUCTOR*,
Keynote Talk, *Advanced Applications of Linguistic Geometry*,
Tutorial, *Linguistic Geometry: From Search to Construction*;
14th International Congress on Computing - CIC'05, Sept. 5-9, 2005, Mexico City, **Mexico**.
ORGANIZER, SPEAKER; Tech. Meeting for the JFCOM Project with TAG, ITspatial (now Overwatch) & STILMAN, *Demonstration of LG-TRAINER*, **2-day event**, with Dr. V. Yakhnis, O. Umanskiy, ITspatial - JFCOM-J7, Aug. 25-26, 2005, McLean-Suffolk, VA, **USA**.
- INVITED PANELIST*, COLORADO Homeland Security Research Focus Group (organized by the CU-Boulder Leeds School of Business), Aug. 23, 2005, Denver, CO, **USA**.
- ORGANIZER, SPEAKER*; Kick-off Tech. Meeting for the STTR Army LG-EXPERT Project (with Army Research Inst. – Ft. Knox, KY), *LG Systems for Advanced Training*, **2-day event**, with Dr. V. Yakhnis, O. Umanskiy, S. Shadrik, Dr. Loussier, Aug. 16-17, 2005, Denver, CO, **USA**.
- SPEAKER, PANELIST*, with Dr. V. Yakhnis, O. Umanskiy, “RAID Experiment 2: Lessons Learned; Phase II Requirements”, *DARPA RAID PI Tech. Meeting*, July 28-29, 2005, Orlando, FL, **USA**.
- ORGANIZER, SPEAKER, PANELIST*, with Dr. V. Yakhnis, “Role of LG Technology in the DARPA RAID Project”, Multiple Meetings, Presentations and Demonstrations to various VIP visitors (50 people) during *DARPA RAID Experiment 2*, Offices of the RAID Systems Integrator – SAIC, July 20-29, 2005, Orlando, FL, **USA**.
- SCIENTIFIC ADVISOR, REVIEWER, DARPA RAID Experiment 2*, Offices of SAIC, **major 3-week event**, July-Aug, 2005, Orlando, FL, **USA**.
- INVITED SPEAKER*; Invited Talk (with Dr. V. Yakhnis), *Linguistic Geometry for Modeling & Simulation of Defense Systems*, with Gen Hall, Dr. Ozolek, US JFCOM-J9 (Modeling & Simulation, Joint Forces Command), July 18, 2005, Suffolk, VA, **USA**.
- ORGANIZER, SPEAKER*; Workshop with BAE SYSTEMS (UK), *Experiments with LG-PACKAGE: Evaluation and Advanced Training*, **2-day event**, with Dr. T. Altman, Dr. V. Yakhnis, O. Umanskiy, J. Senior, June 27-28, 2005, Denver, CO, **USA**.
- ORGANIZER, SPEAKER*; with Dr. V. Yakhnis, P. Curry, K. Wilshire, *LG Strategies for Joint Operations*, US JFCOM-J7 (Training Division, Joint Forces Command), June 9, 2005, Suffolk, VA, **USA**.
- INVITED SPEAKER*; Invited Talk (with Dr. V. Yakhnis, Gen Freeman), *Linguistic Geometry for US Joint Forces*, US JFCOM-J9 (Modeling & Simulation, Joint Forces Command), June 8, 2005, Suffolk, VA, **USA**.
- ORGANIZER, SPEAKER*; (with Dr. V. Yakhnis), Presentation to Gen Freeman, *LG Systems: New Opportunities*, May 5, 2005, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER*; (with Dr. V. Yakhnis), DARPA Kick-off Tech. Meeting, *Force Multipliers for Urban Operations*, with TAG, ITspatial (now Overwatch), and STILMAN, J. Ramming, Col J. Moore, DARPA, May 6, 2005, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER*; Workshop with Dstl (UK), with software demonstrations, *Experiments with LG-PACKAGE: Required Enhancements*, **2-day event**, with Dr. T. Altman, Dr. V. Yakhnis, Dr. P. Young, Dr. D. Tilley, B. Wardman, April 28-29, 2005, Denver, CO, **USA**.
- ORGANIZER, SPEAKER*; Workshop with BAE SYSTEMS (UK), with software demonstrations, *Experiments with LG-PACKAGE: Lessons Learned and Future Plans*, **2-day event**, with Dr. T. Altman, Dr. V. Yakhnis, O. Umanskiy, Dr. P. Grossmann, A. Daw, April 21-22, 2005, Denver, CO, **USA**.

- SPEAKER, PANELIST*; (with Dr. V. Yakhnis, O. Umanskiy), “DARPA RAID Experiment I: Lessons Learned”, *DARPA RAID PI Technical Meeting*, April 14, 2005, Orlando, FL, **USA**.
- SCIENTIFIC ADVISOR, REVIEWER, DARPA RAID Experiment 1*, Offices of SAIC, **major 3-week event**, March-April, 2005, Orlando, FL, **USA**.
- INVITED SPEAKER*; Invited Talk (with Dr. V. Yakhnis, Sir Sandy Wilson), *Linguistic Geometry for US Army Projects*, US Army Science Board, *Potential Applications to Future Combat Systems (FCS)*, MITRE, April 13, 2005, McLean, VA, **USA**.
- ORGANIZER, PANELIST*; Research Meeting; TAG, ITspatial (now Overwatch), and STILMAN, Discussion of the DARPA projects on Urban Operations, **4-hour event**, with Dr. V. Yakhnis, O. Umanskiy, P. Curry, scientists and engineers, April 12, 2005, The Analysis Group, Falls Church, VA, **USA**.
- ORGANIZER, SPEAKER*; Two Invited Sessions on *Linguistic Geometry*, **0.5-day event** at the 2005 SPIE DEFENSE & SECURITY, Symposium "Enabling Technologies for Simulation Science IX", Orlando, FL, March 29-30, 2005, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with RAID SME, with software demonstrations and extensive discussions, *Linguistic Geometry Strategies for Urban Operations*, **2-day event**, with Dr. T. Altman, Dr. V. Yakhnis, R. Boyd, O. Umanskiy, Col Moore, Feb. 23-24, 2005, Denver, CO, **USA**.
- ORGANIZER, SPEAKER*; **3-hour Workshop** at Lockheed Martin, “Capabilities of LG Tools”, with Dr. V. Yakhnis and 7 scientists, Center for Innovation, Lockheed Martin, Feb. 18, 2005, Suffolk, VA, **USA**.
- ORGANIZER, SPEAKER*; (with Dr. V. Yakhnis), Presentation at DARPA, “LG Systems for Integrated Battle Command”, with Dr. J. Allen, Program Manager, DARPA, Feb. 17, 2005, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER*; Presentation at BAE SYSTEMS/N. America, “LG Tools: New Advancements”, with Dr. V. Yakhnis, Sir Sandy Wilson, Dr. R. Lawrence, BAE SYSTEMS Headquarters, Feb. 17, 2005, Rockville, MD, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop at Northrop Grumman, with software demonstrations and extensive discussions, *LG Technology for Modeling and Simulation*, **0.5-day event**, with Dr. V. Yakhnis, Sir Sandy Wilson, Dr. V. Roske, M. Tulkoff, and 10 managers, scientists and engineers, Modeling, Simulation & Analysis Center, Northrop Grumman, Feb. 16, 2005, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER*; (with Dr. V. Yakhnis), Presentation at ONR, “LG Tools to Autonomous Operations, Future Naval Capability”, with Marc Steinberg, Deputy Program Manager, STTR topic N05-T017, Office of Naval Research, Feb. 15, 2005, Arlington, VA, **USA**.
- ORGANIZER, PANELIST*; Research Meeting; TAG, ITspatial (now Overwatch), and STILMAN, Discussion of the Joint DARPA Project “Force Multipliers”, **3-hour event**, with Dr. V. Yakhnis, O. Umanskiy, other scientists and engineers, Feb. 15, 2005, The Analysis Group, Falls Church, VA, **USA**.
- INVITED SPEAKER, PANELIST*; Invited Talk (with Dr. V. Yakhnis), LG Tools for Modeling Command Organization Structure, DARPA RFI SN05-09 Workshop, *Tools to Identify an Enemy's Command Organization and Manage its Disruption*, Jan. 25-27, 2005, Orlando, FL, **USA**.

