



John M. Flach, Ph.D

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<http://scholar.google.com/citations?user=DBg5ZRwAAAAJ&hl=en>
<http://psych-scholar.wright.edu/flach/biocv>
<http://blogs.wright.edu/learn/johnflach/>

Date of Birth: 19 OCT 53 Baltimore, MD

Family: Wife (Married, 1977) - Linnea (Bits) Kosater Flach.

Sons – John (Turk) Kosater Flach (1980), James (Peeper) Lawrence Flach (1982), Joseph (Joey) Kimball Flach (1987). Grandchildren - John Steven Flach (2010), David James Flach (2012), Ean James Flach (2013), Thomas Rogers Flach (2014), Ema Jo Flach (2017).

Research Interests:

To relate *Mind* and *Matter* to better understand *What Matters* with respect to successful adaptation to the demands of living in sociotechnical systems. In other words to better understand why I am so clumsy, and why doesn't technology help more? How to manage many degrees of freedom, whether in a human body or other complex system (e.g., learning to play guitar)? Perceptual-motor skill, manual control, decision-making, cognitive systems engineering, human-machine interface design (particularly in the domains of aviation, medicine, highway safety, learning with disabilities, and virtual reality), and ecological psychology.

Education and Degrees:

Ph.D.	1984	The Ohio State University Major: Human Experimental Psychology
M.A.	1978	University of Dayton Major: Psychology
B.A.	1975	St. Joseph's College, Indiana Major: Psychology Minor: Biology

Professional History:

2017 - Present	Senior Cognitive Systems Engineer, Mile Two LLC
2017 - Present	Emeritus Professor, Wright State University
1998 – 2017	Professor, Departments of Psychology and Biomedical Industrial and Human Factors Engineering, Wright State University
2014 (Sept – Nov)	Visiting Research Professor, Liberty Mutual Research Institute for Safety
2004 – 2012	Chair, Department of Psychology, Wright State University
2004 (Jan – Mar)	Visiting Professor, Departments of Aeronautical, Mechanical, and Industrial Design Engineering, TU Delft (Sabbatical from WSU)
2000 (May - June)	Erskine Fellow. University of Canterbury, Christchurch, NZ.
1994 - 1998	Associate Professor, Department of Psychology Wright State University
1990 – 1996	Adjunct Research Scientist Air Force Research Laboratory, Wright Patterson AFB
1990 - 1994	Assistant Professor, Department of Psychology Wright State University
1984 - 1990	Assistant Professor, Department of Mechanical & Industrial Engineering, Department of Psychology, Institute of Aviation, University of Illinois at Urbana-Champaign
1983-1984	Coordinator for Introductory Psychology Program

1982-1984	The Ohio State University Teaching Associate (Introductory Psychology)
1978-1982	The Ohio State University Research Associate, Supervisor: Dr. R.J. Jagacinski
1976-1978	The Ohio State University Graduate Teaching Associate, University of Dayton

Professional Societies:

Human Factors Society (Member of Editorial Board 1985 - 1995)
Southern Ohio Chapter Human Factors Society (President, 1994)
International Society for Ecological Psychology (Board of Directors 1991-1999)

Editorial Duties:

Editorial Board, *Cognition, Technology, and Work*, 2003 -
Editorial Board, *Theoretical Issues in Ergonomics*, 2001 -
Editorial Board, *International Journal of Cognitive Ergonomics*, 1992 - 1998
Editorial Board, *International Journal of Applied Ergonomics*, 1995 - 2001
Editorial Board, *Human Factors* 1985-1995

Research Support: (PI unless otherwise indicated)

EAGER/Collaborative Research: A New Science of Visual Experience NSF (Dec 2015 - Aug 2017) Co-PI with Parikh (PI) (\$195,845).
Sirius Games: Heuristica: Subcontract to ARA/Klein, Beth Veinott (project PI). Sponsor IARPA (PI with Kevin Bennett as Co-PI). (Oct 2011 - 2015) \$304,782.
NSF: Social Media Enhanced Organizational Sense Making in Emergency Response. (Sept 2011 - 2014) (co-PI with Sheth and Shalin). \$480,000.
FAA Nextgen Research Support, Ball Aerospace, (13 Jun - 5 Sept, 2011). \$10,705.
Air Force Office of Scientific Research, "Support for the 16th International Symposium on Aviation Psychology" Co-PI with Pam Tsang, 2011: \$18,900
Choose Ohio First Scholarships for Students with disabilities pursuing STEM careers, State Of Ohio, \$2.5 M. (2008 - 2013)
National Center for Technology Innovation (NCTI) Technology in the Works Competition Award, (Co-PI with Andrew Junker, Brain Actuated Technologies) 2009, \$42,226.
NSF:RDE RAD: Ohio STEM Abilities Alliance (2008-2016) \$2.5 M.
AF:STTR System for Meta-Information Portrayal of Lessons Learned: SIMPL. Sub contract to Aptima, Inc. (Co-PI with Wayne Shebilske) (July 1, 2008 - March 1, 2009). \$30,000. Phase II award (\$200,000) (2010 - 2013).
NSF, IGERT: Learning with Disabilities (PI, with Golshani, Wheatly and others) (2005-2010) \$3 M.
Graduate School, Wright State University, Research Challenge "Perceptual-Motor Learning," \$75,000 (Co-PI with Gallagher, Cope, and Barton) (2005)
Air Force Research Laboratory, "Cultural Cognition Laboratory," (2005). \$50,000.
General Dynamics AIS, "Cognitive Systems Engineering and the AOC" \$30,000. (2004).
General Dynamics/Veridian, "Cognitive Systems Engineering and the AOC" \$30,000. (2003).
College of Science and Mathematics, WSU, New Research Incentive Fund, "Virtual Environments and Simulation." (Co-PI with Shebilski and Gilkey) \$30,000 (2001)
Human Factors Research Laboratory, Japan Atomic Energy Research Institute, "Research on information form in human-machine interfaces," \$55,470 (1997 - 1998); \$46,886 (1998 - 1999); \$48,395 (1999 - 2000).
Air Force Office of Scientific Research, "Cognitive Workload in a Complex Synthetic Task Environment," \$778,000 (Co-investigator with R. Gilkey, PI) (1996 - 2000).
Fusion Interfaces for Tactical Environments Laboratory, Armstrong Laboratory, WPAFB, Subcontract to Logicon, "Human Factors support in display evaluation" 1993 \$9874.78.
AFOSR Augmentation Awards for Science and Engineering Research Training AASERT. "Perception and Control of Locomotion", 1993-1996, \$ 77,534.
Air Force Office of Scientific Research, "Perception/ Action: An Holistic Approach II," 1992-1995, \$338,635.

Air Force Office of Scientific Research, "Perception/ Action: An Holistic Approach," 1990-1991, \$125,387.
 Army Research Office, "Engineering Psychology Simulation Laboratory," 1987-1988, \$78,000, (Co-principal investigator with Chris Wickens).
 University of Illinois Research Board, "Engineering Psychology Simulation Laboratory," 1987-1988, \$18,950.
 IBM Project EXCEL, University of Illinois, "Broadening the Scope of the Manual Control Instructional Facility," 1987-1988, \$25,099 (Co-principal investigator with Penelope Sanderson).
 IBM Project EXCEL, University of Illinois, "Manual Control Instructional Facility," 1985-1987, \$29,426.
 University of Illinois Research Board, "Perception, Training, and Attention in Simulated Flight Control Tasks," 1985, \$30,000 (Co-principle investigator with Chris Wickens and Gavan Lintern).

Research Awards and Recognition:

2017 Honorary Fellow of the *International Symposium on Aviation Psychology*.
 2013 Paul M. Fitts Education Award winner, *Human Factors and Ergonomics Society*, Oct.
 Invited Participant. International Workshop on Human Error and System Design and Management. Sponsored by the Volkswagen Foundation, Germany. Technische Universität Clausthal (March 24 - 26, 1999).
 Invited Lecturer. Japan Atomic Energy Research Institute, Tokai, Japan (July 28 - Aug 18, 1996).
 Invited Participant. Seventeenth International Symposium on Attention and Performance, Beit Oren, Haifa, Israel, (July 7 - 12, 1996).
 Visiting Professor. University of Calgary. Department of Psychology and Computer Science Department. (March 12 -21, 1996).
 Invited Participant. Annual Workshop on New Technologies and Work --- NeTWORK. Approaches to Modeling the Evolution and Breakdown in Adaptive Systems. Bad Homburg, Germany. (June 16 - 18, 1994).
 Invited Participant. Workshop on Ecological Methods for Studying Perceptually-Guided Actions, Research Project Mind and Brain, Zentrum für Interdisziplinäre Forschung, Universität Bielefeld, 28 Nov - 1 Dec 1989.
 Invited Participant. Summer 1989 Workshop on Visually-Guided Control of Movement. NASA Ames Research Center, Moffet Field, CA. June/July 1989.
 UES-AFOSR Summer Faculty Fellowship, Armstrong Aerospace Medical Research Laboratory, Wright Patterson Air Force Base. Summer 1985.
 Arthur O. Beckman Research Award, University of Illinois, 1985.
 SCEEE-AFOSR Summer Graduate Student Fellowship, Armstrong Aerospace Medical Research Laboratory, Wright Patterson Air Force Base. Summer 1984.
 Alumni Research Award, Graduate School, The Ohio State University, 1982.
 Toop's Research Award, Department of Psychology, The Ohio State University, 1982.
 Graduate Summer Fellowship, University of Dayton, 1978.

Professional Services:

External evaluator for the Human Systems Engineering program in the College of Engineering at Arizona State University, Tempe/Mesa, AZ. (Jan, 2015).
 External evaluator of the proposal for a Ph.D. program in Applied Experimental Psychology/Human Factors in the Psychology and Communications Department at the University of Idaho, Moscow, ID (Dec, 2013).
 Expert Consultant for the AFRL Scientific Advisory Board (SAB) Review of Human ISR and Training Core Technical Competencies (CTC) within the Human Effectiveness Directorate, AFRL/RH. Wright-Patterson, AFB, OH. (Nov 18 - 22, 2013).
 Consultant to the SHARPC (Strategic Health IT Advanced Research) program National Center for Cognitive Informatics and Decision Making (NCCD), The School of Bioinformatics, The University of Texas Health Sciences Center at Houston. Houston, Texas. (2012)
 External Advisory Board of the Institute for Accessible Science (IAS), Purdue University, West Lafayette, IN. ias@purdue.edu or web address: iashub.org (2011)
 Scientific Advisory Board of Aptima, Inc. 12 Gill Street, Suite 1400, Wolburn, MA. 0180. <http://www.aptima.com/index.php> (2010 - 2011).

Organizing Committee and co-Chair: *International Symposium on Aviation Psychology*. (May 2017, Dayton, OH) (May 2015, Dayton, OH) (May 2013, Dayton, OH) (May 2011, Dayton, OH) (April 2009, Dayton, OH) (April, 2007, Dayton, OH) (April, 2005, Oklahoma City, OK) (April, 2003, Dayton, OH).

Technical Chair: *Cognitive Systems Engineering Workshop*. Dayton, OH. (Oct, 2003).

Technical Program Committee: *International Conference on Probabilistic Safety Assessment and Management*. (Nov, 2000). Osaka, Japan.

General Chair: *The Fourth Annual Symposium on Human Interaction with Complex Systems*, (March, 1998) Dayton, OH.

Organizing Committee: *Third Annual Symposium on Human Interaction with Complex Systems..* (Aug, 1996) Dayton, OH.

Symposium Organizer (with Peter Hancock): "Ecological approaches to human machine systems". Symposium at the *Human Factors Society 36th Annual Meeting*. Santa Monica, CA: Human Factors Society.

Symposium Organizer (with Yves Guiard): "Human Factors." *The 6th International Conference on Event Perception and Action*. Free University, Amsterdam. August 25-30, 1991.

Symposium Organizer: "Ecological Psychology: An Alternative perspective for Human Factors Design." *Interface '91: Design in the Global Market Place*. Stouffer Center Plaza Hotel, Dayton, OH. May 1-3, 1991.

Workshop Organizer: "The control of self-motion: Methodological issues." Sponsored by Wright State University, Armstrong Aerospace Medical Research Laboratory, and NASA Rotorcraft Human Factors Research Branch. Wright State University, Dayton, OH. August 27-28, 1990.

Program Advisory Committee: *The 5th International Conference on Event Perception and Action*. Miami University, Oxford, OH. July 24-28, 1989.

Symposium Organizer: "The ecology of human-machine systems." *The 5th International Conference on Event Perception and Action*. Miami University, Oxford, OH. July 26, 1989.

Organizing Committee: *NAMRC XVI north American Manufacturing Research Institution of SME Annual Meeting and Conference*, University of Illinois, Urbana, IL. May 25-27, 1988.

Symposium Organizer (with Gavan Lintern): "The perception of egomotion." *The 4th International Conference on Event Perception and Action*. Trieste, Italy. August 1988.

Conference Organizer: *The 4th Mid-Central Ergonomics/Human Factors Conference*. University of Illinois, Urbana, IL. July, 1987.

Department Service

Department Chair (2004 -2012)

Chair of Faculty Development Committee (FDC) (2001 - 2002)

Host to Dr. John Paulin Hansen, visiting researcher from Department of Innovation, IT Copenhagen, Denmark. Funded by a grant from European Union. (Summer, 2005)

Host to Dr. Hiroyuki Umemuro, visiting researcher from Department of Industrial Engineering and Management, Tokyo Institute of Technology, Tokyo Japan. Funded by a grant from the Japanese Government. (2000 – 2001)

Graduate Program Director (2000 – 2003)

Assistant Graduate Program Director (1999 – 2000)

Acting Department Head (Nov 98 – Jan 99)

Human Factors Search Committee (Chair 1995 - 1996)

Human Factors Curriculum Committee (1990 -

College Service

Graduate Studies Committee (1993 - 1996)

Graduate Studies Committee (2000 – 2003)

Promotion and Tenure Committee (2002 – 2003; 2004 – 2006)

University Service

Choose Ohio First Scholarship Committee (2008-2009)

Senior Vice President for Curriculum and Instruction Special Recognition Award in recognition of exceptional contributions in support of Choose Ohio First and the mission and goals of Academic Affairs and Wright State University (2008)

Dean's 5th Year Review Committee (2007)
 Search Committee for VP of Research (2006)
 Foundations of Excellence Assessment of First Year Experience (2005-2006)
 University Appeals Board (1996 -1997)
 Graduate Studies Committee (1998 – 2004)
 University Undergraduate Petitions (2000 – 2002)
 Graduate Council Member (2000 – 2004)

TEACHING

Graduate Courses:

Engineering Psychology, Department of Psychology, University of Illinois
Modeling Human-Machine Systems, Department of Mechanical and Industrial Engineering, University of Illinois
Manual Control and Psychomotor Skills, Department of Psychology and Department of Biomedical, Industrial, and Human Factors Engineering, Wright State University
Ecological Approaches to Human-Machine Systems, Department of Psychology, Wright State University
Introduction to Dynamic Systems. Department of Psychology, WSU
Science of Learning, Learning with Disabilities Program/ Dept. of Psychology, WSU
Complexity Theory, Multi-discipline across CoSM & Engineering, WSU
History & Systems in Psychology. Department of Psychology, WSU

Undergraduate Courses:

Introductory Psychology, Department of Psychology, Ohio State; WSU
Introductory Psychology (honors) Department of Psychology, WSU
Manual Control, Department of Mechanical and Industrial Engineering, University of Illinois
Methods-Time Analysis, Department of Mechanical and Industrial Engineering, University of Illinois
Cognition and Learning, Department of Psychology, WSU
Research Design and Methods, Department of Psychology, WSU
Engineering Psychology, Department of Psychology, WSU
Control of Locomotion, Department of Psychology, WSU
Great Ideas in Science, College of Science and Mathematics, WSU

Extension Courses:

Putting Humans Into Control: Analysis and Design of Stable Cognitive Systems. Short Course presented at IT Copenhagen, Denmark (March 8 –12, 2004). Also presented at Linköping Institute of Technology, Sweden (March 10 –11). With Max Mulder and Rene van Paassen (Aeronautical Engineering, TU Delft).
Annual Flight and Ground Vehicle Simulation Course. Thomas J. Watson School of Engineering and Applied Science, Binghamton University, State University of New York. Binghamton, NY. Lecture Topic: Human Factors in Training and Design. (1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003).
Ecological Analysis of Human-Machine Systems: A Meaning processing approach. The Swedish Center for Human Factors in Aviation, Linköping Institute of Technology, Linköping, Sweden (Dec. 13 – 14, 1999)
Ecological Approaches to Human-Machine Systems. Japan Atomic Energy Research Institute, Tokai, Japan. A course of lectures on ecological approaches to human performance and implications for the design of technological systems was presented over a period of three weeks. (July / August, 1996).
Control Theory: An Introduction for Psychologists and Others. Workshop presented at *The Sixth International Symposium on Aviation Psychology*. Columbus, OH. April 29-May 2, 1991.
Advanced Cockpit Displays and Controls, Engineering Short Course, UCLA Extension, Los Angeles, CA. August 5-9, 1991. Lecture Topic: Human Factors of Aircraft Display Images. [Also April 2-6, 1990; February 4-8, 1991]

Ecological Interface Design, Risø National Laboratory, Denmark, June 11-22, 1990. This was a two-week intensive summer course for Ph.D. students and young researchers. Funding was provided by the Danish Research Academy.

International Workshop on the Perception and Control of Egomotion, The Institute for Perception TNO, Soesterberg, The Netherlands. Sponsor: U.S. Air Force and Institute for Perception TNO. August, 1986. Lecture Topic: Perceptual-Motor Learning.

Human Perception and Performance Workshop for System Designers. University of Dayton, OH. Sponsor: U.S. Air Force. June, 1989. Lecture Topic: Motor Control.

Teaching Awards

2013 Paul M. Fitts Education Award from the *Human Factors and Ergonomics Society*.

1992 Dean's Collaborative Teaching Award, College of Science and Mathematics. For development of Research Design and Methods Course (Psych 300) in the Department of Psychology. (with Robert Gilkey and Ted Hayes)

Ph. D. Supervisor (supervisor for 13 completed Ph.D.s)

In progress	T. Saffell, (Quals completed 10) Psychology, WSU
In progress	T. Hammack, Psychology, WSU
2017	K. Behymer, Psychology, WSU <i>Interface Design for the Supervisory Control of Multiple Heterogeneous Unmanned Vehicles</i>
2014	S. Russell, Psychology, WSU <i>Alternative Indices of Performance: An Exploration of Eye Gaze Measures in a Visual Puzzle Task</i>
2013	A. Courtice (nee Bennett), Psychology, WSU <i>Chat Communication in a command and control environment</i>
2013	J. Cooper, Psychology, WSU <i>Heuristics: Bias vs. smart instrument. An exploration of the hot hand</i>
2012	T. McEwen, Psychology, WSU <i>Development and evaluation of an ecological display for the detection, evaluation, and treatment of cardiovascular risk</i>
2009	M. Feufel, Psychology, WSU <i>Bounded rationality in the emergency department</i>
2008	R. Schmidt, Psychology, WSU <i>The moderating influence of stress appraisals on performance under fatigue</i>
2008	D. Schwartz, Psychology, WSU <i>Exploring team dynamics: The evolution of coordination in a complex command and control environment</i>
2002	A. Ryan, (with P. Tsang & R. Backs) Psychology, WSU <i>Relations among multiple mental workload measures collected concurrently during a memory task</i>
2000	M. Smith, Psychology, Wright State University <i>Timing constraints on collision control</i>
1998	T. Stanard, Psychology, Wright State University <i>The visual information used in collision avoidance</i>
1997	C. Dominguez, Psychology, Wright State University <i>First do no harm: Expertise and metacognition in laparoscopic surgery</i>
1991	K. Vicente (with P.M. Sanderson), Dept Mech & Ind Engineering, UI <i>Supporting knowledge-based behavior through ecological interface design</i>

Ph.D. Committees (34):

2017	F.E. Robinson, Department of Psychology, WSU
2016	F.M. Drop, Aeronautical Engineering, Technische Universiteit Delft
2016	K. Johnson, Department of Aeronautics and Astronautics, MIT
2016	J. Holt, Department of Psychology, WSU
2014	P. Savioja, Department of Computer Science and Engineering, Aalto University Schools of Science, Finland
2013	B. Bina, Industrial Engineering, University of Toronto
2013	J. Ellerbroek, Aeronautical Engineering, Technische Universiteit Delft
2013	J. Smigelski, Environmental Sciences, WSU
2010	M. Amelink, Aeronautical Engineering, Technische Universiteit Delft
2010	M. Nagarajan, Computer Science & Engineering, WSU
2009	C. Eschelman-Hayes, Department of Psychology, WSU
2009	C. Borst, Aeronautical Engineering, Technische Universiteit Delft
2009	Thanh Mung Lam, Aeronautical Engineering, Technische Universiteit Delft
2007	M. Mulder, Aeronautical Engineering, Technische Universiteit Delft
2005	O. St-Cyr, Industrial Engineering, University of Toronto
2003	R. Bryll, Computer Science & Engineering, WSU
2003	M. Wentink, Mechanical Engineering Dept, Technische Universiteit Delft
2002	K. Gildea, Department of Psychology, WSU
2000	R. Beauregard, Department of Psychology, WSU
1999	P. Monier, Department of Psychology, WSU
1999	Max Mulder, Aeronautical Engineering, Technische Universiteit Delft
1992	P.J. Stappers, Industrial Design, Technische Universiteit Delft
1991	S. Kim, Kinesiology Department, UI
1990	T. Aretz, Department of Psychology, University of Illinois
1990	S. Lai, Urban and Regional Planning, UI
1990	R. Van Emmerik, Kinesiology Department, UI
1990	P. Grunzke, Department of Psychology, University of Illinois
1989	L. Weinstein, Department of Psychology, UI
1989	K. Harwood, Department of Psychology, UI
1988	D. Strayer, Department of Psychology, University of Illinois
1988	J. Zheng, Dept. of Mechanical & Industrial Engineering, UI
1987	L. Fracker, Department of Psychology, University of Illinois
1987	B. Goettl, Department of Psychology, University of Illinois
1998	Invited non-voting participant for the Ph.D. promotion of Fred Voorhorst, Industrial Design Engineering, Technische Universiteit Delft. (Travel funded by Delft University).

M.S. Degrees (Research Supervisor for 29 completed MS theses)

2017	Lucas Lemasters, WSU
2015	Taleri Hammack, WSU
2012	P. Venero, Psychology, WSU
2011	J. Leonard, Psychology, WSU
2010	J. Cooper, Psychology, WSU
2009	S. Russell, Psychology, WSU
2009	L. Kervin, Psychology, WSU
2008	M. Stillson, Psychology, WSU
2008	T. McEwen, Psychology, WSU
2006	A. Bennett (now Courtice), Psychology, WSU
2005	J. Asad, Psychology, WSU
2005	B. McKenna, Psychology, WSU
2003	P. Jacques, Psychology, WSU
2003	M. Guisinger, Psychology, WSU
2002	D. Patrick, Psychology, WSU
2000	B. Crawford, Psychology, WSU
1998	M. Gage, Psychology, WSU
1998	M. Smith, Psychology, WSU

1996	J. Holden, Psychology, WSU
1995	S. Garness (now Klauer), Psychology, WSU
1995	A. Robison, Psychology, WSU
1994	B. Brickman, Psychology, WSU
1993	B. Allen, Psychology, WSU
1993	R. Hutton, Psychology, WSU
1993	L. Kelly, Psychology, WSU
1989	B. Hagen, Dept. of Mechanical & Industrial Eng., UI
1989	B. Bell, Department of Psychology, University of Illinois
1988	J. Larish, Department of Psychology, University of Illinois
1987	W. Olson, Department of Psychology, University of Illinois

International Students (Hosted in my lab as visiting researchers as part of graduate training)

2014	Hosted Julian Rechar, University of Bretagne-Sud, Centre de Reserche en Psychologie.
2013	Hosted Arisara Jiamsanguanwong, Tokyo Institute of Technology, Department of Industrial Design Engineering.
2009	Hosted Henrik Skovsgaard, IT University of Copenhagen, Denmark, Department of Innovation.
2006	Hosted Pieter Wejkstra, Delft Technical University, Netherlands, Department of Aeronautical Engineering.
2005	Hosted Ferdinand Coster, Delft Technical University, Netherlands, Department of Aeronautical Engineering
2001	Hosted Matthijs Amelink, Delft Technical University, Netherlands. Department of Aeronautical Engineering.
2000	Hosted Jacco Otten, Delft Technical University, Netherlands and helped to supervise research for Masters Thesis in Industrial Design Engineering at Delft.
1999	Hosted Evonne van Genderen, Utrecht University, Netherlands and helped to supervise research for Masters Thesis in Psychology at Utrecht.
1992	(Feb. - June). Hosted John Paulin Hansen a Ph.D. candidate from Risø National Laboratory and Aarhus University, Denmark as a visiting researcher in our lab.