2004*INVITED KEYNOTE SPEAKER*,

Keynote Talk I, *LG-PACKAGE, The Ultimate Wargaming Environment*,

Keynote Talk II, *LG Wargaming for Simulation Based Acquisition*,

International Conference on Artificial Intelligence in Science and Technology – AISAT’2004, Nov. 21-24, 2004, UTAS, Hobart, **Australia**.

*ORGANIZER, SPEAKER, PANELIST***BRITISH SEMINAR SERIES VI**

Oct. 18, 2004: - *LG for Defense: A Strategic View*, **3-hour Workshop** (with software demonstrations and discussion), with O. Umanskiy, Sir Wilson, Air Vice-Marshal G. Williams, top managers and scientists (7 participants), Lockheed Martin, London, **UK**.

Oct. 19, 2004: - *LG strategies for Naval Operations*, **3-hour Workshop** (with software demonstrations and discussion), with O. Umanskiy, Sir Wilson, N. Moss, managers and scientists (5 participants), Thales, London, **UK**.

- *Advantages of the LG based technology*, **1-hour Workshop** (with software

- demonstrations and discussion), with O. Umanskiy, Sir A. Wilson, UK CAS ACM Sir J. Stirrup, B. Patel, Dr. P. Young, top managers and scientists (12 participants), Ministry of Defence, London, **UK**.
- *LG strategies for Naval Operations*, **3-hour Workshop** (with software demonstrations and discussion), with O. Umanskiy, Sir Wilson, Sir J. Blackham, J. Telford, VP, top managers (7 participants), EADS, London, **UK**.
- Oct. 20, 2004, - *Mathematical Foundations of LG: Why does LG work?*, **0.5-day Workshop**, (15 participants) with O. Umanskiy, Dr. P. Grossmann, and other scientists, SEIC (Systems Engineering Innovation Center), BAE SYSTEMS, Bristol, **UK**.
- *LG strategies for Defense Systems*, **3-hour Workshop** (with software demonstrations and discussion), with O. Umanskiy, Dr. J. Stark, RADM, K. Marshall, top managers (6 participants), Northrop Grumman, London, **UK**.
- Oct. 21, 2004, - *Experiments with LG-PACKAGE; Future Enhancements*, **1-day Workshop**, (10 participants) with O. Umanskiy, Dr. P. Young, Dr. T. Gardener, B. Wardman, and other scientists and engineers, Dstl, Farnborough, **UK**.
- Oct. 22, 2004, - *Experiments with LG systems; Lessons Learned*, **0.5-day Workshop**, (10 participants) with O. Umanskiy, Dr. P. Young, Dr. T. Gardener, Sir "Sandy" Wilson, B. Patel,, and other scientists, Dstl, Farnborough, **UK**.
- *Experiments with LG-PACKAGE*, **3-hour Workshop**, (6 participants) with O. Umanskiy, Sir S. Wilson, P. Collins, A. Daw, Dr. P. Grossmann, and other scientists and engineers, BAE SYSTEMS, Farnborough, **UK**.
- SPEAKER, PANELIST*; (with Yakhnis, V.), "Linguistic Geometry Strategies for Adversarial Reasoning", *DARPA RAID Kick-off Technical Meeting*, Oct. 12-15, 2004, Offices of SAIC, Orlando, FL, **USA**.
- INVITED SPEAKER*, Presentation *LG for Command & Control and Effects-Based Operations*, to the Panel of Reviewers "Force Multipliers for Urban Area Operations", DARPA, Arlington, VA, Sept. 13, 2004, **USA**.
- ORGANIZER*; Modeling and What-If Experiments with LG-PACKAGE: Optimizing Configuration of Aircraft Carrier to Withstand Cruise Missile Attacks, **1-day event**, with Dr. T. Altman, Dr. V. Yakhnis, R. Boyd, O. Umanskiy, A. Daw (BAE), Dr. P. Grossmann (BAE SYS-S, UK), Sept 9, 2004, Denver, CO, **USA**.
- ORGANIZER, INSTRUCTOR*; Workshop with BAE SYSTEMS (UK), with software demonstrations, "Know How" for LG-PACKAGE, **3-day event**, with Dr. T. Altman, Dr. V. Yakhnis, R. Boyd, O. Umanskiy, Dr. P. Grossmann (BAE SYSTEMS, UK), Sept 6-8, 2004, Denver, CO, **USA**.
- INVITED SPEAKER*, Presentation *LG for Predictive Situational Awareness and Threat Assessment*, to the Panel of Reviewers "Command and Control and Combat Systems Discovery", Office of Naval Research, Arlington, VA, Aug. 5, 2004, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with CECOM RDEC, with software demonstrations and extensive discussions, *LG Technology for US Army*, **1-day event**, with Dr. V. Yakhnis, O. Umanskiy, E. Dawidowitz (CECOM RDEC), and 12 managers, scientists and engineers, US Army CECOM RDEC, May 17, 2004, Ft. Monmouth, NJ, **USA**.
- ORGANIZER, SPEAKER*; Workshop with BAE SYSTEMS (UK), with software demonstrations and extensive discussions, *Exploration of Capabilities of LG at BAE SYSTEMS*, **1-day event**, with Dr. V. Yakhnis, P. Collins (Manager, BAE SYSTEMS, UK), May 9, 2004, Denver, CO, **USA**.
- ORGANIZER, SPEAKER, INSTRUCTOR*; Workshop with Dstl (UK), with software demonstrations and extensive discussions, "Know How" for LG-PACKAGE, **3-day event**, with Dr. T. Altman, Dr. V. Yakhnis, R. Boyd, O. Umanskiy, Dr. P. Young (Dstl – Defence Science and Technology Lab, UK), B. Wardman (Dstl), C. Johnson (Dstl), May 2-4, 2004, Denver, CO, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with NSWC and UWF, with software demonstrations and extensive discussions, *Linguistic Geometry for Simulation Based Acquisition*, **1-day event**, with Dr. T. Altman, Dr. V. Yakhnis, R. Boyd, O. Umanskiy, V. Pugachev, Dr. J. Canning (NSWC – Naval Surface Warfare Center), R. Dibble (NSWC), April 22, 2004, Denver, CO, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with NSWC and General Dynamics, with software demonstrations and extensive discussions, *Foundations of the LG Theory; LG Technology for Littoral Operations*, **1-day event**, with Dr. V. Yakhnis, O. Umanskiy, Dr. S. Kass (UWF, telecommute), J.

- Kimball, C. Blakelock, B. Copeland, B. Dibble, J. Canning, and 20 managers, scientists and engineers, Naval Surface Warfare Center, March 18, 2004, Dahlgren, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with XPXC, LG for Air Force Operations, with software demonstrations and extensive discussions, **0.5-day event**, with Dr. V. Yakhnis, O. Umanskiy, Dr. H. Meyer, Scientific Advisor (HQ USAF/XPXC), and 15 officers, HQ USAF/XPXC (The Pentagon), March 17, 2004, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with DTRA, with software demonstrations and extensive discussions, *LG Technology for Missile Defense*, **3-hour event**, with Dr. V. Yakhnis, O. Umanskiy, and 8 managers, scientists and engineers, DTRA - Defense Threat Reduction Agency, March 16, 2004, Ft. Belvoir, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with BAH, with software demonstrations and extensive discussions, *LG Technology: Foundations and Applications*, **3-hour event**, with Dr. V. Yakhnis, O. Umanskiy, Dr. F. Frostic (BAH), and 7 scientists and engineers, BAH – Booze, Allen, Hamilton, March 15, 2004, Tyson's Corner, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with MDA and SPARTA, with software demonstrations and extensive discussions, *LG Technology for Missile Defense*, **3-hour event**, with Dr. V. Yakhnis, O. Umanskiy, C. Paldino (SPARTA), J. Stoehr (MDA), and 5 scientists and engineers, SPARTA, Feb. 25, 2004, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with NSWC and General Dynamics, with software demonstrations and extensive discussions, *LG Technology for Tactical and Strategic Operations*, **1-day event**, with Dr. V. Yakhnis, O. Umanskiy, J. Kimball (SBIR Program Manager, NSWC), and 11 managers, scientists and engineers, Naval Surface Warfare Center, Feb. 26, 2004, Dahlgren, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with NSWC and UWF, with software demonstrations and extensive discussions, *LG: New Opportunities for US Navy*, **2-day event**, with Dr. T. Altman, Dr. V. Yakhnis, R. Boyd, O. Umanskiy, J. Kimball (SBIR Program Manager, Naval Surface Warfare Center), Dr. S. Kass (Univ. of West Florida), Jan. 8-9, 2004, Denver, CO, **USA**.

2003

- ORGANIZER, SPEAKER*; Workshop "LG for Aerospace Defense Systems", Organized **0.5-day event** at the Defence Science and Technology Organization – DSTO, Melbourne, Dec. 12, 2003, **Australia**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with Raytheon, with software demonstrations and extensive discussions, *LG: New Opportunities for Defense Systems*, **1-day event**, with Dr. T. Altman, R. Boyd, Dr. D. Nguen, K. Casey, P. Brenner, D. Ruehre, S. Hansen, E. Hansen, L. Schwartz, and other managers, scientists and engineers, Raytheon Office, Nov. 14, 2003, Aurora, CO, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with Boeing, with software demonstrations and extensive discussions, *LG Technology for Defense Systems*, **2-day event** together with Dr. V. Yakhnis, O. Umanskiy, T. Rolston, C. McCiver, Heinz, VP, Dr. M. McCoy, G. Johanningmeier, R. Bertin, Ass. Tech Fellow, R. Jones, G. Engel, Dr. M. L. Lucian, and other managers, scientists and engineers, Boeing Phantom Works and Integrated Defense Systems, Nov. 6-7, 2003, St. Louis, MO, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with Space Missile Center and Boeing, with software demonstrations and extensive discussions, *LG Theory for Solving Higher-Dimensional Game, Applications to Defense*, **1-day event** together with Dr. V. Yakhnis, O. Umanskiy, T. Rolston, R. Weber, and other managers, scientists and engineers (SMC and Aerospace Corp.), SMC, Los Angeles AFB, Sept. 19, 2003, Los Angeles, CA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with Boeing, with software demonstrations and extensive discussions, *LG Technology for Defense Systems*, **1-day event** together with Dr. V. Yakhnis, O. Umanskiy, T. Rolston, Director, C. McCiver, Manager, and other managers, scientists and engineers, Boeing Integrated Defense Systems, Sept. 18, 2003, Huntington Beach, CA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with Boeing, with software demonstrations and extensive discussions, *LG Technology for Space Defense Systems*, **2-day event** together with Dr. V. Yakhnis, O. Umanskiy, K. Neifert, T. Rolston, G. Smith, and other managers, scientists and engineers, Boeing Integrated Defense Systems, Aug. 14-15, 2003, Arlington, VA, **USA**.

- ORGANIZER, SPEAKER, PANELIST*; Workshop: Air Force Future Concepts and Transformation with USAF/XPXC and Boeing, with software demonstrations and extensive discussions, *LG for Air Force Future Systems*, Organized **0.5-day event** together with Dr. V. Yakhnis, O. Umanskiy, T. Rolston (Boeing), Dr. Howard Meyer, HQ USAF/XPXC at The Pentagon, Aug. 15, 2003, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Lecture-Seminar: MDA, Boeing, XPXC, with extensive discussions, *How LG Works for Ballistic Missile Defense*, **0.5-day event**, with Dr. V. Yakhnis, O. Umanskiy, C. Paldino (SPARTA), J. Stoehr (MDA), T. Rolston (Boeing), Dr. H. Meyer (USAF/XPXC) and other scientists and engineers, Missile Defense Agency, Aug. 14, 2003, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with MDA and SPARTA, with software demonstrations and extensive discussions, *LG: Theory and Applications to Ballistic Missile Defense*, **0.5-day event** together with Dr. V. Yakhnis, O. Umanskiy, C. Paldino (SPARTA), J. Stoehr, Dr. L. Altgilbers and other managers, scientists and engineers (all – MDA), Missile Defense Agency, July 1, 2003, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST*; Workshop with Boeing, with software demonstrations and extensive discussions, *LG Technology for Space Systems*, Organized **1-day event** together with Dr. V. Yakhnis, O. Umanskiy, T. Rolston, J. Carlile, J. Shelnut, J. Winzell, and other managers, scientists and engineers, Boeing Phantom Works and Integrated Defense Systems, June 6, 2003, Seal Beach & Huntington Beach, CA, **USA**.
- ORGANIZER, SPEAKER*; Invited session *Linguistic Geometry*, **0.5-day event** at the 2003 Symposium "Enabling Technologies for Simulation Science VII", Orlando, FL, April 25, 2003, **USA**.
- ORGANIZER, SPEAKER, PANELIST*, Workshop with Lockheed Martin (LM), with software demonstrations and extensive discussions, *LG: New Opportunities for Defense Systems*, a **0.5-day event** together with Dr. V. Yakhnis, O. Umanskiy, Dr. S. Smith, Dir. (LM), S. Reineke, Dir. (LM), D. Barton, VP (LM), J. Murray (LM), T. Barnard (LM) and other managers, scientists and engineers, Lockheed Martin Headquarters, March 26, 2003, Bethesda, MD, **USA**.
- ORGANIZER, SPEAKER, PANELIST*
BRITISH SEMINAR SERIES V
- Feb. 28, 2003: - *LG for Defense: A Strategic View*, **4-hour Workshop** (with software demonstrations and discussion), with Dr. V. Yakhnis, O. Umanskiy, Sir Wilson, top managers and scientists (12 participants), Alenia Marconi, Kimberley, **UK**.
- Feb.25-26, 2003, - **Joint British/American Workshop** at Dstl (MoD UK), UCD (USA), STILMAN (USA) with representatives from military branches of British Government, NATO, and major international companies (28 invited participants): presentations, live software demonstrations, and extensive discussions, *LG: New Opportunities for Defense Industry*, **2-day event**, with Dr. V. Yakhnis, O. Umanskiy, Sir "Sandy" Wilson, and B. Patel, Dr. P. Young, Dr. T. Gardener, Dstl, Farnborough, **UK**.
- Feb. 24, 2003: - *The Power of LG-based Defense Systems*, **3-hour Presentation** (with software demonstrations and discussion), with Dr. V. Yakhnis, O. Umanskiy, Sir Wilson, top managers and scientists of the Dept. of Strategy, BAE Systems, London, **UK**.
- ORGANIZER, SPEAKER, PANELIST*, *Presentation with software demonstrations and extensive discussions*, *LG: New Technology for Strategic Wargaming*, **3-hour workshop** together with Dr. V. Yakhnis, J. Kreighbaum, Lt Col, N. Beard, J. Noss, P. Wathen, Lt Col, R. Fabian, *Wargaming and Simulation, Headquarters USAF, Jan. 30, 2003, Arlington, VA, USA*.
- ORGANIZER, SPEAKER, PANELIST*, Presentation with software demonstrations and extensive discussions, *LG: Predicting and Neutralizing Enemy Sensors*, **4-hour workshop** together with Dr. V. Yakhnis, M. Gray, J. Scott, T. Drzewiecki, J. Rossi, Alion Science and Technology, Jan. 28, 2003, Alexandria, VA, **USA**.
- SPEAKER, PANELIST*, Presentation, *LG: New Technology for Focusing Search and Analysis of Advanced Information Extraction*, **3-hour workshop** together with Dr. V. Yakhnis, S. Kimmel, B. Tagliaferri, M. Benezra, D. McAuliffe and 20 team members of the large-scale proposal to AFRL, Alion Science and Technology, Jan. 28, 2003, Washington, DC, **USA**.

2002

ORGANIZER, SPEAKER, PANELIST, Joint American/British Workshop with presentations, software demonstrations and extensive discussions, *Advanced Applications to Defense Systems and Foundations of Linguistic Geometry*, **2-day event**, with Dr. T. Altman, Dr. V. Yakhnis, O. Umanskiy, R. Boyd, Dr. P. Young, Dr. T. Gardener, Dec. 16-17, 2002, Denver, CO, **USA**.

SPEAKER, Presentation with software demonstration and discussion, *Linguistic Geometry: New Technology for Defense Systems*, **0.5-hour talk** at the Joint Meeting of the Industrial & Student Advisory Boards, Dept. of Computer Science and Eng., UCD, Nov.22, 2002, Denver, CO, **USA**.

INVITED SPEAKER, PANELIST, Presentation with software demonstrations and extensive discussions, *LG: Mathematical Foundations and Computational Complexity*, **4-hour workshop** together with Dr. V. Yakhnis, B. Tagliaferri, Dan McAuliffe, Alex Sisti, Dr. Tim Busch, and John McNamara, Information Directorate, Air Force Research Lab, Nov. 12, 2002, Rome, NY, **USA**.