Undergraduate

Honors Theses (Research Supervisor)

1997	Patricia Lake
1994	Jeffery Light

STREAMS (Summer Research Experience: Funded by NIH)

2008	Jenny Border
2008	Sarah Pyszka
2009	Jacob Brewer
2009	Kelly Leach
2010	Sarah Woods
2010	Rita Copeland
2011	Wilbren Gwin

SCHOLARSHIP

Google Scholar (Total citations = 3861; h-index = 30; i10-index = 65) (April, 2017)

Books



- 7) Tsang, P., Vidulich, M. & Flach, J.M. (Eds.) (2017). *Advances in Aviation Psychology II*. Aldershot, England: Ashgate.
- 6) Flach, J.M. & Voorhorst, F.A. (2016). *What matters?* Dayton, OH: Wright State University Library. <http://corescholar.libraries.wright.edu/books/127/> or <http://www.lulu.com/shop/john-m-flach-and-fred-a-voorhorst/what-matters/paperback/product-22924845.html>
- 5) Tsang, P., Vidulich, M. & Flach, J.M. (Eds.) (2014). *Advances in Aviation Psychology*. Aldershot, England: Ashgate. ISBN: 978-1-4724-3840-9
- 4) Bennett, K.B. & Flach, J.M. (2011). *Display and Interface Design: Subtle Science, Exact Art*. London: Taylor & Francis. ISBN-13: 978-1420064384
<http://www.nortonaudio.com/Ficheiros/Interface/142006438X.pdf>
- 3) Jagacinski, R.J. & Flach, J.M. (2003). *Control Theory for Humans: Quantitative approaches to modeling performance*. Mahwah, NJ: Erlbaum. ISBN-13: 978-0805822939
- 2) Flach, J.M., Hancock, P.A., Caird, J. & Vicente, K. (Eds.) (1995). *Global perspectives on the ecology of human-machine systems*. Hillsdale, NJ: Erlbaum. ISBN-13: 978-0805813821
- 1) Hancock, P.A., Flach, J.M., Caird, J. & Vicente, K. (Eds.) (1995). *Local applications of the ecological approach to human-machine systems*. Hillsdale, NJ: Erlbaum. ISBN-13: 978-0805813807

Journal Articles, Book Chapters, and Published Proceedings (*italics = grad students*)

- van Paassen, M.M., Mulder, M., Borst, C., Ellerbroek, J. & Flach, J.M. (Under review). Ecological interface design for vehicle locomotion control. *IEEE Transactions on Human-Machine Systems*,
- 183) Flach, J.M. & Bennett, K.B. (2018). Improving Sensemaking Through the Design of Representations. In P. Smith & R. Hoffman (Eds.). *Cognitive Systems Engineering: The Future for a Changing World*. p. 165-180. Boca Raton, FL: CRC Press.
 - 182) Hammack, T., Neely, J., Stanard, T., Roll, J. & Flach, J. (2017). Empirically evaluating representational aids for target tracking and sensor management. *Proceedings of the International Symposium on Aviation Psychology*, Dayton, OH. (May 8-11).
 - 181) Hampton, A.J., Bhatt, S., Smith, A., Brunn, J., Purhoit, H., Shalin, V.L., Flach, J.M., Sheth, A.P. (2017). Constructing synthetic social media stimuli for an emergency preparedness exercise. *Proceedings of the 14th ISCRAM Conference*, (May) Albi, France.
 - 180) Flach, J.M., Feufel, M.A., Reynolds, P.L., Parker, S.H. & Kellogg, K.M. (2017). Decisionmaking in practice: The dynamics of muddling through. *Applied Ergonomics*, 63, 133-141.
https://journals.ohiolink.edu/pg_99?110653743796317::NO::P99_ENTITY_ID,P99_ENTITY_TYP E:270362299,MAIN_FILE&cs=3JNbQ4hzv9QeS-X034jNzrG7DeR20KFNshNTX683U_c_-c-YdZUPIIIO1_AGbweJKBgn_SKb4mHMT-6P-m-ISQ
 - 179) Flach, J.M., Reynolds, P., Cao, C. & Saffell, T. (2017). Engineering representation to support evidence based practice. *Proceedings of the International Symposium on Human Factors and Ergonomics in Healthcare*, 6(1), 66-73. New Orleans, LA (March 5-8).
<http://journals.sagepub.com/doi/pdf/10.1177/2327857917061015>
 - 178) Morineau, T., Flach, J.M., Le Courtois, M. & Chapelain, P. (2017). An extended version of the Rasmussen Dynamic Safety Model for measuring multitasking behaviors during medical emergency, *Human Factors and Ergonomics in Healthcare*, 6(1), 238-343. New Orleans, LA (March 5-8). <http://journals.sagepub.com/doi/pdf/10.1177/2327857917061052>
 - 177) Hammack, T., Cooper, J., Flach, J.M., Houpt, J. (2017). Toward an ecological theory of rationality: Debunking the hot hand 'illusion.' *Ecological Psychology*, 29(1), 35-53.
<http://dx.doi.org/10.1080/10407413.2017.1270149>

- 176) Flach, J.M. (2017). Supporting Productive Thinking: The Semiotic Context for Cognitive Systems Engineering (CSE). *Applied Ergonomics*, 59B, 612-624. [Accepted for publication 02 Sept 2015]. <http://www.sciencedirect.com/science/article/pii/S0003687015300739>
- 175) Flach, J.M., Stappers, P.J., Voorhorst, F.A. (2017). Beyond affordances: Closing the generalization gap between design and cognitive science. *Design Issues*, 33(1), 76-89. (Accepted 11 July 2016). http://www.mitpressjournals.org/doi/abs/10.1162/DESI_a_00427#.WHPVXmM9U5c
- 174) Flach, J.M. & Behymer, K.J. (2016). From designing to enabling effective collaborations. *She Ji, The Journal of Design, Economics, and Innovation*, 2(2), 119-124. <http://www.sciencedirect.com/science/article/pii/S2405872616300703>
- 173) Behymer, K.J. & Flach, J.M. (2016). From autonomous systems to sociotechnical systems: Designing effective collaborations. *She Ji, The Journal of Design, Economics, and Innovation*, 2(2), 105-114. <http://www.sciencedirect.com/science/article/pii/S240587261630017X>
- 172) Flach, J.M. (2015). Supporting self-designing organizations. *She Ji, The Journal of Design, Economics, and Innovation*, 2, 95 -99. <http://www.sciencedirect.com/science/article/pii/S240587261530037X>
- 171) Lemasters, L., & Flach, J. (2015, September). Multi-Gain Control Balancing Demands for Speed and Precision. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 59, No. 1, pp. 771-775). SAGE Publications.
- 170) Hammack, T., Flach, J., Houpt, J. (2015). Detecting structure in activity sequences: Exploring the hot hand phenomenon. *Proceedings of the Human Factors and Ergonomics Society 59th Annual Meeting*, p. 846 – 849, October, Los Angeles, CA.
- 169) Hammack, T., Flach, J. & Houpt, J. (2015). Detecting structure in activity sequences: Exploring the hot hand phenomenon. J.A. Weast-Knapp, M. Malone, & D.H. Abney (Eds.) *Studies in Perception & Action XIII*. (p. 109-112). New York: Psychology Press.
- 168) Lemasters, L. & Flach, J. (2015). Multi-gain control: Balancing demands for speed and precision. *Proceedings of the 18th International Symposium on Aviation Psychology*, p. 404-409. Dayton, OH. (May 4-7).
- 167) Hammack, T., Flach, J. & Houpt, J. (2015). Detecting structure in activity sequences: Exploring the hot hand phenomenon. *Proceedings of the 18th International Symposium on Aviation Psychology*, 394-397. Dayton, OH. (May 4-7).
- 166) Holt, J., Bennett, K.B. & Flach, J.M. (2015). Emergent Features and Perceptual Objects: A Reexamination of Fundamental Principles in Display Design, *Ergonomics*, 58(12), 1960- 1973. <http://dx.doi.org/10.1080/00140139.2015.1049217>
- 165) Flach, J.M., Carroll, J., Dainoff, M. & Hamilton, I. (2015). Striving for safety: Communicating and deciding in sociotechnical systems. *Ergonomics*, 58(4), 615-633. [\[http://dx.doi.org/10.1080/00140139.2015.1015621\]](http://dx.doi.org/10.1080/00140139.2015.1015621)
- 164) Flach, J.M. (2015). Situation Awareness: Context Matters! *Journal of Cognitive Engineering and Decision Making*, 9(1), 59 -72. [DOI: 10.1177/1555343414561087].
- 163) Bennett, K.B., Flach, J.M., McEwen, T., & Fox, O. (2015). Enhancing creative problem solving through visual display design. In D. Boehm-Davis, F. Durso, & J.D. Lee (Eds.) *The Handbook of Human-Systems Integration (HSI)*, p. 419-433. Washington, DC: The American Psychological Association. ISBN-13: 978-1433818288.
- 162) Bennett, K.B. & Flach, J.M., Edman, C., Holt, J. & Lee, P. (2015). Ecological interface design: A selective overview. In R. R. Hoffman, P. A. Hancock, M. Scerbo, R. Parasuraman, and J. L. Szalma (Eds.) *Handbook of Applied Perceptual Research*. (p. 669 – 691). New York: Cambridge University Press. ISBN: 9781107096400.
- 161) Flach, J.M., Bennett, K.B., Woods, D.D. & Jagacinski, R.J. (2015). Interface Design: A Control Theoretic Context for a Triadic Meaning Processing Approach. In R. R. Hoffman, P. A. Hancock, M. Scerbo, R. Parasuraman, and J. L. Szalma (Eds.) *Handbook of Applied Perceptual Research*. (p. 647 – 668). New York: Cambridge University Press. ISBN: 9781107096400.
- 160) Borst, C., Flach, J.M. & Ellerbroek, J. (2015). Beyond ecological interface design: Lessons from concerns and misconceptions. *IEEE: Transactions on Systems, Man, and Cybernetics*, 45(2), 164-175. [10.1109/THMS.2014.2364984](http://dx.doi.org/10.1109/THMS.2014.2364984)
- 159) Purohit, H., Bhatt, S., Hampton, A., Shalin, V. L., Sheth, A. P., & Flach, J. M. (2014). With Whom to Coordinate, Why and How in Ad- Hoc Social Media Communications during Crisis Response. *Proceedings of the 11th International Conference on Information Systems for Crisis Response and Management*, 787-791. <http://corescholar.libraries.wright.edu/knoesis/582>

- 158) Purohit, H., Hampton, A., Bhatt, S., Shalin, V., Sheth, A. & Flach, J.M. (2014) "Identifying seekers and suppliers in social media communities to support crisis coordination, *Computer Supported Cooperative Work*, 23, 513 – 545. DOI 10.1007/s10606-014-9209-y
- 157) Vidulich, M., Tsang, P. & Flach, J. (2014). Aviation Psychology: Optimizing Human and System Performance. In Tsang, P., Vidulich, M. & Flach, J.M. (Eds). *Current Issues in Aviation Psychology*. Aldershot, England: Ashgate. ISBN: 978-1-4724-3840-9
- 156) Flach, J.M., Bennett, W. & Galster, S.M. (2014). Synthetic Task Environments and the Three Body Problem. In Tsang, P., Vidulich, M. & Flach, J.M. (Eds). *Current Issues in Aviation Psychology*. Aldershot, England: Ashgate. ISBN: 978-1-4724-3840-9
- 155) McEwen, T., Flach, J.M. & Elder, N. (2014). Interfaces to medical information systems: Supporting evidence-based practice. *IEEE: Systems, Man, & Cybernetics Annual Meeting*, 341-346. San Diego, CA. (Oct 5-8).
- 154) Stappers, P.J. & Flach, J.M. (2014). Prototyping: Making the future today. *Crisp #3*, April, p. 2-3.
- 153) Flach, J.M., Steele-Johnson, D., Shalin, V.L., Hamilton, G.C. (2014). Coordination and control in emergency response. In A. Badiru & L. Racz (Eds.). *Handbook of Emergency Response: Human Factors and Systems Engineering Approach*, (p. 533-548). CRC Press.
- 152) Brill, J.C., DeLucia, P.R., Flach, J.M., Kaber, D.B., Youmans, R.J. (2013). Invisible Factors Strategies for Raising Awareness of Human Factors Among Undergraduate Students, *Proceedings of the Human Factors and Ergonomics Society 57th Annual Meeting*, 447-451.
- 151) Mersch, E., Fox, O., Leonard, J. Flach, J., Bennett, K. & Holt, J. (2013). Mitigation of the confirmation bias using a game-based trainer. *Proceedings of the Human Factors and Ergonomics Society 57th Annual Meeting*, 1475 – 1479.
- 150) Purohit, H., Hampton, A., Shalin, V.L., Sheth, A.P., Flach, J.M. & Bhatt, S. (2013). What kind of #conversation is Twitter? Mining #psycholinguistic cues for emergency coordination. *Computers in Human Behavior*, 29, 2438-2447.
- 149) Flach, J.M. (2013). Synthetic task environments and the three-body problem. *Proceedings of the 17th International Symposium on Aviation Psychology*, Wright State University, Dayton, OH, p. 482-487. (May 6 – 9, 2013).
- 148) Bennett, K.B. & Flach, J.M. (2013). Configural and pictorial displays. In J.D. Lee and A. Kirlik (Eds.). *The Oxford Handbook of Cognitive Engineering*. CH 35, (pp. 517-533) Oxford: Oxford University Press.
- 147) Flach, J.M., Bennett, K.B., Jagacinski, R.J., Mulder, M., van Paassen, M.M. (2013) The closed-loop dynamics of cognitive work. In J.D. Lee and A. Kirlik (Eds.). *The Oxford Handbook of Cognitive Engineering*. CH 1, (pp. 19-35) Oxford: Oxford University Press.
- 146) Flach, J.M. & Hoffman, R.R. (2012). The limitations of limitations. In R.R. Hoffman, P. Hayes, K.M Ford & J.M. Bradshaw (Eds.) *Collected Essays on Human-Centered Computing, 2001-2011*. Piscataway, NJ: IEEE Computer Society. CH 27 (pp. 171- 174). [originally published 2033].
- 145) Bennett, K. B., Nagy, A. L., and Flach, J. M. (2012). Visual displays. In G. Salvendy (Ed.), *Handbook of Human Factors and Ergonomics* (4th ed., pp. 1179-1208). New York, NY: John Wiley & Sons.
- 144) Stanard, T., Flach, J.M., Smith, M.R.H., & Warren, R. (2012). Learning to avoid collisions: A functional state space approach. *Ecological Psychology*, 24:4, 328-360.
- 143) Flach, J.M. (2012). Complexity: Learning to muddle through. *Cognition, Technology & Work*, 14, 187-197. DOI 10.007/s10111-011-0201-8
- 142) McEwen, T.R., Flach, J.M., and Elder, N.C. (2012). Ecological interface for assessing cardiac disease. *Proceedings of the ASME 2012 11th Biennial Conference on Engineering Systems Design and Analysis, ESDA2012*, July 2-4, 881-888. Nantes, France. ASME ESDA2012-82974.
- 141) Flach, J.M. (2012). Deep structure and smart mechanisms: Designing perspicacious systems. *Proceedings of the ASME 2012 11th Biennial Conference on Engineering Systems Design and Analysis, ESDA2012*, July 2-4, Nantes, France. (Invited Keynote). ASME ESDA2012-83015.
- 140) Purohit, H., Hampton, A., Shalin, V., Sheth, A., Flach, J. (2012). Framework for the analysis of coordination in crisis response, *CSCW'12*, February, 11 - 15, 2012. Seattle, WA. ACM 978-1-4503-1051-02/12/02.
- 139) Bennett, K.B. & Flach, J.M. (2012). Visual momentum redux. *International Journal of Human-Computer Studies*, 70, 399-414.
- 138) Holt, J., Bennett, K.B. & Flach, J.M. (2011). Ambiguity and Content Mapping among Display Types. *Proceedings of the Human Factors and Ergonomics Society 55th Annual Meeting*, pp. (Sept, 2011). Las Vegas, NV. (Received award from Southern Ohio Chapter of the Human Factors and Ergonomics Society as best student paper).