ORGANIZER, SPEAKER, PANELIST, Presentation with software demonstrations and extensive discussions, *LG: Predictive Capability; Application to Information Extraction*, **2-hour workshop** together with Dr. V. Yakhnis, B. Tagliaferri, Dan McAuliffe, Alion Science and Technology (former IITRI), Nov.12, 2002, Rome, NY, **USA**.

ORGANIZER, SPEAKER, PANELIST, Presentation with software demonstrations and extensive discussions, *LG: New Horizons for Modeling and Simulation*, **2-hour workshop**, with J. "Snake" Clark, Lt Col K. Johns, Maj. P. Hastert (Eagle Team Solutions), Directorate of Quick Reaction Combat Support, Air Force, The Pentagon, Sept. 26, 2002, Washington, DC, **USA**.

ORGANIZER, SPEAKER, PANELIST

BRITISH SEMINAR SERIES IV

Sept. 3, 2002: - *LG: Wide Range of Defense Applications*, 3-hour Presentation (with software demonstrations and discussion), with Dr. V. Yakhnis, Dr. P. Martin, LOGICA, Cobham, Surrey, **UK**.

Sept. 2, 2002: - *LG for Maritime Operations and Other Applications*, 3-hour Workshop (with software demonstrations and discussion), with Dr. V. Yakhnis, Sir Wilson, Dr. A. Low (Tech. Director), N. Moss (Dep. Director), Thales, London, **UK**.

ORGANIZER, SPEAKER, PANELIST, Presentation with software demonstrations and extensive discussions, *LG: New Conceptual Model for Defense Systems*, **3-hour workshop** together with C. Warner (Euromarkt), M. Gray, J. Scott, IITRI (now Alion), Aug. 30, 2002, Alexandria, VA, **USA**.

ORGANIZER, SPEAKER, PANELIST, Presentation with software demonstrations and extensive discussions, *LG: New Technology for Strategy Generation*, **3-hour workshop** together with Col Dr. B. McCrabb (DMM Ventures), C. Warner (Euromarkt), M. Upson (Executive Associate, CACI), J. A. Schandua (Senior Simulation Engineer, CACI), CACI, Aug. 30, 2002, Arlington, VA, **USA**.

ORGANIZER, SPEAKER, PANELIST, Presentation with software demonstrations and extensive discussions, *LG for Effects Based Planning and Wargaming*, **3-hour workshop** together with Col Dr. B. McCrabb (DMM Ventures), C. Warner (Euromarkt), E. Geier (Director, Program Development for Army, Air Force and DARPA, ORINCON), R. Pudwill (Chief Scientist, ORINCON), ORINCON Corp., Aug. 29, 2002, Arlington, VA, **USA**.

ORGANIZER, SPEAKER, PANELIST, Presentation with software demonstrations and extensive discussions, *LG: Results and Opportunities for Defense Systems*, **One-day workshop** together with Lt Gen T. Case (Former Deputy Commander in Chief and Chief of Staff, U.S. Pacific Command, Interim Dean), College of Business and Public Policy, University of Alaska at Anchorage, Aug. 15, 2002, Anchorage, Alaska, **USA**.

ORGANIZER, SPEAKER, PANELIST,

BRITISH/EUROPIAN SEMINAR SERIES III

Aug. 2, 2002: - *LG: New Technology for Operations Planning*, One-hour Presentation (with software demonstrations and discussion), with Dr. V. Yakhnis, Sir Wilson, Dr. J. Daily and 12 scientists (NATO C3 Agency), The Hague, **The Netherlands**.

Aug. 1, 2002: - *LG for Short and Long Range Planning and Resource Allocation*, Two-hour Workshop (with software demonstrations and discussion), with Dr. V. Yakhnis and

- July 31, 2002: Sir Wilson, Participants: 20 officers, NATO-SHAPE, Brussels, **Belgium**.
- *LG Defense Systems: Practical Approach*, Five-hour Workshop (with software demonstrations and discussion), with Dr. V. Yakhnis, A Thompson and 5 scientists, EDS Defence Ltd., Hook, Hampshire, **UK**.
- July 30, 2002: - *LG for Maritime Operations Planning and Execution*, Three-hour Workshop (with software demonstrations and discussion), with Dr. V. Yakhnis, N. Moss (Dep. Director, Thales Naval), London, **UK**.
- July 29, 2002: - *LG Technology for Aircraft Carrier Configuration Analysis and Operations*, Four-hour Presentation (with software demonstrations and discussion), with Dr. V. Yakhnis and Sir Wilson (all - STILMAN), J. Bray, A. Daw, C. Tovee, I. Stage (all - Alenia Marconi Ltd.), Farnborough, **UK**.
- *LG Technology for Defense Systems*, Three-hour Presentation (with software demonstrations and discussion), with Dr. V. Yakhnis, Advantage Tech. Consulting, Farnborough, **UK**.
- July 26, 2002: - *LG for Maritime Operations*, Three-hour Workshop (with software demonstrations and discussion), with Dr. V. Yakhnis, Dr. A. Low (Technical Director, Thales), Thales, London, **UK**.
- ORGANIZER, SPEAKER, INSTRUCTOR**, Extended Presentations and Demonstrations of LG Applications at the **4-day long** exhibit *LG: New Technology for Defense Systems* at JAWS S3 2002 (Joint Advanced Weapons Systems, Sensors, Simulations and Support Symposium), US Air Force Academy, July 22-25, 2002, Colorado Springs, CO, **USA**.
- INVITED SPEAKER**, *Linguistic Geometry: New Technology for Defense Systems*, **1-hour** Invited Talk, The 2002 International Symposium on Information Systems and Engineering (ISE'2002), July 17, 2002, San Diego, CA, **USA**.
- ORGANIZER, SPEAKER, PANELIST**;
BRITISH SEMINAR SERIES II
- June 21, 2002: - *LG: New Technology for Military Operations Rehearsal*, Three-hour Presentation (with software demonstrations and discussion), with Dr. V. Yakhnis, Sir Wilson, Air Vice-Marshal Robinson and his staff (Permanent Joint Headquarters - PJHQ), Northwood, **UK**.
- June 20, 2002: - *Defense Applications of LG: Inside-Out*, Four-hour Workshop (with software demonstrations and discussion), with Dr. V. Yakhnis, and Sir Wilson, Participants: 18 scientists from BAe Systems, Bristol, **UK**.
- June 19, 2002: - *LG Defense Systems: Practical Approach*, Five-hour Workshop (with software demonstrations and discussion), with Dr. V. Yakhnis, Wing Com. T. Stephens and his staff, Dr. R. Willer (Dstl), RAF Cranwell College, Air Warfare Centre, Cranwell, **UK**.
- June 18, 2002: - *LG Technology for Modeling and Simulation*, Three-hour Presentation (with software demonstrations and discussion), with Dr. V. Yakhnis, J. Bray, J. Rutherford, Dr. D. Scott, L. Watton, Alenia Marconi Ltd., Farnborough, Hampshire, **UK**.
- June 17, 2002: - *LG: Theoretical Foundations and Advanced Applications*, Five-hour Workshop (with software demonstrations and discussion), with Dr. V. Yakhnis, Sir Wilson, B. Patel, Dr. P. Young, Dr. I. Greig, R. Frampton, Dstl, Ministry of Defence UK, Farnborough, Hampshire, **UK**.
- ORGANIZER, SPEAKER**, Demonstration of LG-PROTECTOR 1.3 to the top Boeing management including J. Albaugh (Boeing Space and Communications, Director) and G. Muellner (Boeing Phantom Works, Director); *Briefings at Boeing Integration Center*, **2-day event** together with Dr. V. Yakhnis, O. Umanskiy, and J. Hearing, P. Bloch, The Boeing Company, June 2-3, 2002, Los Angeles, CA, **USA**.
- ORGANIZER, SPEAKER, PANELIST**, Presentation to the Joint Synthetic Battlespace Group with software demonstrations and extensive discussions, *LG: New Opportunities for Synthetic Battlespace*, **1-day event**, with Dr. V. Yakhnis, Dr. S. D. Kwak, Col E. Andrew, Hanscom AFB, May 28, 2002, Boston, MA, **USA**.
- ORGANIZER, SPEAKER, PANELIST**, Presentation to the Collaborative Simulation Technology Branch

- with software demonstrations and extensive discussions, *LG: Results and Opportunities for Defense Systems*, **1-day event** together with Dr. V. Yakhnis, B. McQuay, Dr. K. Weigand, Wright-Patterson AFB, May 23, 2002, Dayton, OH, **USA**.
- ORGANIZER, INSTRUCTOR**, Extended Presentation to the US Air Force Scientific Advisory Board with demonstration of PROTECTOR 1.3 and extensive discussions, *Optimal Resource Allocation for the Defense against Cruise Missile Attack*, Participants: Boeing Phantom Works, Rockwell Science Center, UCD, STILMAN Advanced Strategies, **2-day event** together with J. Hearing, P. Bloch (all - Boeing), The Boeing Company, May 14-15, 2002, Mesa, AZ, **USA**.
- SPEAKER, PANELIST**, Briefing, *Defense Capabilities of Linguistic Geometry*, **1-hour event**, together with Dr. V. Yakhnis, Charles Warner (Euromarkt), DARPA Program Managers from IXO (Information Exploitation) and ATO (Advanced Technologies) departments (17 attendees), May 6, 2002, DARPA, Arlington, VA, **USA**.
- ORGANIZER, SPEAKER, PANELIST**, Joint Seminar of Boeing Phantom Works/Rockwell Science Center/STILMAN/UCD with software demonstrations and extensive discussions, *Advanced Applications and Mathematical Foundations of Linguistic Geometry*, **2-day event** together with Dr. J. Albert, P. Bloch, J. Hearing (all – Boeing Phantom Works), The Boeing Company, April 25-26, 2002, Seattle, WA, **USA**.
- ORGANIZER, SESSION CHAIR, SPEAKER**, *Linguistic Geometry for Wargaming and COA Analysis (0.5-day event)* at the 2002 Symposium "Enabling Technologies for Simulation Science VI", Orlando, FL, April 2-5, 2002, **USA**.
- ORGANIZER, SPEAKER**, Joint Seminar of STILMAN/UCD/Fujitsu Defense Systems (**Japan**) with software demonstrations, *Modeling and Simulation with Linguistic Geometry*, **1-day event**, March 21, 2002, Denver, CO, **USA**.
- INVITED SPEAKER, PANELIST**, *Defense and Commercial Applications of Linguistic Geometry*, **3-hour** Presentation (with software demonstration and discussion), with C. Wilcox, Euromarkt, Ltd, Feb. 28, 2002, Washington, DC, **USA**.
- INVITED SPEAKER, PANELIST**, *LG Based Technology for Air Force, Army, and Navy*, **3-hour** Presentation (with software demonstration and discussion), with C. Wilcox, British Embassy, Feb. 28, 2002, Washington, DC, **USA**.
- INVITED SPEAKER, PANELIST**, *Defense Capabilities of Linguistic Geometry Tools*, **3-hour** Presentation (with software demonstration and discussion), with Dr. V. Yakhnis, O. Umanskiy, RAF Air Commodore S. Peach and UK Representatives at the U.S. Central Command - CENTCOM, Jan. 31, 2002, Tampa, FL, **USA**.
- INVITED SPEAKER, PANELIST**, *LG Tools for Planning & Control of Defense Systems*, **2-hour Presentation** (with software demonstration and discussion), with V. Yakhnis, O. Umanskiy, Col. McCrabb, The US Air Force Command And Control BattleLab, Jan. 30, 2002, Hurlburt Field, FL, **USA**.
- ORGANIZER, SPEAKER, PANELIST**;
BRITISH SEMINAR SERIES I
 Jan. 17, 2002: - *LG Technology for Air Traffic Management*, Two-hour Presentation (with software demonstration and discussion), with C. Wilcox, ACM Sir Wilson, Alenia Marconi Ltd., Farnborough, Hampshire, **UK**.
 - *LG: Revolutionary Technology for Defense Systems*, Three-hour Presentation (with software demonstration and discussion), with ACM Sir Wilson, B. Patel (Dstl/MoD), UK Ministry of Defence, Farnborough, Hampshire, **UK**.
 - *LG: New Wargaming Technology*, Four-hour Presentation (with software demonstration and discussion), with C. Wilcox, ACM Sir Wilson, Newman & Spurr Consultancy Ltd., Surrey, **UK**.
 Jan. 16, 2002: - *Linguistic Geometry Tools for Defense Systems*, Four-hour Presentation (with software demonstration and discussion), with C. Wilcox, Royal Air Force Cranwell, Air Warfare Centre, London, **UK**.
 Jan. 15, 2002: - *Various Applications of LG to Defense Systems*, Four-hour Presentation (with

- Jan. 14, 2002: software demonstration and discussion), with C. Wilcox, BAe Systems, Bristol, **UK**.
 - *Linguistic Geometry for Command and Control*, Three-hour Presentation (with software demonstration and discussion), with C. Wilcox, UK Ministry of Defence, Synthetic Environments Coordination Office, London, **UK**.

2001

- INVITED SPEAKER, PANELIST, Linguistic Geometry: Theory and, Applications*, Four-hour Presentation (with software demonstration and discussion), Defense Science and Technology Organization - DSTO, Dec. 11, 2001, Adelaide, **Australia**.
- INVITED TUTORIAL INSTRUCTOR*, Six-hour Tutorial, Advanced Strategies for Abstract Board Games: Foundations of Linguistic Geometry, *14th Australian Joint Conference on Artificial Intelligence - AI'01*, Dec. 10, 2001, Adelaide, **Australia**.
- ORGANIZER, SPEAKER, TUTORIAL INSTRUCTOR, PANELIST, Workshop LG-PROTECTOR for Integrated Defense Against Cruise Missile Attack; Future Plans*, **Two-day event** with Boeing Phantom Works (with software demonstrations and extensive discussion), The Boeing Company, November 29-30, 2001, Seattle, WA, **USA**.
- INVITED PLENARY SPEAKER, TUTORIAL INSTRUCTOR*, Intelligent Virtual Worlds Empowered by LG Engine, *International Conference on Computational Intelligence and Multimedia - ICCIMA-2000*, Shonan International Village, Oct. 30, 2000, Yokosuka City, **Japan**.
- INVITED SPEAKER, PANELIST, Linguistic Geometry: New Technology for Advanced C², Modeling, and Simulation*, Two-hour Presentation (with software demonstration and discussion), Defense Systems Group, Fujitsu, Oct. 29, 2001, Tokyo, **Japan**.
- INVITED SPEAKER, Linguistic Geometry: New Technology for Defense Systems*, Two-hour Presentation (with software demonstration and discussion) with O. Umanskiy, T. Altman, C. Wilcox, TRW Data Technologies Division, Oct. 2, 2001, Denver, CO, **USA**.
- INVITED SPEAKER, PANELIST, Linguistic Geometry Wargaming for Effects Based Operations*, One-hour Presentation (with software demonstration and extensive discussion) with V. Yakhnis, Workshop on Effects Based Wargaming, Air Force Research Laboratory (AFRL), July 10, 2001, Rome, NY, **USA**.
- INVITED SPEAKER, Linguistic Geometry: A New Type of Game Theory*, One-hour Talk (with software demonstration), Pre-Collegiate "Engineering Topics", UCD, June 29, 2001, Denver, CO, **USA**.
- ORGANIZER, SPEAKER, TUTORIAL INSTRUCTOR, PANELIST, Foundations and Defense Applications of Linguistic Geometry*, Two-day Workshop of STILMAN Advanced Strategies, Boeing Phantom Works, and Rockwell Science Center (with software demonstrations and extensive discussion), The Boeing Company, June 14-15, 2001, Seattle, WA, **USA**.
- INVITED SPEAKER, PANELIST, Linguistic Geometry for Air Force Problem Solving*, Three-hour Presentation (with software demonstration and extensive discussion) with V. Yakhnis and O. Umanskiy, The U.S. Air Force Research Laboratory (AFRL), June 12, 2001, Rome, NY, **USA**.
- INVITED TUTORIAL INSTRUCTOR*, "Human and Robotic Wars: The Winning Strategies", *IEEE International Conference on Robotics and Automation - ICRA-2001*, May 21-25, 2001, Seoul, **Korea**.
- ORGANIZER, SPEAKER, PANELIST, Linguistic Geometry: Foundations and Applications*, Joint Seminar of STILMAN Advanced Strategies, UCD, and representatives of various industries (with software demonstrations), March 23, 2001, Denver, CO, **USA**.
- SPEAKER, PANELIST*, — Talks, Software Demonstrations, Panel Discussions (with Lee, J., Feng Lin, Yakhnis, V., Umanskiy, O.), "LG History and Projects", "JFACC Experiment Commander (JEC): Advanced SEAD Missions", *Tech. Interchange Meeting with Science Fair*, DARPA JFACC Program, Feb. 5-8, 2001, San Diego, CA, **USA**.