- 137) McEwen, T.R., Elder, N.C. & Flach, J.M. (2011). Creating safety in primary care practice with electronic medical records requires the consideration of system dynamics. *Journal of Healthcare Engineering*, 2, 87 - 96.
- 136) Flach, J.M., Jagacinski, R.J., Smith, M.R.H. & McKenna, B. (2011). Coupling perception, action, intention, and value: A control theoretic approach to driving performance. In D.L. Fisher, M. Rizzo, J.K. Caird & J.D. Lee (Eds.) *Handbook of Driving Simulation for Engineering, Medicine and Psychology*. (p. 43.1 - 43.16). Boca Raton, FL: Taylor & Francis, CRC Press.
- 135) Flach, J.M., Bennett, K.B., Stappers, P.J. & Saakes, D.P. (2011). An ecological approach to meaning processing: The dynamics of abductive systems. In R.W. Proctor & K-P.L. Vu (Eds.) *Human Factors of Web Design, 2nd Edition*. (pp. 509 - 526). Mahwah, NJ: Erlbaum.
- 134) Neal, A., Flach, J., Mooij, M., Lehman, S., Stankovic, S., and Hasenbosch, S. (2011). Envisioning the future aircraft management system. *International Journal of Aviation Psychology*, 21(1), 16-34.
- 133) Flach, J.M., Schwartz, D., Bennett, A., Behymer, K., Shebilski, W. (2010). Synthetic Task Environments: Measuring Macro-cognition. In E. Patterson & J. Miller (Eds.) *Macro-cognition: Metrics and Scenarios: Design and Evaluation for Real World Teams*. (p. 201 - 284). Aldershot, England: Ashgate.
- 132) Repperger, D.W., Phillips, C.A., Flach, J.M. (2010). Modern human-machine modeling using information, control, and complexity theory. In P.S.P Wang (Ed.) *Pattern Recognition and Machine Vision - in Honor and Memory of Late Prof. King-Sun Fu*. (p. 263 - 273). Aalborg, Denmark: River Publishers.
- 131) Wheatly, M.G., Flach, J.M., Shingledecker, C. & Golshani, F. (2010). Delivering on the promise of Plato's academy: Educational accessibility for the 21st Century. *Journal of Disability and Rehabilitation: Assistive Technology*, 5(2), 79 - 82.
- 130) Elder, N.C., McEwen, T.R., Flach, J., Gallimore, J., & Pallerla, H. (2010). The management of test results in primary care: Does an electronic medical record make a difference? *Family Medicine*, 42(5), 327 - 333.
- 129) Skovsgaard, H., Mateo J.C., Flach, J.M., & Hansen, J.P. (2010). Selecting small targets with gaze alone: Is zoom the answer. *Proceedings of Symposium on Eye Tracking Research and Application (ETRA '10)*, 145 - 148, Austin, TX: 22-24 March.
- 128) Vidulich, M.A., Wickens, C.D., Tsang, P.S. & Flach, J.M. (2010). Information processing in aviation. In E. Salas, D. Maurino, & T. Allard (Eds.) *Human Factors in Aviation (2nd edition)*. (p. 175 - 215). San Diego, CA: Academic Press.
- 127) McEwen, T., Elder, N.C., & Flach, J.M. (2009). Lessons for Electronic Medical Records from Family Medical Practices, *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, (Oct), San Antonio, TX. (Received award from Southern Ohio Chapter of the Human Factors and Ergonomics Society as best student paper).
- 126) Flach, J.M. (2009). The dynamics of experience. A search for what matters. *Proceedings of the European Conference on Cognitive Ergonomics (ECCE 2009)*, p. 11 - 18, Helsinki, Finland (30 Sept - 2 Oct). **(Invited Keynote Address)**
- 125) Elder, N., McEwen, T.R., Flach, J.M. & Gallimore, J.J. (2009). The management of test results in family medicine offices: Complexity and quality. *The Annals of Family Medicine*, 7(4), 343 - 351.
- 124) Bennett, K. & Flach, J.M. (2008). Graphical Displays: Implications for divided attention, focused attention, and problem solving. In N. J. Cooke and E. Salas (Eds.) *Best of Human Factors: Thirty Classic Contributions to Human Factors/Ergonomics Science and Engineering*. Santa Monica, CA: The Human Factors and Ergonomics Society. [Originally published 1992]
- 123) Elder, N., McEwen, T.R., Flach, J.M. & Gallimore, J.J. (2008). Creating safety in the testing process in primary care offices. In *Advances in Patient Safety: New Directions and Alternative Approaches*. Vol. 2. Agency for Healthcare Quality and REsearch Publication No. 08-0034(2). July AHRQ Rockville, MD.
- 122) Flach, J.M., Schwartz, D., Bennett, A., Russell, S. & Hughes, T. (2008). Integrated constraint evaluation: A framework for continuous work analysis. In A.M. Bisantz & C.M. Burns (Eds.) *Applications of Cognitive Work Analysis*. (p. 273 - 297). London: Taylor & Francis.
- 121) Flach, J.M. (2008). Mind the Gap: A skeptical view of Macro-cognition. In J.M. Schraagan, L.G. Militello, T. Ormerod & R. Lipshitz (Eds.) *Naturalistic Decision Making and Macro-cognition*. (p. 27 - 40). Aldershot, England: Ashgate.
- 120) Schwartz, D.H., Flach, J.M., Nelson, W.T., & Stokes, C.K. (2008). Use-Centered Design Strategy for Designing E-Collaboration Systems in Support of Virtual Teams. N. Kock (Ed.) *Encyclopedia of E-Collaboration*, Hershey, PA: Idea Group Inc.

- 119) Flach, J.M., Dekker, S., Stappers, P.J. (2008). Playing twenty questions with nature (The surprise version): Reflections on the dynamics of experience. *Theoretical Issues in Ergonomics Science*. 9:2, 125 -145.
- 118) Flach, J.M., Schwartz, D., Bennett, A., Behymer, K. & Shebilske, W. (2007). Synthetic task environments: Measuring macrocognition. *Macrocognitive Metrics*, AFRL/HE Commanders Predictive Environment. Columbus, OH (June 14).
- 117) Golshani, F., Wheatly, M., Bargerhuff, M.E. & Flach, J. (2007). A multidisciplinary graduate program in technology-based learning with disability. *2007 ASEE Annual Conference & Exposition, American Society for Engineering Education*, (June), Honolulu, HI.
- 116) Bennett, K.B., Nagy, A.L., & Flach, J.M. (2006). Visual displays. In G. Salvendy (Ed.). *Handbook of Human Factors*. (3rd ed., pp. 1191 -1221) New York: John Wiley & Sons.
- 115) Bennett, A.M., Flach, J.M., McEwen, T.R., Russell, S.M. (2006). Active regulation of speed during a simulated low-altitude flight task. *Proceedings of the Human Factors and Ergonomics Society*. San Francisco, Oct. 2006.
- 114) Mulder, M., van Paasen, M.M., Flach, J.M. & Jagacinski, R.J. (2006). Fundamentals of manual control. In W.S. Marras & W. Karwowski (Eds.). *Fundamentals and assessment tools for occupational ergonomics*. Boca Raton, FL: Taylor & Francis.
- 113) Amelink, H.J.M., Mulder, M., van Paassen, M.M., Flach, J.M. (2005). Theoretical foundations for total energy-based perspective flight-path displays for aircraft guidance. *International Journal of Aviation Psychology*, 15, 205 – 231.
- 112) Flach, J.M., Bennett, K.B., Stappers, P.J. & Saakes, D.P. (2005). Searching for meaning in complex databases: An ecological perspective. In R.W. Proctor & K-P.L Vu (Eds.) *Human Factors of Web Design*. (p. 408 – 423). Mahwah, NJ: Erlbaum.
- 111) Amelink, M., Mulder, M., van Paassen, M.M., & Flach, J. (2005). Cognitive systems engineering to shared situation awareness for unmanned aerial vehicles. *Proceedings of the 13th International Symposium on Aviation Psychology*, CD, (April).
- 110) Flach, J., Mulder, M., & van Paassen, M.M. (2004). The concept of the ‘situation’ in psychology. In S. Banbury and S. Tremblay (Eds.) *A cognitive approach to situation awareness: Theory, measurement, and application*. (pp. 42 – 60). Aldershot, England: Ashgate.
- 109) Dominguez, C.O., Flach, J.M., Lake, P., McKellar, D., & Dunn, M. (2004). The conversion decision: Knowing your limits and limiting your risks. In K. Smith, J. Shanteau, & P. Johnson (Eds.) *Psychological Explorations of Competent Decision Making*. (p. 7 – 39). Cambridge University Press.
- 108) Flach, J.M., Smith, M.R.H., Stanard, T., & Dittman, S.M. (2004). Collision: Getting them under control. In H. Hecht & G.J.P. Savelsbergh (Eds.) *Theories of time to contact*. Advances in Psychology Series, (p. 67 – 91) Elsevier, North-Holland.
- 107) McKenna, B., Bennett, A. & Flach, J.M. (2004). Using perceptual boundaries to control braking actions. *Proceedings of the Human Factors and Ergonomics Society*. New Orleans, Oct, 2004.
- 106) Flach, J.M., Junaid, A.A., Warren, R. (2004). Judgments of speed of self-motion: Modeling the relative effects of speed and altitude change. *Proceedings of the Human Factors and Ergonomics Society*. New Orleans, Oct. 2004.
- 105) Flach, J.M. (2004). The human as a critical component in an adaptive meaning processing system. *IEEE Conference on Systems, Man, and Cybernetics*, The Hague, Netherlands, Oct. 10-13. (**Invited Keynote Address**).
- 104) Stappers, P.J. & Flach, J.M. (2004). Visualizing cognitive systems: Getting past block diagrams, *IEEE Conference on Systems, Man, and Cybernetics*, The Hague, Netherlands, Oct. 10-13.
- 103) Stappers, P.J., Hoeben, A. & Flach, J.M. (2003). Learning control theory by experiencing dynamics. *6th Asian Design International Conference*, University of Tsukuba.
- 102) Flach, J.M. (2003) For those condemned to live in the future: Commentary on Fischhoff (1975; 1982). *Quality and Safety in Health Care*, 12(4), 311 – 312.
- 101) Flach, J.M. & Guisinger, M. (2003). Modeling discrete movements. K. Itoh & S. Kuwano (Ed.) *Handbook of Human Factors/Ergonomics*. (p. 246 – 255) Tokyo: Asakura Publishing Co. (In Japanese)
- 100) Flach, J.M., Vicente, K.J., Tanabe, F., Monta, K. & Rasmussen, J. (2003). Ecological Approach to Interface Design. K. Itoh & S. Kuwano (Ed.) *Handbook of Human Factors/Ergonomics*. (p. 199 – 215). Tokyo: Asakura Publishing Co. (In Japanese)
- 99) Flach, J.M. & Dominguez, C.O. (2003). A Meaning Processing Approach: Understanding Situations and Awareness. In M. Haas & L. Hettlinger (Eds.) *Psychological Issues in the Design and Use of Virtual Environments*. (pp. 433 – 460) Mahwah, NJ: Erlbaum.