2000

- INVITED PLENARY SPEAKER, TUTORIAL INSTRUCTOR, International Conference on Artificial Intelligence in Science and Technology - AISAT-2000*, The University of Tasmania, Dec. 16-20, 2000, Hobart, **Australia**.
- INVITED PLENARY SPEAKER, TUTORIAL INSTRUCTOR, The ICSC Int. Symposium on Intelligent*

- Systems and Applications* – ISA’2000, Dec. 11-15, 2000, Wollongong, **Australia**.
INVITED SPEAKER,
Artificial Intelligence: Personal Impressions;
From Turk to Linguistic Geometry,
UCD REFIT Program at Chapparel, Dec. 7, 2000, Denver, CO, USA.
ORGANIZER, SPEAKER, PANELIST, *Defense and Civil Applications of Linguistic Geometry*, Joint Seminar of the Boeing Company, STILMAN Advanced Strategies, and UCD with software demonstration, Nov. 28, 2000, Denver, CO, **USA**.
INVITED SPEAKER, *Linguistic Geometry for Effects Based Operations*, The Boeing Company, Nov. 13, 2000, Washington, DC, **USA**.
INVITED SPEAKER, *Linguistic Geometry for Tactical Command and Control*, Raytheon, Nov. 8, 2000, Washington, DC, **USA**.
INVITED SPEAKER, *Linguistic Geometry: Winning Games, Advising Commanders, Routing Vehicles*, MITRE, Nov. 8, 2000, Washington, DC, **USA**.
SPEAKER, PANELIST, — Talk, Software Demonstration, Panel Discussion (with Lee, J., Feng Lin, Yakhnis, V., Umansky, O.), “JFACC Experiment Commander (JEC): New SEAD Experiments”, *Tech. Interchange Meeting with Air Operations Panel*, JFACC Program, DARPA, Oct. 31-Nov. 2, 2000, Pittsburgh, PA, **USA**.
INVITED TUTORIAL INSTRUCTOR, *The 2nd Int. Conference on Computers and Games – CG’2000*, October 26-28, 2000, Hamamatsu, **Japan**.
INVITED SPEAKER, *Internet Protection with LG*, LATIS, Oct. 10, 2000, Boulder, CO, **USA**.
INVITED SPEAKER, *Applications of LG to Various Problem Domains*, Sandlot Capital, Sept. 20, 2000, Denver, CO, **USA**.
INVITED SPEAKER, *LG: Background and Expectations*, Softbank Venture Capital, Sept. 8, 2000, Louisville, CO, **USA**.
INSTRUCTOR, — Tutorials, Software Demonstrations (with Lee, J., Feng Lin, Yakhnis, V.), “JFACC Experiment Commander (JEC): Advanced SEAD Experiments”, *Tech. Interchange Meeting with Science Fair*, JFACC Program, DARPA, July 12-14, 2000, Minneapolis, MN, **USA**.
PROGRAM COMMITTEE MEMBER, SESSION CHAIR, SPEAKER (with Yakhnis, V.), *The 2nd DARPA JFACC Symposium “Advances in Enterprise Control,”* July 10-11, 2000, Minneapolis, MN, **USA**.
PROGRAM and STEERING COMMITTEES MEMBER, INVITED PLENARY SPEAKER, INSTRUCTOR, *The 2nd Int. Symp. on Engineering of Intelligent Systems - EIS’2000*, June 27-30, 2000, Paisley, **UK**.
SPEAKER (with Yakhnis, V.), *JEC: First Analytical Experiments*, DARPA Program Review – PMR, Multimedia long-distance conference, June 21, 2000, Denver - Thousand Oaks – Detroit – Washington - San Diego, **USA**.
SPEAKER, INSTRUCTOR, — Talk, Tutorials, Software Demonstrations (with Lee, J., Feng Lin, Chen, Y., Yakhnis, V., Umansky, O.), “JFACC Experiment Commander (JEC): First SEAD Experiments”, *Tech. Interchange Meeting with Sci. Fair*, JFACC Program, DARPA, May 2-4, 2000, Washington, DC, **USA**.
SPEAKER (with Yakhnis, V.), *LG Prototype Development: A Roadmap*, DARPA Program Review, Multimedia long-distance Conf., April 4, 2000, Denver - Thousand Oaks – Detroit – Washington - San Diego, **USA**.
ORGANIZER and CHAIR, *Joint STILMAN/UCD Tech. Meeting on JFACC Project*, March 24, 2000, Denver, CO, **USA**.
ORGANIZER and CHAIR, *Joint STILMAN/UCD/Rockwell Tech. Meeting on JFACC Project*, March 2-3, 2000, Denver, CO, **USA**.
ORGANIZER and CHAIR, *Joint STILMAN/UCD/Rockwell Tech. Meeting on JFACC Project*, Feb. 1, 2000, Denver, CO, **USA**.
SPEAKER, *DARPA JFACC Technical Meeting for Rockwell Team*, Jan. 9-12, 2000, Rockwell Science Center, Thousand Oaks, CA, **USA**.

INVITED INSTRUCTOR, 2-hour Tutorial, *LG: Winning Strategies for Multiagent Systems*, The 1st Asia-Pacific Conf. on Intelligent Agent Technology – IAT'99, Dec. 14-17, 1999, Hong Kong, **China**.

PROGRAM COMMITTEE MEMBER, *INVITED SPEAKER*, International Workshop on Emergent Synthesis - IWES'99, December 6-7, 1999, Kobe, **Japan**.

ORGANIZER and CHAIR, *STILMAN/UCD/Pioneer Technologies Tech. Meeting on JFACC Project*, Nov., 1999, Denver, CO, **USA**.

— KEYNOTE TALK, “Military Applications of Linguistic Geometry”;

— TALK with SOFTWARE DEMO (with Skhisov, E.), “2D Combat Simulator/ Controller;”

— TALK with SOFTWARE DEMO (with Umanskiy, O.), “Dynamic 3D User Interface for the JFACC Experiment Commander.”

PROGRAM COMMITTEE MEMBER, *SESSION CHAIR*, *SPEAKER* (with Yakhnis, V.), 1st DARPA JFACC Symposium “Advances in Enterprise Control,” November 15-16, 1999, San Diego, CA, **USA**.

INVITED SPEAKER, Invited Lecture, “Linguistic Geometry: Strategies to Win”, *The 1999 Int. Conference on Mechatronic Technology - ICMT'99*, Oct. 21-23, 1999, Pusan, **S. Korea**.

SPEAKER, (with Lee, J., Chen, Y., Lin, F., Yakhnis, V.) “Agile Symbolic Mission Control and Hostile Counteraction Strategies,” *DARPA JFACC Tech. Interchange Meeting*, Sept. 21-23, 1999, Washington, DC, **USA**.

SPEAKER (with Yakhnis, V.), “LG Strategies for Agile Control”, *DARPA JFACC Kick-off Tech. Meeting (teleconference)*, Sept. 1, 1999, Rockwell Sci. Center, Thousand Oaks, CA, **USA**.

CO-FOUNDER, (CHAIRMAN & CEO), *STILMAN Advanced Strategies*, a company to advance research and develop applications of Linguistic Geometry, Sept. 9 of 1999, Denver, CO, **USA**.

INTERNATIONAL SCIENTIFIC COMMITTEE MEMBER, The 3rd Int. Conf. on Systems, July 4-8, Athens, **Greece**.

PROGRAM COMMITTEE MEMBER, Int. Conf. “Problems of Control and Modeling in Complex Systems”, June 14-18, 1999, Samara, **Russia**.

INVITED SPEAKER, Lecture, *From Games to Intelligent Systems*, Department of Electrical Eng. and Computer Science, Tulane University, March 18, 1999, New Orleans, LA, **USA**.

INVITED SPEAKER, Lecture, *Winning Strategies for Robot War Games*, 4th Int. Symp. *ARTIFICIAL LIFE AND ROBOTICS - AROB'99* "Challenge for Complexity", Jan.19-22, 1999, Oita, **Japan**.