- 98) Flach, J.M., Jacques, P., Patrick, D., Amelink, M., van Paassen, M.M. & Mulder, M. (2003). A Search for Meaning: A Case Study of the Approach-to-Landing. In Erik Hollnagel (Ed.) *Handbook of Cognitive Task Design*. (pp. 171 – 191). Mahwah, NJ: Erlbaum.
- 97) Flach, J.M. and Hoffman, R.R. (2003). The limitations of limitations. *IEEE Intelligent Systems*, Jan/Feb, The IEEE Computer Society. 94 – 96.
- 96) Jacques, P.F., Flach, J.M., Patrick, D.L. & Green, R. (2003). Evaluating a configural attitude display: WrightCAD. *Proceedings of the 12th International Symposium on Aviation Psychology*, CD.
- 95) Patrick, D.L., Flach, J.M. & Jacques, P.F. (2003). Ambiguities in optical flow: Tuning in to speed and altitude changes. *Proceedings of the 12th International Symposium on Aviation Psychology*, CD.
- 94) Amelink, M.H.J., van Passen, M.M., Mulder, M., & Flach, J.M. (2003). Total energy-based perspective flight path display for aircraft guidance along complex approach trajectories. *Proceedings of the 12th International Symposium on Aviation Psychology*, CD.
- 93) Amelink, M.H.J., van Passen, M.M., Mulder, M., & Flach, J.M. (2003). Applying the abstraction hierarchy to the aircraft manual control task. *Proceedings of the 12th International Symposium on Aviation Psychology*, CD.
- 92) Proctor, R.W., Vu, K-P.L., Salvendy, G., Degen, H., Fang, X., Flach, J.M., Gott, S.P., Herrmann, D., Kromker, H., Lightener, N.J., Lubin, K., Najjar, L., Reeves, L. Rudorfer, A., Stanney, K., Stephanidis, C., Strybel, T.Z., Vaughan, M., Wang, H., Weber, H., Yang, Y., & Zhu, W. (2002). Content preparation and management for web design: Eliciting, structuring, search, and displaying information. *International Journal of Human Computer Interaction*, 14, 25 – 92.
- 91) Smith, M.R.H., Flach, J.M., Dittman, S.M. & Stanard, T.W. (2001). Monocular optical constraints on collision control. *Journal of Experimental Psychology: Human Perception & Performance*, 27(2), 395 - 410.
- 90) Flach, J.M. & Kuperman, G.G. (2001). Victory by Design: War, Information, and Cognitive Systems Engineering. (pp. 259 – 283). In M.D. McNeese, E. Salas, & M. Endsley (Eds.) *New Trends in cooperative activities: System dynamics in complex environments*. Santa Monica, CA: Human Factors and Ergonomics Society.
- 89) Flach, J.M. (2001). A meaning processing approach to analysis and design. (pp. 1405 – 1409). In M.J. Smith, G. Salvendy, D. Harris, & R.J. Koubek (Eds.) *Usability evaluation and interface design*. Mahwah, NJ: Erlbaum.
- 88) Jacques, P.F., Flach, J.M., Patrick, D.L., Green, R., & Langenderfer, J. (2001). The Wright Configural Attitude Display (WrightCAD) and the ecology of instrument approaches. *Proceedings of the 11th International Symposium on Aviation Psychology*, CD.
- 87) Patrick, D.L., Flach, J.M., & Jacques, P.F. (2001). On judging altitude and speed: Global Optical Flow Rate. *Proceedings of the 11th International Symposium on Aviation Psychology*, CD.
- 86) Flach, J.M. & Smith, M.R.H. (2000). Right strategy, wrong tactic. *Ecological Psychology*, 12, 43 – 51.
- 85) Flach, J.M. (2000). Ecological design: Some premises. In B. Boussoffara, P.F. Elzer & (Eds.) *Human Error and System Design and Management*. (p. 125 – 136). Great Britain: Springer-Verlag.
- 84) Flach, J.M. (2000). Discovering situated meaning: An ecological approach to task analysis. In J.M. Schraagen, S.F. Chipman & V.L. Shalin (Eds.) *Cognitive Task Analysis*. (p. 87 – 100). Mahwah, NJ: Erlbaum.
- 83) Flach, J.M. & Kuperman, G. (2000). The human capacity for work: A (biased) historical perspective. In P.A. Hancock & P.A. Desmond (Eds.) *Stress, Workload, and Fatigue: Theory, Research, and Practice*. (p. 429 – 442). Mahwah, NJ: Erlbaum.
- 82) Flach, J.M. & Rasmussen, J. (2000). Cognitive engineering: Designing for situation awareness. In N. Sarter & R. Amalberti (Eds.) *Cognitive Engineering in the Aviation Domain*. (p. 153 –179) Mahwah, NJ: Erlbaum. Reprinted in E. Salas & A.S. Dietz (2011) *Situation Awareness. Critical Essays in Human Factors in Aviation Series*. Aldershot, England: Ashgate.
- 81) Flach, J.M. Jacques, P., Patrick, D., Langenderfer, J. & van Genderen, E. (2000). The WrightCAD: A configural flight display. *Proceedings of the IEA 2000/HFES 2000 Congress*, 3, 599 - 602.
- 80) Flach, J.M. (2000). An ecological approach to human-machine systems. *Proceedings of the IEA 2000/HFES 2000 Congress*, 3, 553.
- 79) Holden, J.G., Flach, J.M., Donchin, Y. (1999). Perceptual-motor coordination in an endoscopic surgery simulation. *Surgical Endoscopy*, 13, 127 - 132.
- 78) Flach, J.M. (1999). Ready, fire, aim: Toward a theory of meaning processing systems. (p. 187 -221). In D. Gopher & A. Koriat (Eds.). *Attention & Performance XVII*. Cambridge, MA: MIT Press.

- 77) Flach, J.M. (1999). Beyond error: The language of coordination and stability. In P.A. Hancock (Ed.) *Handbook of Perception and Cognition: Human Performance and Ergonomics*. (p. 106 - 129). New York: Academic Press.
- 76) Hughes, T.C., Martin, C.D., Dominguez, C., Patzek, M., & Flach, J.M. (1999). Blending theory and practice: Design approaches for uninhabited air vehicles. In M.W. Scerbo & M. Mouloua (eds.) *Automation technology and human performance*. (p. 246 - 251). Mahwah, NJ: Erlbaum.
- 75) Flach, J.M. (1999). Phenomenon Centered Research: Henk's way. *Perspectives on the human controller: Essays in honor of Hank G. Stassen*. Book review for *Ergonomics in Design*, 7(1), 32.
- 74) Flach, J.M. & Thordsen, M. (Ed.) (1999, April). On top of the world: An interview with Julien Christensen. *Ergonomics in Design*, 7(2), 31 - 34.
- 73) Stappers, P.J., Flach, J.M., & Voorhorst, F.A. (1999, April) Critical ratios as behavioral indices of presence. *Second International Workshop on Presence*. University of Essex, England.
- 72) Flach, J.M. & Holden, J. (1998). The reality of experience: Gibson's way. *Presence*, 27(1), 90 - 95.
- 71) Flach, J.M. (1998). Cognitive systems engineering: Putting things in context. *Ergonomics*, 41(2), 163 - 167.
- 70) Flach, J.M., Eggleston, R., Kuperman, G., & Dominguez, C. (1998). Uninhabited Combat Aerial Vehicles: Who's Driving. *Proceedings of the 42 Annual Meeting of the Human Factors and Ergonomics Society*, (p. 113 - 117) Santa Monica, CA: Human Factors and Ergonomics Society.
- 69) Flach, J.M., Vicente, K.J., Tanabe, F., Monta, K., & Rasmussen, J. (1998). An Ecological Approach to Interface Design. *Proceedings of the 42 Annual Meeting of the Human Factors and Ergonomics Society*, (p. 295 - 299) Santa Monica, CA: Human Factors and Ergonomics Society.
- 68) Flach, J.M., Warren, R., Garness, S.A. Kelly, L., & Stanard, T. (1997). Perception and control of altitude: Splay & depression angles. *Journal of Experimental Psychology: Human Perception and Performance*, 23, 1764 - 1782.
- 67) Bennett, K.B., Nagy, A.L., & Flach, J.M. (1997). Visual displays. In G. Salvendy (Ed.). *Handbook of Human Factors*. (pp. 659 - 696) New York: John Wiley & Sons.
- 66) Isabelle, S.K., Gilkey, R.H., Kenyon, R.V., Valentino, G., Flach, J.M., Spenny, C.H., & Anderson, T.R. (1997). Defense applications of the CAVE™. *S.P.I.E. Aerosense'97 Proceedings*, Vol. 3057, "Cockpit Displays IV". April, Orlando, FL.
- 65) Flach, J.M. & Gilkey, R.H. (1997). Synthetic task environments and situation awareness. *IEEE: AESS 14th Annual Meeting: Synthetic Visualization: Systems and Applications*. Dayton, OH: IEEE Dayton's Section's Aerospace and Electronic Systems Society. (p. 11 - 17) (April, 9th).
- 64) Flach, J.M., Guisinger, M.A. & Robison, A.B. (1996). Fitts' Law: Nonlinear dynamics and positive entropy. *Ecological Psychology*, 8(4), 281 - 325.
- 63) Flach, J.M. (1996). Situation awareness: Between a rock and a hard place. *The Flyer: Newsletter of the Aerospace Systems Technical Group of the Human Factors and Ergonomic Society*, Summer/Fall, 5 - 7.
- 62) Flach, J.M. (1996). Abstraction, coordination, and situation awareness: Implications for use centered design. In C.A. Ntuen & E.H. Park (Eds.). *Human Interaction with Complex Systems: Conceptual Principles and Design Practice*. (pp. 335 - 341). Boston: Kluwer Academic Publishers.
- 61) Flach, J.M. & Bennett, K.B. (1996). A theoretical framework for representative design. In R. Parasuraman & M. Mouloua (Eds.) *Automation and human performance: Theory and application*. (pp. 65 - 87) Mahwah, NJ: Erlbaum.
- 60) Flach, J.M. & Bennett, K.B. (1996). Graphical interfaces to complex systems: Separating the wheat from the chaff. In G. Perlman, G.K. Green, & M.S. Wogalter (Eds.) *Human Factors Perspectives on Human-Computer Interaction: Selections from Human Factors and Ergonomics Society Annual Meetings Proceedings, 1983 - 1994*. (p. 301 - 305). Santa Monica, CA: Human Factors Society. Reprinted from *Proceedings of the Human Factors Society 36th Annual Meeting*. (1992) Santa Monica, CA: Human Factors Society. (pp. 470-474).
- 59) Flach, J.M. (1996). Situation awareness: In search of meaning. *CSERIAC Gateway*, VI(6), 1- 4.
- 58) Dominguez, C.O., Flach, J.M., McKellar, D.P. & Dunn, M. (1996). Using videotaped cases to elicit perceptual expertise in laparoscopic surgery. *Third Annual Symposium on Human Interaction with Complex Systems*. (pp. 116-123). Los Alamitos, CA: IEEE Computer Society Press.
- 57) Holden, J.G. & Flach, J.M. (1996). Hand-eye coordination in an endoscopic surgery simulation. *Third Annual Symposium on Human Interaction with Complex Systems*. (pp. 110-115). Los Alamitos, CA: IEEE Computer Society Press.
- 56) Stanard, T., Flach, J.M., Smith, M., & Warren, R. (1996). Visual information use in collision avoidance tasks: The Importance of understanding the dynamics of action. *Third Annual Symposium on*

- Human Interaction with Complex Systems*. (pp. 62-67). Los Alamitos, CA: IEEE Computer Society Press.
- 55) Flach, J.M., Holden, J.G., Dominguez, C.O., McKellar, D., & Dunn, M. (1996). Human performance in minimally invasive surgery. *Studies in Ecological Psychology: Proceedings of the Fourth European Workshop on Ecological Psychology*. (pp. 3-7). Zeist, The Netherlands. (July).
- 54) Flach, J.M. (1995). Maintaining situation awareness when stalking cognition in the wild. In D.J. Garland & M. Endsley (Eds.). *Experimental Analysis and Measurement of Situation Awareness*. (pp. 25-34) Daytona Beach, FL: Embry-Riddle Aeronautical University.
- 53) Flach, J.M. (1995). The ecology of human-machine systems: A personal history. In Flach, J.M., Hancock, P.A., Caird, J. & Vicente, K. (Eds.). *Global perspectives on the ecology of human-machine systems*. (pp. 1 - 13) Hillsdale, NJ: Erlbaum.
- 52) Flach, J.M. & Warren, R. (1995). Active psychophysics: The relation between mind and what matters. In Flach, J.M., Hancock, P.A., Caird, J. & Vicente, K. (Eds.). *Global perspectives on the ecology of human-machine systems*. (pp. 189 - 209). Hillsdale, NJ: Erlbaum.
- 51) Flach, J.M. & Warren, R. (1995). Low altitude flight. In Flach, J.M., Hancock, P.A., Caird, J. & Vicente, K. (Eds.). *Local applications of the ecological approach to human-machine systems*. (pp. 65 - 103). Hillsdale, NJ: Erlbaum.
- 50) Flach, J.M. (1995). Situation awareness: Proceed with caution. *Human Factors*, 37, 149 - 157.
- 49) Flach, J.M. & Dominguez, C.O. (1995). Use-centered design. *Ergonomics in Design*, July, 19 - 24.
- 48) Dominguez, C.O., Hutton, R.J.B., Flach, J.M. & McKellar, D.P. (1995). Perception-Action coupling in endoscopic surgery: A cognitive task analysis approach. In B.G. Bardy, R.J. Bootsma, & Y. Guiard (Eds.) *Studies in Perception and Action III*. (pp. 285 -288). Mahwah, NJ: Erlbaum.
- 47) Bennett, K.B. & Flach, J.M. (1994). When automation fails In M. Mouloua & R. Parasuraman (Eds.) *Human performance in automated systems: Current research and trends*. (p. 229 - 234) Hillsdale, NJ: Erlbaum.
- 46) Flach, J.M. (1994). Situation awareness: The emperor's new clothes. In M. Mouloua & R. Parasuraman (Eds.) *Human performance in automated systems: Current research and trends*. (p. 241 - 248) Hillsdale, NJ: Erlbaum.
- 45) Flach, J.M. (1994). Ruminations on mind, matter, and what matters. *Proceedings of the Human Factors and Ergonomics Society 38th Annual Meeting*. (p. 531 - 535). Santa Monica: The Human Factors and Ergonomics Society.
- 44) Garness, S.A., Flach, J.M., Stanard, T. & Warren, R. (1994). The basis for the perception and control of altitude: Splay & depression angle components of optical flow. *Proceedings of the Human Factors and Ergonomics Society 38th Annual Meeting*. (p. 1275 - 1279). Santa Monica: The Human Factors and Ergonomics Society.
- 43) Hutton, R.J.B., Flach, J.M., Brickman, B.J., Dominguez, C.O., Hettinger, L., Haas, M., & Russell, C. (1994). Keeping in touch: Kinesthetic-tactile information and fly-by-wire. *Proceedings of the Human Factors and Ergonomics Society 38th Annual Meeting*. (p. 26 - 30). Santa Monica: The Human Factors and Ergonomics Society.
- 42) Flach, J.M. (1994). Beyond the servomechanism: Implications of closed-loop, adaptive couplings for modeling human-machine systems. *Proceedings of the '94 Symposium on Human Interaction with Complex Systems*. (p. 401 - 406). Greensboro, NC: Industrial Engineering Department, North Carolina A & T.
- 41) Flach, J.M. (1993). Active psychophysics: A psychophysical program for closed-loop systems. In E.J. Haug (Ed.). *Concurrent engineering tools and technologies for mechanical system design*. (p. 987 - 993). New York: Springer-Verlag.
- 40) Kelly, L. Flach, J.M., Garness, S. & Warren, R. (1993). Altitude control: Effects of texture and global optical flow. *Proceedings of the Seventh International Symposium on Aviation Psychology*. Columbus, OH.
- 39) Bennett, K. & Flach, J.M. (1992). Graphical Displays: Implications for divided attention, focused attention, and problem solving. *Human Factors*, 34(5), 513-533. Reprinted in N. J. Cooke and E. Salas (Eds.) (2008). *Best of Human Factors: Thirty Classic Contributions to Human Factors/Ergonomics Science and Engineering*. Santa Monica, CA: The Human Factors and Ergonomics Society.
- 38) Sanderson, P.M., Haskell, I., & Flach, J.M. (1992). The complex role of perceptual organisation in visual display design. *Ergonomics*. 35, 1199 - 1219.
- 37) Flach, J.M., Hagen, B.A., & Larish, J.F. (1992). Sources of information in optic flow for the regulation of altitude. *Perception & Psychophysics*, 51(6), 557-568.