1998

INVITED SPEAKER, Invited Lecture, *Solving Games by Construction of Strategies*, CTS Workshop on Combinatorics and Algorithms, Center for Theoretical Sciences (CTS), Institute of Information Science, Academia Sinica, December 21-23, 1998, Republic of China, **Taiwan**.

PROGRAM COMMITTEE MEMBER, The 3rd IEEE European Workshop on Computer-Intensive Methods in Control and Data Processing, “Can We Beat the Curse of Dimensionality?” Sept. 7-9, 1998, Prague, **Czech Republic**.

ORGANIZER, INSTRUCTOR, SPEAKER, and PROGRAM COMMITTEE CHAIR

THIRD SYMPOSIUM on LINGUISTIC GEOMETRY:

2 tutorial sessions: *Introduction to Linguistic Geometry: Tools and Experiments*

Optimal Strategies and Formal Grammars

3 paper sessions: *Winning Strategies in Linguistic Geometry*

Linguistic Geometry Tools

LG: Implementations

at *IEEE Int. Conf. on Systems, Man, and Cybernetics — SMC'98*, San Diego, Oct. 11-14, 1998, **USA**.

INVITED KEYNOTE SPEAKER, Invited Keynote Talk, *6th Int. Workshop on Distributed Data Processing - DDP'98*, Academy of Sci., June 23-25, 1998, Akademgorodok, Novosibirsk, Siberia, **Russia**.

INVITED SPEAKER, Invited Lecture, Institute of Systems in Computer Science (Informatics), The Russian Academy of Science, Akademgorodok, Novosibirsk, Siberia, June 29, 1998, **Russia**.

INVITED PANELIST, *Ambiguity and Uncertainty in the 21st Century: Revolutions in Business, Science & Technology*, Chancellor's Scholars and Leaders Program, Panel Discussion, University of Colorado at Denver, Denver, CO, March 27, 1998, **USA**.

INVITED INSTRUCTOR, 4-hour Tutorial, *World Automation Congress*, May 1998, Anchorage, AK, **USA**.
INVITED SPEAKER, INSTRUCTOR, Invited Keynote Lecture and 4-hour Tutorial, International Symposium on Engineering of Intelligent Systems - EIS'98, Feb. 11-13, Tenerife, **Spain**.

INVITED SPEAKER, INSTRUCTOR, Invited Keynote Lecture and 4-hour Tutorial, *The Int. Conf. on Comp. Intelligence and Multimedia Applications*, Feb. 8-11, 1998, Monash University, Churchill, **Australia**.

INVITED SPEAKER, Florida State University Annual Colloquium Series in Computer Science for the Spring Semester, Jan. 22, 1998, Tallahassee, FL, **USA**.

1997

INVITED SPEAKER, INSTRUCTOR, Invited Lecture and 2.5-hour Tutorial, Asian Pacific Neural Network Assembly, ICONIP'97, jointly with the 5th Australian and New Zealand Int. Conf. on Intelligent Information Processing Systems (ANZIIS'97) and the 3rd New Zealand Int. Conf. on Artificial Neural Networks and Expert Systems (ANNES'97), Nov. 24-28, 1997, Dunedin & Queenstown, **New Zealand**.

INVITED INSTRUCTOR, 4-hour Tutorial, ANNIE'97 - Artificial Neural Networks and other Emerging Technologies for Designing Smart Engineering Systems, Nov. 9-12, 1997, St. Louis, **USA**.

INVITED KEYNOTE SPEAKER, International Symposium on Intelligent Systems AMSE-ISIS'97, September 11-13, 1997, Reggio Calabria, **Italy**.

ORGANIZER, INSTRUCTOR, SPEAKER, and PROGRAM COMMITTEE CHAIR

SECOND SYMPOSIUM on LINGUISTIC GEOMETRY (3-day event):

2 tutorial sessions: *Linguistic Geometry for Modeling and Simulation; Informal Survey, Formal Issues*

2 invited paper sessions: *Linguistic Geometry for Multi-Agent Systems: Theory and Applications Construction and Verification of Strategies in LG and Other Games*

at the 15th IMACS World Congress on Scientific Computation, Modeling and Applied Mathematics, August 24-29, 1997, Berlin, **Germany**.

INVITED PLENARY SPEAKER, SESSION CHAIR, World Multi-conference on SYSTEMICS, CYBERNETICS and INFORMATICS SCI '97/ISAS '97, July 7-11, 1997, Caracas, **Venezuela**.

INVITED SPEAKER

2 Invited Talks: *Linguistic Geometry for Planning and Control, Software Configuration Management with Programmer's Workbench,*

4-hour Tutorial on Linguistic Geometry,

Rockwell International Corp., Rockwell Science Center, Thousand Oaks, CA, May 8-9, 1997, **USA**.

INVITED INSTRUCTOR, 2-hour Tutorial *Linguistic Geometry: Problems and Solutions*, INFORMS - National Conf. on Operations Research and Management, San Diego, CA, May 4-7, 1997, **USA**.

INVITED SPEAKER, Seminar *Introduction to Linguistic Geometry*, Tennessee Technological University, April 28, 1997, **USA**.

INVITED SPEAKER, CHANCELLOR'S LECTURE *Linguistic Geometry: First Contact*, University of Colorado at Denver, Denver, CO, April 2, 1997, **USA**.

INVITED SPEAKER, Invited Talk *Linguistic Geometry for Intelligent Systems*, Department of Computer Science, Indiana University — Purdue University, April 11, 1997, **USA**.

ORGANIZER, PLENARY SPEAKER, and CHAIR

FORUM on LINGUISTIC GEOMETRY (2-day event, 4 special sessions):

From Search to Analysis: Linguistic Geometry of Complex Systems

Advances in Linguistic Geometry

Construction of High Assurance Systems via Linguistic Geometry and Other Methods

Linguistic Geometry: Foundations and Applications

at the 2nd Workshop of the INTERNATIONAL INSTITUTE FOR GENERAL SYSTEMS STUDIES, Jan. 1997, San Marcos, TX, **USA**.

Marcus *WHO'S WHO IN SCIENCE AND ENG., WHO'S WHO IN AMERICA, WHO'S WHO IN THE WORLD*, **USA**.

1996

- INVITED SPEAKER*, Talk “Complex Systems from the Linguistic Geometry Prospective”, Proc. of the Int. Workshop *Control Mechanisms for Complex Systems: Issues of Measurement and Semiotic Analysis*, (sponsored by the US Army), Dec. 8-12, 1996, Las Cruces, **USA**.
- INVITED SPEAKER*, Talk “Introduction to Linguistic Geometry”, AAI FALL SYMPOSIUM “Learning Complex Behaviors in Adaptive Intelligent Systems, Nov. 9-11, MIT, Boston, **USA**.
- INVITED KEYNOTE SPEAKER*, 1.5-hour Keynote Talk at the V *Congreso Iberoamericano de Inteligencia Artificial - the 5th International Congress on Artificial Intelligence of Ibero-American countries* (mainly Latin America, Spain and Portugal) - IBERAMIA’96, Oct. 28 - Nov. 1, Cholula, **Mexico**.
- INVITED INSTRUCTOR, GUEST MEMBER OF THE PANEL*, One-day Tutorial “A Linguistic Geometry for Multiscale Intelligent Planning and Control: Optimal Strategies in War Scenarios, Manufacturing, Positional Games”, Int. Conf. *INTELLIGENT SYSTEMS: A SEMIOTIC PERSPECTIVE*, Oct. 20-23, NIST, Gaithersburg, MD, **USA**.
- INVITED SPEAKER*, Invited Lecture, *Linguistic Geometry for Multi-agent Systems*, Research Colloquium, Department of Mathematics and Computer Science, University of Denver, Sept. 20, Denver, CO, **USA**.
- INVITED KEYNOTE SPEAKER, SESSION CHAIR, MEMBER OF THE PANEL*, Invited Lecture “Advances in Linguistic Geometry”, Eleventh International Conference on the *Applications of Artificial Intelligence in Engineering*, Sept. 11-13, 1996, Clearwater, Florida, **USA**.
- INVITED KEYNOTE SPEAKER*, Invited Lecture (2 hours) “Fighting Dimensionality with Linguistic Geometry”, IEEE Workshop on *Computer-Intensive Methods in Control and Signal Processing*, August 28-30, 1996, Prague, **Czech Republic**.
- INVITED SPEAKER*, Talk “New Results in Linguistic Geometry”, Joint Seminar of the Departments of Computer Science and AI, University of New South Wales, Sydney, August 20, 1995, **Australia**.
- INVITED KEYNOTE SPEAKER*, Invited Lecture “Linguistic Geometry: A Hierarchy of Semantic Networks for Search Reduction”, IV *Int. Conf. on Conceptual Structures*, Sydney, August 19-22, 1996, **Australia**.
- ORGANIZER and INSTRUCTOR*,
SUMMER SCHOOL ON LINGUISTIC GEOMETRY, a **week-long event** at the Dept. of Applied Mathematics and Process Control, St. Petersburg University, St. Petersburg, July 1996, **Russia**.
- INVITED INSTRUCTOR*, Advanced Tutorial “Linguistic Geometry: A Formal Model of Human Reasoning for Solving Search Problems”, *Int. Conf. on Formal and Applied Practical Reasoning*, Gustav Stresemann Institut, Bonn, June 1996, **Germany**.
- INVITED SPEAKER*, Invited Talk “Advances in Linguistic Geometry: Heuristic Model Generates Optimal Solutions”, Research Seminar *Readings in Optimization*, Dept. of Mathematics, University of Colorado at Denver, April 4, 1996, Denver, **USA**.
- INVITED SPEAKER*, Invited Talk "Linguistic Geometry: Search and Knowledge Representation", Research Seminar, School of Business, CU-Boulder, March 14, 1996, Boulder, CO, **USA**.
- INVITED SPEAKER*, Invited Talk “LINGUISTIC GEOMETRY: A Cognitive Model for Autonomous Agents”, *Workshop on Biologically Inspired Autonomous Systems: Computation, Cognition and Action*, Durham, NC, March 4-6, 1996, **USA**.
- INVITED INSTRUCTOR*, Advanced Tutorial “A Linguistic Geometry for Modeling and Control”, 5th *INFORMS Conf. on Comp. Sci. and Op-s Research: Recent Advances in the Interface*, Dallas, TX, Jan. 8-10, 1996, **USA**.