- 36) Flach, J.M., Allen, B.L., Brickman, B.J. & Hutton, R.J.B. (1992). Dynamic occlusion: Active versus passive observers. *INSIGHT: Newsletter of The Visual Performance Technical Group of the Human Factors and Ergonomics Society*, 14(2), 5-7.
- 35) Flach, J.M. & Hancock, P.A. (1992). An ecological approach to human-machine systems. *Proceedings of the Human Factors Society 36th Annual Meeting*. Santa Monica, CA: Human Factors Society. (pp. 1056-1058).
- 34) Flach, J.M. (1991). The human factor: A positive factor for aviation safety. *The Journal of Air Traffic Control*, April-June, 40-43.
- 33) Flach, J.M. (1991). Manual Control Laboratory. *Proceedings of the Human Factors Society 35th Annual Meeting*. Santa Monica, CA: Human Factors Society.
- 32) Flach, J. M., Wilcox, S.B., Rutter, B.G., Wilkin, L., Bennett, K.B., & Hansen, J.P. (1991). Ecological psychology: An alternative perspective for human factors design. *Interface '91*. Dayton, OH. (pp. 248-257).
- 31) Flach, J.M., Hagen, B.A., O'Brien, D. & Olsen, W.A. (1990). Alternative displays for discrete movement control. *Human Factors*, 32(6), 685-695.
- 30) Brill, E.D. Jr., Flach, J.M., Hopkins, L.D., & Ranjithan, S. (1990). MGA: A decision support system for complex, incompletely defined problems. *IEEE Transactions on Systems, Man, and Cybernetics*, 20(4), 745-757.
- 29) Flach, J.M. (1990). Control with an eye for perception: Precursors to an active psychophysics. *Ecological Psychology*, 2(2), 83-111.
- 28) Flach, J.M. (1990). The ecology of human-machine systems I: Introduction. *Ecological Psychology*, 2(3), 191-205.
- 27) Larish, J.F. & Flach, J.M. (1990). Sources of optical information useful for perception of speed of rectilinear self-motion. *Journal of Experimental Psychology: Human Perception and Performance*, 16(2), 295-302.
- 26) Flach, J.M., Lintern, G., & Larish, J.F. (1990). Perceptual motor skill: A theoretical framework. In R. Warren & A.H. Wertheim (Eds.). *Perception & Control of Self-Motion*. (pp. 327-355). Hillsdale, NJ: Erlbaum.
- 25) Flach, J.M. (1989). An ecological alternative to eggsucking. *Human Factors Society Bulletin*, 32(9), 4-6.
- 24) Sanderson, P.M., Flach, J.M., Buttigieg, M.A., & Casey, E.J. (1989). Object displays do not always support better integrated task performance. *Human Factors*, 31(2), 183-198. (Identified in 2008 as one of the top 50 publications in the history of the journal *Human Factors*)
- 23) Flach, J.M. (1989). Control with an eye for perception: Precursors to an active psychophysics. *Visually Guided Control of Movement*. Workshop held at NASA Ames Research Center, Moffett Field, CA, June 26 to July 14, 1989. NASA Conference Publication 3118. (pp. 121-149).
- 22) Vicente, K.J., Flach, J.M., & Sanderson, P.M. (1989). Ecological interface design: Creating a window to the world of complex work domains. *Proceedings of the 22nd Annual Conference of The Human Factors Association of Canada*. Toronto: HFAC/ACE.
- 21) Flach, J.M., Larish, J.F., & Weinstein, L. (1989). Fitts and Jones' analysis of pilot error: 40 Years Later. *Proceedings of the Fifth International Symposium on Aviation Psychology*. Columbus, OH.
- 20) Wickens, C.D. & Flach, J.M. (1988). The processing of information. In E.L. Weiner & D.C. Nagel (Eds.). *Human Factors in Modern Aviation*. (pp. 111-155). New York: Academic Press.
- 19) Buttigieg, M.A., Sanderson, P.M., & Flach, J.M. (1988). Object vs. separate displays for process failure detection: The emergent features approach. *Proceedings of the 32nd Annual Meeting of the Human Factors Society*. Santa Monica, CA: Human Factors Society.
- 18) Flach, J.M. (1988). Direct manipulation, direct engagement, and direct perception: What's directing what? *Proceeding of the 32nd Annual Meeting of the Human Factors Society*. Santa Monica, CA: Human Factors Society.
- 17) Flach, J.M. (1987). Consistent mapping, invariants, and the training of perceptual motor skills. In L.S. Mark, J.S. Warm, & R.L. Huston (Eds.). *Ergonomics and Human Factors: Recent Research*. (131-137). New York: Springer-Verlag.
- 16) Flach, J.M. (1987). Cognitive Engineering Science. *Proceedings of the Frontiers in Education Conference*. Rose-Hulman Institute of Technology, Terre Haute, IN.
- 15) Flach, J.M. (1987). Automatic processing: Through the back door. *Proceedings of the 31st Annual Meeting of the Human Factors Society*. Santa Monica, CA: Human Factors Society.
- 14) Flach, J.M., Fuld, R.B., & Sanderson, P.M. (1987). Manual control instructional facility. *IBM Academic Information Systems University Conference Proceedings*. Boston, MA.

- 13) Larish, J.F. & Flach, J.M. (1987). Judgment of speed with simulated graphic displays. *Proceedings of the Fourth International Symposium on Aviation Psychology*. Columbus, OH.
- 12) Flach, J.M. (Ed.). (1987). *Proceedings of the 4th Mid-Central Ergonomics/Human Factors Conference*, University of Illinois, Urbana, IL.
- 11) Flach, J.M. (1987). Cognitive resource analysis method. *Proceedings of the 4th Mid-Central Ergonomics/Human Factors Conference*, University of Illinois, Urbana, IL.
- 10) Flach, J.M., Riccio, G.E., McMillan, G.R., & Warren, R. (1986). Psychophysical methods for equating performance between alternative motion simulators. *Ergonomics*, 29, 1423-1438.
- 9) Flach, J.M. (1986). Within set discriminations in a consistent mapping search task. *Perception & Psychophysics*, 39(6), 397-406.
- 8) Weller, M.K., Wickens, C.D., Flach, J.M., Davis, T., Stokes, A.F., Entwistle, W.C., Braune, R. & Mane, A. (1986). Computer augmentation of flight simulator training EXCEL project. *Computers in Education Conference*, San Diego, CA.
- 7) Olson, W.A. & Flach, J.M. (1986). An exploration of a Fitts' law task on a logarithmically scaled screen. *Proceedings of the 22nd Annual Conference on Manual Control*, Dayton, OH.
- 6) Flach, J.M. (1986). Training perceptual motor skills. *Advances in Flight Simulation Visual and Motion Systems*, London: Royal Aeronautical Society.
- 5) McMillan, G.R., Martin, E.A., Flach, J.M., & Riccio, G.E. (1985). Motion cuing with a dynamic seat II: The search for training transfer. *Proceedings of the 7th Interservice/Industry Training Equipment Conference*, Orlando, FL.
- 4) Snell, M.K., Flach, J.M., McMillan, G.R., & Warren, R. (1985). Tactual cuing can produce better performance than visual cuing. *Proceedings of the Third International Symposium on Aviation Psychology*, Columbus, OH.
- 3) Flach, J.M., McMillan, G.R., Warren, R., & Snell, M.K. (1985). The effects of psychophysical matching on the transfer of training between alternative motion simulators. *Proceedings of the Third International Symposium on Aviation Psychology*, Columbus, OH.
- 2) Jagacinski, R.J., Flach, J.M., & Gilson, R.D. (1983). A comparison of visual and kinesthetic tactual displays for compensatory tracking. *IEEE Transactions on Systems, Man, and Cybernetics*, 13(6), 1103-1112.
- 1) Jagacinski, R.J., Flach, J.M., & Gilson, R.D. (1981). A comparison of tracking with visual and kinesthetic-tactual displays. *Proceedings of the First International Symposium on Aviation Psychology*, Columbus, OH.

Conference Presentations Publication of Abstract Only:

- Flach, J.M., Dehais, F., Gluck, K., Kirlik, A., Olsen, W. (2017). Plenary Research Panel: Bridging the gulf: Putting science to work. To be presented at *Symposium on Aviation Psychology*, Dayton, OH. (May 8-11).
- 44) Flach, J.M. (2015). Putting cognition to work. *Marconi Conference*, Office Ergonomics Research Committee. Holland, MI. (17-19 July). [Invited]
 - 43) Flach, J.M. (2015). Ecological Interface Design: Skilled Coupling of Perception and Action in Sociotechnical Ecologies. *XVIII International Conference on Perception and Action*. University of Minnesota, Minneapolis & St. Paul, Minnesota, USA. (14-18 July).
 - 42) Hettinger, L., Dainoff, M. & Flach, J. (2015). STAMP and workplace safety: There's more to it than you think! *Fourth MIT STAMP/STPA Conference*, Cambridge, MA. (March 23-26, 2015).
 - 41) Blevins, E., Bødker, S., Flach, J., Forlizzi, J., Jung, H., Kaptelinin, V., Nardi, B., Rizzo, A. (2015). Ecological perspectives in HCI: Promise, Problems, and Potential, *CHI'15 Extended Abstracts*, Seoul, Korea. (April 18 -23, 2015). ACM 978-1-4503-3146-3/15/04.
<http://dx.doi.org/10.1145/2702613.2702634>
 - 40) McEwen, T., Flach, J.M., and Elder, N. (2012). The Development and Evaluation of an Ecological Display For the Detection, Evaluation, and Treatment of Cardiovascular Risk. Poster presented at the HFES 2012 Symposium on Human Factors and Ergonomics in Health Care, Baltimore, MD.
 - 39) Flach, J.M. (2011). Designing at the edge: Pursuing possibilities in a complex world. Keynote presentation at the D-CIS Human Factors Event. Delft, Netherlands (8 Nov).
 - 38) Border, J., Cooper, J., Flach, J., Junker, A. and Leonard, J. (2009). Hands free interaction using biopotentials. 2009 Technology Innovators Conference, Washington, D.C.: National Center for Technology Innovation. (Winner of 2009 Brightest Idea Award).

- 37) Elder, N.C. McEwen, T., Flach, J.M., Gallimore, J. & H. Palleria (2009). Patient Notification of Test Results: Does an Electronic Medical Record Improve Documented Notification And Follow Up? North American Primary Care Research Group Meeting, (Nov 14 - 18). Montreal, Quebec, Canada.
- 36) Flach, J.M. (2009)). The Holy Trinity of Cognitive Systems Engineering: Three facets in one Ontology, *Human Factors and Ergonomics Society Annual Meeting*, (Oct), San Antonio, TX.
- 35) Elder, N.C., McEwen, T., Flach, J.M., & Gallimore, J. (2007). The testing process in primary care practices: Creating safety. First Agency for Healthcare Research & Quality (AHRQ) Annual Meeting. Bethesda, MD (Sept. 26 – 28).
- 34) Bennett, A.M., Flach, J.M., McEwen, T.R., Russell, S.M. (2006). Detecting changes in speed during an active control task: Are we effective controllers? International Society for Ecological Psychology, North American Meeting, University of Cincinnati, Cincinnati, OH (June 22-24).
- 33) Flach, J.M. (2005). Tuning into the optic array. Presented at the 13th *International Conference on Perception and Action*, Asilomar, CA (July 5 – 10).
- 32) Flach, J.M. (2004). Sensemaking: Beyond the Servo Metaphor. Invited Plenary Address *IEEE:SMC 2004: International Conference on Systems, Man, & Cybernetics*. The Hague, The Netherlands (October 10 – 13).
- 31) Rasmussen, J., Pejtersen, A.M. & Flach, J.M. (2003). Workshop on Cognitive Systems Engineering. *Human Computer Interaction Conference*, Crete (June 22 – 27).
- 30) Flach, J.M. (2003). The Dynamics of Perception/ Action: Getting Collisions Under Control *Twenty-first International System Dynamics Conference*, New York (July 20 – 24)
- 29) Flach, J.M. (1997). Experiential space/ time. *Ninth International Conference on Perception and Action*. University of Toronto, Scarborough, Ontario, Canada. (July 20 - 25).
- 28) Flach, J.M. (1997). Situation Awareness: Scaling-up, Filling-in, or Finding-out. *The Ninth International Symposium on Aviation Psychology*. Columbus, OH. (April 27 - May 1).
- 27) Dominguez, C., Dexter, D., Dunn, M., Flach, J. & McKellar, D. (1996). Decision making in laparoscopic surgery: Implications for training. *43rd Annual Symposium of the Society for Air Force Clinical Surgeons*. San Antonio (3/31-4/5).
- 26) Flach, J.M. (1995). Putting the Human in Control: Toward Use-Centered Design. Invited Tutorial Session *Symposium on Human Interaction with Complex Systems*. Greensboro, NC: Department of Industrial Engineering, North Carolina A & T State University.
- 25) Flach, J.M. (1995). Cognitive Ergonomics of complex systems. Panel presentation *Symposium on Human Interaction with Complex Systems*. Greensboro, NC: Department of Industrial Engineering, North Carolina A & T State University.
- 24) Dominguez, C.O., Hutton, R.J.B., Flach, J.M., & McKellar, D.M. (1995). Human performance issues in video surgery. Presented at the *Aerospace Medical Association 66th Annual Scientific Meeting*. Anaheim, CA, (May).
- 23) Flach, J.M. (1995). Beyond the laboratory: Lessons from human factors. Invited paper presented at the *Sixty-Seventh Annual Meeting of the Midwestern Psychological Association*, Chicago, IL.
- 22) Brickman, B.J. & Flach, J.M. (1994). The effects of delayed sensory feedback on object recognition performance: Uncoupling perception and action. *Proceedings of the Human Factors and Ergonomics Society 38th Annual Meeting*. (p. 954). Santa Monica: The Human Factors and Ergonomics Society.
- 21) Guisinger, M.A., Flach, J.M. & Robison, A.B. (1994). Fitts' law and the "force" or Newton: A match made in physics. *Proceedings of the Human Factors and Ergonomics Society 38th Annual Meeting*. (p. 955). Santa Monica: The Human Factors and Ergonomics Society.
- 20) Robison, A.B., Hutton, R.J.B., & Flach, J.M. (1994). The role of action in perception. *Proceedings of the Human Factors and Ergonomics Society 38th Annual Meeting*. (p. 955). Santa Monica: The Human Factors and Ergonomics Society.
- 19) Flach, J.M. (1993). Meaning a lost dimension. *Proceedings of the Human Factors and Ergonomics Society 37th Annual Meeting*. (p. 1375 - 1376). Santa Monica, CA: The Human Factors and Ergonomics Society.
- 18) Flach, J.M. (1993). A constraint-based global perspective on information for control. Presented at the *VIIth International Conference on Event Perception and Action*. University of British Columbia, Vancouver, BC, Canada.
- 17) Flach, J.M. (1992). Skill: Dancing with the environment. *NASPSPA '92*. North American Society for the Psychology of Sport and Physical Activity. Pittsburg, PA. (June).

- 16) Flach, J.M. (1992). Active psychophysics: A psychophysical program for closed-loop systems. Haug, E. (Ed.). *NATO Advanced Study Institute: Concurrent Engineering Tools and Technologies for Mechanical System Design*. Iowa City, IA. (May 25 - June 5).
- 15) Hopkins, L.D., Flach, J.M., & Brill, E.D. Jr. (1989). Human skills as complements to mathematical programming models: Some experimental results for incompletely defined problems. *Thirty-sixth North American Meeting of the Regional Science Association*, Santa Barbara, CA.
- 14) Hettinger, L.J., Andersen, G.J., Bennett, C.T., Flach, J.M., Johnson, W.W., & Riccio, G.E. (1989). Visually guided control of self-motion. Panel Presentation. *Proceedings of the 33rd Annual Meeting of the Human Factors Society*, Denver, CO.
- 13) Bell, B.P. & Flach, J.M. (1989). Automation and pilot performance. *Proceedings of the 33rd Annual Meeting of the Human Factors Society*, Denver, CO.
- 12) Flach, J.M. (1989). Direct perception: A "natural intelligence" approach to display design. *Scientific computing and Automation Conference and Exposition*, Philadelphia, PA.
- 11) Flach, J.M. (1989). Ecologies beyond the Serengeti. *Proceedings of the Fifth International Conference on Event Perception and Action*, Miami University, Oxford, OH.
- 10) Bell, B.P. & Flach, J.M. (1989). The effects of coupling in the environment of flight performance. *Proceedings of the Fifth International Conference on Event Perception and Action*, Miami University, Oxford, OH.
- 9) Bennett, C.T., Johnson, W.W., Braunstein, M.L., Flach, J.M. & Wolpert, L. (1988). Perspective displays: The control of motion in 3-D virtual space. *Proceedings of the 32nd Annual Meeting of the Human Factors Society*, Anaheim, CA.
- 8) Wickens, C.D., Flach, J.M., Kramer, A.F., Harwood, K., & Lintern, G. (1988). Taskillian: A validation test bed for complex performance models. *Proceedings of Psychology in the Department of Defense, 11th Symposium*, USAF Academy, Colorado Springs, CO.
- 7) Hopkins, L.D., Brill, E.D. Jr., Flach, J.M., & Ranjithan, S. (1988). Experimental evaluation of the modeling to generate alternatives approach. *The 26th Joint National Meeting of the Operations Research Society of America and the Institute of Management Sciences*, Denver, CO.
- 6) Larish, J.F. & Flach, J.M. (1988). Flat worlds, flat displays, flat perception? *Spring Meeting of the International Society for Ecological Psychology*, Yellow Springs, OH.
- 5) Flach, J.M. (1988). The ecology of human-machine systems: Problems, prayers, and promises. *Spring Meeting of the International Society for Ecological Psychology*, Yellow Springs, OH.
- 4) Flach, J.M. (1988). Variably mapped within set discriminations in within and between category search. Invited paper. *1988 Midwestern Psychological Association Meeting*, Chicago, IL.
- 3) Flach J.M. & Sanderson, P.M. (1987). Ecological principles of display design for process control environments. *Fourth International Conference on Event Perception and Action*, Trieste, Italy.
- 2) Flach, J.M. & Larish, J.F. (1987). Perception of egospeed over flat surfaces. *Fourth International Conference on Event Perception and Action*, Trieste, Italy.
- 1) Flach, J.M. & Fuld, R.B. (1987). Manual control instructional facility. *IBM Conference on Academic Computing*, University of Wisconsin, Madison, WI.

Technical Reports:

- 11) Flach, J.M. (2000). *Research on information form in human machine interfaces: A meaning processing approach*. Final Report to Japan Atomic Energy Research Institute. Dayton, OH: Wright State University.
- 10) Flach, J.M. (1999). *Research on information form in human-machine interfaces*. Second Year Report to Japan Atomic Energy Research Institute. Dayton, OH: Wright State University.
- 9) Flach, J.M. (1998). *Research on information form in human-machine interfaces*. First Year Report to Japan Atomic Energy Research Institute. Dayton, OH: Wright State University.
- 8) Flach, J.M., Eggleston, R. Kuperman, G., Dominguez, C. (1998). *SEAD and the UCAV: A preliminary cognitive systems analysis*. Final Report. Human Engineering Division, Air Force Research Laboratory, Wright-Patterson, AFB.
- 7) Flach, J.M. & Kuperman, G. (February, 1998). *Victory by design: War, information, and cognitive systems engineering*. (AFRL/HE-WP-TR-1998-00). Wright-Patterson AFB: Air Force Research Laboratory.
- 6) Flach, J.M. (January, 1998). *Flight and Ground Vehicle Simulation: A Tool for Skill Development*. Supplementary Notes for a Lecture given as part of the flight and Ground Vehicle Simulation Course jointly sponsored by Binghamton State University, Watson School Office of Continuing

- Education, and the American Institute of Aeronautics and Astronautics Flight Simulation Technical Committee. Binghamton, NY: Watson School Office of Continuing Education.
- 5) Flach, J.M. (October, 1996). *Perception and Control of Locomotion*. Final report prepared for U.S. Air Force Office of Scientific Research.
 - 4) Flach, J.M. (November, 1995). *Perception/Action: An holistic approach II*. Final report prepared for U.S. Air Force Office of Scientific Research.
 - 3) Flach, J.M. (October, 1992). *Perception/Action: An holistic approach*. Final report prepared for U.S. Air Force Office of Scientific Research.
 - 2) Flach, J.M. & Jagacinski, R.J. (November, 1992). *CASHE: Manual control test bench*. Prepared for U.S. Air Force Armstrong Laboratory, Human Engineering Division.
 - 1) Flach, J.M. & Vicente, K.J. (1989). Complexity, difficulty, direct manipulation, and direct perception. EPRL-89-03. Engineering Psychology Research Laboratory, University of Illinois.

Presentations and Workshop Participation:

- 81) Flach, J.M. (2015). Designing quality experiences: Putting humans into control in complex work domains. *DesignX Workshop*, Tongji University, School of Design and Innovation, Shanghai, China (Oct 9-10).
- 80) Hettinger, L., Dainoff, M. & Flach, J. (2015). On the nature and role of organizational dynamics in adaptive safety. 6th REA Symposium: Managing resilience, learning to be adaptable and proactive in an unpredictable world. Resilience Engineering Association. Lisbon, Portugal (June 22-25).
- 79) Flach, J.M. (2014). What Matters: Escaping the dichotomy to explore the duality of mind and matter. *Inter-University Workshop*. University of Buffalo, Buffalo, NY. (Nov 15th).
- 78) Cooper, J., Hammack, T., Lemasters, L. & Flach, J. (2014). Detecting Structure in Activity Sequences: Exploring the Hot Hand Phenomenon. *International Society for Ecological Psychology North American Meeting*, Miami University, Oxford, OH. (June 5-7).
- 77) Hammack, T., Lemasters, L., Adkins, D. Ayala, A. Clay, B. Lampke, S. Marangoni, T., MtCastle, T. Roll, J., Venero, P. & Flach, J. (2014). Alternative Methods of Control within a Virtual Environment: Using Fitts' Law as a Model for Human Performance and Device Comparison, *Simulation Technical Interchange Meeting (SimTIM)*, WPAFB, OH (3 June).
- 76) Flach, J.M. (2014). Productive Thinking through Interface Design. *Transportation User Experience (TUX) Seminar Series*. Scott, AFB, IL. (May 20th).
- 75) Flach, J.M. (2013) *C-Share Workshop*. Delft, Netherlands: D-CIS Lab & TU Delft. (Sept 13). Invited participant.
- 74) Flach, J.M. (2013). *Workshop on Safety Management in Context: Cross-industry learning for theory and practice*. Centro Stefano Franscini, Monte Verita, Ascona Switzerland. (June 18 – 22, 2013). Organizers: Gudela Grote (ETH Zurich) and John Carroll (MIT). Invited participant.
- 73) Flach, J.M. (2013). *From college to careers: Fostering inclusion for persons with disabilities in STEM careers*. The Institute for Accessible Science, Purdue University, West Lafayette, IN. (May 20-23). Invited participant.
- 72) Flach, J.M. (2013). Supporting evidence based practice through interface design. *W21C 2013 Innovation Forum: Creating a new common ground: Apps, Analytics and Visualization for better health and health care in the 21st Century*. Calgary, Can: Faculty of Medicine, University of Calgary. (April 12). Invited Keynote.
- 71) Flach, J.M. (2012). Cognition at the Edge. Invited keynote presentation at the Human Factors and Applied Cognition Student Conference, Embry-Riddle University, Daytona Beach, FL. April 5th, 2012.
- 70) Izzo, M., Flach, J. M., & Andersen, C. (2011). Using technology for engagement with STEM students with disabilities. Poster presented at the National Outreach Scholarship Conference, East Lansing, MI. (October).
- 69) Flach, J.M. & Bennett, K.B. (2010). Cognitive systems engineering. One day workshop sponsored by the Orlando Chapter of INCOSE. (Sept 17). Orlando, FL.
- 68) Flach, J.M. & Bennett, K.B. (2010). Cognitive systems engineering and interface design. Presentation at the monthly meeting of the Orlando Chapter of INCOSE. (Sept 16). Orlando, FL.