1995

- INVITED SPEAKER*, *Local Heuristic Networks for Multiagent Systems*, 1.5-hour Presentation at the VI *Conference of the Spanish Association for AI - CAEPIA’95*, Alicante, Nov. 1995, **Spain**.
- INVITED SPEAKER*, “Linguistic Geometry: Theory and Applications”, 2-hour Presentation at the 8th *National Conference on AI and Expert Systems*, Ciudad Guyana, October 1995, **Venezuela**.
- INVITED INSTRUCTOR*, “Heuristic Networks for Aerospace Systems Control”, Half-a-day Advanced Tutorial at the 5th *Int. Conference on Human-Machine Interaction and Artificial Intelligence in*

- Aerospace* (HMI-AI-AS'95), Sept. 1995, Toulouse, **France**.
- SESSION CHAIR and SPEAKER*, “LG for Robotic Systems: From Partial to Total Concurrency“, *First ECPD Int. Conf. on Intelligent Automation and Advanced Robotics*, Athens, Sept. 1995, **Greece**.
- INVITED INSTRUCTOR*, Short Course “Applications of Linguistic Geometry to Robotics”, *Automation and Robotics Center* of the University of Wales, Cardiff, Sept. 1995, **United Kingdom**.
- INVITED INSTRUCTOR*, “Linguistic Geometry for Intelligent Control”, 0.5-day Tutorial on LG for Intel. Control at the *10th IEEE Int. Symp. on Intelligent Control*, Monterey, CA, August, 1995, **USA**.
- INVITED SPEAKER*, “Semiotic Structure of Linguistic Geometry”, *IEEE/ISIC Workshop on Architectures for Semiotic Modeling and Situation Analysis in Large Complex Sys-s*, Monterey, CA, Aug.1995, **USA**.
- INVITED INSTRUCTOR*, Half-a-day Advanced Tutorial “Heuristic Networks for Search Reduction”, *Int. Conf. on Recent Advances in Mechatronics*, Istanbul, **Turkey**, August 1995.
- INVITED SPEAKER*, One-Hour Talk “Linguistic Geometry for Software Agents,” *High Integrity Software Initiative – Research Meeting*, Sandia National Laboratories, Albuquerque, NM, **USA**, July 1995.
- INVITED INSTRUCTOR*, Half-a-day Tutorial "From Search to Analysis: Introduction to LG and Applications", *Sandia Nat'l Labs*, joint audience of researchers from Sandia, Phillips Lab, and U. of New Mexico, Albuquerque, NM, **USA**, July 1995.
- INVITED INSTRUCTOR*, Two-Day SHORT COURSE, “Linguistic Geometry for Autonomous Vehicles Control”, Satellite Control and Simulation Division, U.S. Air Force Phillips Laboratory, Kirtland Air Force Base, Albuquerque, NM, **USA**, June 1995.
- INVITED INSTRUCTOR*, half-a-day Tutorial “LG for Technology Transfer”, *8th Int. Conf. on Industrial & Eng. Applications of AI & Expert Systems - IEA/AIE*, Melbourne, June 1995, **Australia**.
- INVITED SPEAKER*, “A Linguistic Geometry for Intelligent Control”, Joint Seminar of Departments of Computer Science and Artificial Intelligence, Univ. of New S. Wales, Sydney, June 1995, **Australia**.
- INVITED SPEAKER*, “Found-s of LG”, Dept. of Comp. Sci., U. of Sydney, Sydney, June 1995, **Australia**.
- INVITED SPEAKER*, Invited Talk, *Introduction to Linguistic Geometry: A Practical Approach*, Satellite Control and Simulation Division, U.S. Air Force Phillips Laboratory, Kirtland Air Force Base, Albuquerque, NM, **USA**, May 1995.
- INVITED INSTRUCTOR*, 3-Hour Advanced Tutorial “Space Applications of Linguistic Geometry”, 1995 *Goddard Conf. on Space Applications of AI and Emerging Information Technologies*, NASA Goddard Space Flight Center, Greenbelt, MD, May 1995, **USA**.
- PROGRAM COMMITTEE MEMBER* at the *Int. Conf. and Summer School on New Information Technologies*, Gurzuf, **Ukraine**, May 1995.
- ORGANIZER and CHAIR*, Panel Discussion “Eng. Education in USA and Eastern Europe”, *Int. Conf. Contemporary Russia: Myth and Reality*, Nat'l Endow-t for Humanities & UCD, Denver, **USA**, Apr. 1995.
- INVITED INSTRUCTOR*, Two-Hour Briefing “Linguistic Geometry for Aerospace Applications”, *American Institute for Aeronautics and Astronautics (AIAA) “Computing in Aerospace 10” Conference*, San Antonio, TX, **USA**, March 1995.
- SESSION CHAIR*, *American Institute for Aeronautics and Astronautics (AIAA) “Computing in Aerospace 10” Conference*, San Antonio, TX, **USA**, March 1995.
- ORGANIZER, PROGRAM COMMITTEE CHAIR, SPEAKER*,
FIRST SYMPOSIUM ON LINGUISTIC GEOMETRY AND SEMANTIC CONTROL at the *First World Congress on Intelligent Manufacturing Processes & Systems*, **Puerto-Rico**, Feb. 1995.
- INVITED INSTRUCTOR*, Full-Day Advanced Tutorial “Applications of LG to Control and Manufacturing” at the *First World Congress on Intel. Manufacturing Processes & Systems*, **Puerto-Rico**, Feb. 1995.
- INVITED SPEAKER*, “From Search to Analysis: Linguistic Geometry Applications”, Seminar *Theoretical Issues of CAD Development*, Auto-trol Technology, Denver, CO, **USA**, Jan. 1995.

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IEEE Int. Conf. on Robotics and Automation - 95
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National Forum on Linguistic Geometry, San-Marcos, TX, - 97
World Multi-conference SCI '97/ISAS '97
2nd Symposium on Linguistic Geometry, Berlin, Germany, - 97
3d IEEE European Workshop CMP'98
3d Symposium on Ling. Geom., San Diego, CA, - 98
Int. Conf. "Problems of Control and Modeling in Complex Systems", Samara, Russia -99
Int. Workshop on Emergent Synthesis - IWES'99, Kobe, Japan -99
1st DARPA JFACC Symposium on Advances in Enterprise Control, San Diego, CA,-99
2nd DARPA JFACC Symposium on Advances in Enterprise Control, Minneapolis, MN,-00
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Book "Adversarial Reasoning: Computational Approaches to Reading the Opponent's Mind", 06