- 67) Izzo, M., Flach, J.M. Merrill, J., Andersen, C. (2010). A Higher Education, Public School, and Business Partnership to Bring Students with Disabilities into the STEM Career Pipeline. National Outreach Scholarship Conference, October 4-6, Raleigh, NC.
- 66) Flach, J.M. (2009). The dynamics of experience: How the mind does work? Invited presentation to the
- 65) Elder NC, *McEwen T* (presenter), Flach J, Gallimore J. (2008). Creating Safety in the Primary Care Testing process. Ohio Academy of Family Physician's Family Medicine Symposium on Research and Education. Newark, Ohio (11 April).
- 64) Flach, J. (2008). Coupling Situations and Awareness. CESPA 20th Anniversary: Ecological Human Factors, University of Connecticut (March, 21).
- 63) Shebilske, W., Flach, J.M., *Gildea, K.* & Freeman, J. (2007). Adaptive presentation of information and meta-information for dynamic targeting. Presented at the 2nd Annual Workshop on Meta-Information Portrayal, Washington, DC, (21-23 August).
- 62) Flach, J.M. (2007). Invited participant on panel discussion "Future Performance Technologies and Trends (Academia)." Human Systems Integration Symposium HSI, Annapolis, MD. (19-21 Mar).
- 61) Flach, J.M. (2007). Cognitive Systems Engineering: A Search for Quality. Invited presentation to the Delft Cooperation on Intelligent Systems DECIS, Delft, The Netherlands. (Feb. 1)
- 60) Flach, J.M. (2005). Invited participant on a panel discussion on "Cognitive Engineering & Systems Engineering Co-Practice, Yellow Springs, OH (Oct 27th).
- 59) Flach, J.M. (2005). Invited participant on panel on Metacognition. 7th *International Conference on Naturalistic Decision Making*. Amsterdam, The Netherlands. (June 15 – 17).
- 58) Flach, J.M. (2004). Invited speaker at the Third Workshop on Cognitive Systems Engineering. The I School, University of Washington, Seattle (Nov, 2004).
- 57) Flach, J.M. (2004). Invited speaker at the 35th Annual Paul D Scholz Symposium on Technology and Its Role in Society: Cognitive Design: Developing Technology for the Human Mind. Sponsored by The Iowa Beta Chapter of Tau Beta Pi, University of Iowa, Iowa City, IA. (15 April).
- 56) Flach, J.M. (2004). Collisions: Getting them under control. Invited presentation at the Vrije University, Amsterdam. (3 March).
- 55) Flach, J.M. (2004). Global Optical Flow Rate: Implications for judgments of speed and altitude. Invited presentation at TNO Soesterberg, The Netherlands. (12 February).
- 54) Flach, J.M. (2003). Collisions: Getting them under control. Invited presentation to the University of Michigan Transportation Research Institute (UMTRI). (9 Dec)
- 53) Flach, J.M. (2003). Adaptation: A Control Theoretic Framework. Presented at the Cognitive Systems Engineering Workshop, Dayton, OH (29 – 31 Oct).
- 52) Flach, J.M. (2003). Dynamics of Cognitive Systems. Invited presentation at San Jose State University. Kevin Corker's Research Group. (3 – 5 Sept).
- 51) Flach, J.M. (2003). The Search for Meaning. Invited presentation at symposium to honor Harry Heft. Denison University. Granville, OH. (31 Mar)
- 50) Flach, J.M. (2003). Collision Control: Challenging Conventional Wisdom About Mind and Matter. Invited presentation Mind and Machines Group, Rensselaer Polytechnic Institute. (21 Mar).
- 49) Flach, J.M. (2002). Natural Intelligence: Ecological Control Systems. Invited presentation to the IT University of Copenhagen, Copenhagen, Denmark (25 Mar)
- 48) Flach, J.M. (2002). Meaning Processing: Ecological Control Systems. Invited presentation to the Volvo research and development group, Gothenburg, Sweden (22 Mar)
- 47) Flach, J.M. (2001). A Meaning Processing Approach to Analysis and Design. Invited presentation to the Industrial Engineering Department, Tokyo Institute of Technology, Tokyo, Japan (29 Nov).
- 46) Flach, J.M. (2001). Cognitive Systems Engineering. Japanese Atomic Energy Research Institute, Tokyo, Japan. (28 Nov)
- 45) Flach, J.M. (2001). A meaning processing approach to interface design. Invited presentation to the Workshop on Ecological Interface Design. Japanese Atomic Energy Research Institute, Tokai, Japan. (22 March – 23 March).
- 44) Flach, J.M. (2001). Ecological approaches to human-machine systems. Presentation to the Special Interest Group on Human-Machine Systems. Japanese Society of Mechanical Engineers. Tokyo, Japan (24 March)
- 43) Rasmussen, J. & Flach, J.M. (2000). Human factors in a dynamic information society: Where are we heading? Presented at the *XIVth Triennial Congress of the International Ergonomics Association and the 44th Annual Meeting of the Human Factors and Ergonomics Society*, (29 July – 4 Aug).

- 42) Flach, J.M. (2000). Closing the loop through the optical array: Specification of dynamics. Presentation to the Aviation Training Group, Massey University, Auckland, New Zealand, (June).
- 41) Flach, J.M. (2000). The optics of collision control. Presentation to the Department of Psychology, Waikato University, Hamilton, New Zealand, (June).
- 40) Flach, J.M. (2000). Collision control. Presentation to the Department of Psychology, University of Otago, Dunedin, New Zealand, (May).
- 39) Flach, J.M. (2000). Beyond mind: Ecological control systems. *Science Prestige Lecture*, University of Canterbury, Christchurch, New Zealand (June 7th).
- 38) Flach, J.M. (2000). Turning cognition inside-out: A cybernetic approach to meaning processing. Presentation to the Department of Psychology, University of Canterbury, Christchurch, New Zealand (May).
- 37) Dominguez, C., Flach, J., McKellar, D., Dunn, M., and Lake, P. (1997). Laparoscopy Cholecystectomy: Implications for patient safety. Presentation at *the Workshop on Assembling the Scientific Basis for Progress on Patient Safety*, the National Patient Safety Foundation, Chicago, IL. (Dec. 17 - 18).
- 36) Flach, J.M. (1997). UAVs: A Use-Centered Approach. Invited presentation. Workshop on Human Machine Issues in Unmanned Aerial Vehicles. (Aug 19 - 10). George Mason University, Fairfax, VA.
- 35) Flach, J.M. (1996). Human performance: A meaning processing approach. Invited presentation. Waseda University, Tokyo, Japan. (August).
- 34) Flach, J.M. (1996). Space-Time: The reality of experience. Invited presentation. Psychology and Computer Science Departments, University of Calgary. (March).
- 33) Flach, J.M. (1995). Information: Beyond the communications channel metaphor. Invited presentation to the Department of Psychology, Rice University, Houston, TX.
- 32) Flach, J.M. (1995). Human factors challenges of minimally invasive surgery. Invited presentation to the Houston Chapter of the Human Factors and Ergonomics Society, Houston, TX.
- 31) Flach, J.M. (1995). Keep the horizon steady! The challenges of minimally invasive surgery. Invited presentation to the Tri-State Chapter of the Human Factors and Ergonomics Society. Cincinnati, OH (May 9).
- 30) Dominguez, C., Hutton, R., & Flach, J.M. (1994). Coordination of perception and action in video surgery. ERGO EXPO. Dayton, OH. (Sept 20)
- 29) Flach, J.M. (1994). Error in adaptive systems: Reconsidering fundamental assumptions about causality. Invited paper presented at the workshop on *Approaches to Modeling the Evolution and Breakdown of Adaptive Systems*. Annual Workshop on New Technologies and Work --- NeTWORK. Bad Homburg, Germany. (June 16 -18)
- 28) Flach, J.M. (1994). Going with the flow: Taoism, low altitude flight, and the meaning of life. Invited presentation at the Beckman Center, University of Illinois, Urbana, IL. (April 22)
- 27) Flach, J.M. (1994). Fitts' Law: Might the force be with it. Invited presentation to the Kinesiology Department, University of Illinois, Urbana, IL. (April 22).
- 26) Flach, J.M. (1993). Beyond the servomechanism: Active Psychophysics. Invited presentation Risø National Laboratory, Kognitiv Systemsgruppe, Roskilde, Denmark. (Sept. 3)
- 25) Flach, J. M. (1993). Perception and action: A holistic approach. Presentation to the Center for Human Motor Research, Department of Movement Science - Division of Kinesiology, University of Michigan, Ann Arbor, MI. (March 26th).
- 24) Flach, J.M. (1993). Perception and Control in Low Altitude Flight. Presentation sponsored by the Purdue Student Chapter of the Human Factors and Ergonomics Society. Department of Industrial Engineering, Purdue University, West Lafayette, IN. (April 2nd).
- 23) Flach, J.M. (1992). Perception and Control in Low Altitude Flight. Presentation to the Wright State Student Chapter of the Human Factors and Ergonomics Society. Wright State University, Dayton, OH.
- 22) Flach, J.M. (1992). Virtuality: Beyond reality. Presentation to the Ohio Consortium for Virtual Environment Research. Miami Valley Research Park, Dayton, Oh.
- 21) Flach, J.M. (1992). Perception/ Action: A Holistic Approach. Presentation to the Human Movement Sciences Group, Department of Psychology, The Free University, Amsterdam. (Dec).
- 20) Flach, J.M. (1992). Ecological approaches to design. Presentation to the Form Theory Group, Department of Industrial Design, Delft Technical University.

- 19) Flach, J.M. (1992). Human performance in low altitude flight. Invited lecture *The Tenth Annual International Conference on Aviation Physiology and Training: Human Factors in Aviation Part III*. Southampton, PA: Aeromedical Training Institute (AMTI) A Division of Environmental Telectronics Corporation.
- 18) Flach, J.M. (1992). Direct perception and affordances. Invited presentation at the Learning Center, University of Minnesota, Minneapolis, MN. 13 Feb.
- 17) Flach, J.M. (1991). Active psychophysics: New problem, new method, or new paradigm? Invited presentation to the Department of Psychology, University of Cincinnati, OH, 18 Oct.
- 16) Flach, J.M. & Allen, B.L. (1991). Dynamic occlusion: Active versus passive observers. Poster presented at the *Sixth International Conference on Event Perception and Action*. Free University, Amsterdam.
- 15) Flach, J.M. & Hagen, B.A. (1991). Regulating altitude: Signal and noise in optic flow. Poster presented at the *Sixth International Conference on Event Perception and Action*. Free University, Amsterdam.
- 14) Flach, J.M. (1991). Invited Discussant: Motor Learning/Motor Control Symposium 2: Visual Control of Movement: Real World Applications. Presented at the *North American Society for the Psychology of Sport and Physical Activity Annual Conference*, June 13-16, Asilomar, CA.
- 13) Flach, J.M. & Hansen, J.P. (1991). The abstraction hierarchy as interface: A new look for design databases. The Armstrong Laboratory: Wright Patterson AFB, OH. May.
- 12) Flach, J.M. (1990). An ecological approach to visual display design. *Representation Project of the Visualization Services and Development Group*, National Center for Supercomputing Applications, University of Illinois, Champaign, IL.
- 11) Flach, J.M. (1990). The human-machine interface as a perceptual system. *First European Workshop on Ecological Psychology*, Marseille, France.
- 10) Flach, J.M. ((1990). Human factors in air traffic control. *Symposium on Human Factors in Air Traffic Control*, Air Traffic Control Association, Arlington, VA.
- 9) Flach, J.M. (1989). Fitts' law versus natural law. Invited presentation. *Workshop for Ecological Methods for Studying Perceptually Guided Actions, The Research Project Mind and Brain*, Zentrum für Interdisziplinäre Forschung, Universität Bielefeld, West Germany.
- 8) Flach, J.M. (1989). Supporting decision making for complex, ill-defined problems with MGA. Invited presentation at Risø National Laboratory, Roskilde, Denmark.
- 7) Flach, J.M. (1989). Manual control: A methodology for studying perception-action. *Workshop on Visually Guided Control of Movement*, NASA Ames Research Center, Moffet Field, CA.
- 6) Flach, J.M. & Hagen, B.A. (1989). Recreating visual workspace. *1989 NASPSPA Conference*, North American Society for Psychology of Sport and Physical Activity, Kent State University, Kent, OH.
- 5) Flach, J.M. (1987). Discrete control with nonlinear displays. *Symposium on Motor Control*, Department of Physical Education, University of Illinois, Urbana, IL.
- 4) Flach, J.M. & Larish, J.F. (1986). Global optical flow rate: A psychophysical assessment. *Third Mid-Central Ergonomics/Human Factors Conference*, Miami University, Oxford, OH.
- 3) Flach, J.M. & Fuld, R.B. (1986). Manual control laboratory. *Third Mid-Central Ergonomics/Human Factors Conference*, Miami University, Oxford, OH.
- 2) Flach, J.M., Snell, M.K., McMillan, G.R. & Warren, R. (1984). Dynamic seat tactual cuing can be superior to visual cuing. *Psychonomic Society Meeting*, San Antonio, TX.
- 1) Jagacinski, R.J., Flach, J.M., Gilson, R.D., & Dunn, R.S. (1982). Performance evaluation of a kinesthetic-tactual display. *American Helicopter Society/ NASA Specialist Meeting on Handling Qualities*, Palo Alto, CA.

The world is moved not only by the mighty shoves of the heroes, but also by the aggregate of the tiny pushes of each honest worker.

- Helen Keller -

"... the only way to develop curiosity, sympathy, principle, and independence of mind is to practice being curious, sympathetic, principled, and independent. For those of us who are teachers, it isn't what we teach that instills virtue, it's how we teach. We are the books our students read most closely."

- Menand describing Dewey's approach to education -

You can't depend on your eyes when your imagination is out of focus.

Mark Twain