

CURRICULUM VITAE



Alan Richard Gundersen Mecham

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Overview:

I have 14 year of professional experience with a focus on 3d visualization and ergonomics design. I have produced computer visualizations within the nuclear energy sector for Norway and the United States; I have experience with 3D design, usability and fabrication; programming and scripting; databases design and maintenance; HMI design; concept development, technological assessment and user integration.

Key Specialties:

- Human Factor and Ergonomic Design
- HMI design and testing
- Polygonal 3D Modeling of buildings, spaces, people and equipment
- 3d print prototyping, STL and GCode
- Virtual Reality technologies using VRML, X3D
- Java programming
- Graphical programming in OpenGL, WebGL, and Web3D
- Visualization Scripting utilizing JavaScript, Python, Perl
- Web Design with HTML3, PHP, CSS (Learning HTML5)
- Database Design with SQL, MySQL
- Data Structures and presentation XML and DTD
- 3DS Max, ZBrush, Photoshop, Blender and other CGI packages

PROFESSIONAL CURRICULUM

Period: **June 2012 – June 2015**
Company: **Rambøll Group, Oil & Gas Norge**
Position/Role: **HSE, Working Environment & Human Factors Engineer**

Key Responsibilities

- Norwegian Offshore working environment safety reviews of oil platforms and vessels;
- Risk assessment of Norwegian offshore oil platforms and vessels designs based upon Norwegian legislation for HSE requirements (utilizing PSA/PTIL regulations & guidelines, and reference standards such as NORSOK)
- Health Safety and Psychosocial workplace compliance reviews.
- Risk and Safety Base Workshop mediation and guidance (HAZID, WEHRA, WEIA, etc)
- Risk and Hazard identification and follow-up
- ALARP review and reporting

Period: **January 2007 – February 2012**
Company: **Idaho National Laboratory, US Department of Energy – Nuclear**
Position/Role: **Research Engineer & 3d Visualizations**

Key Responsibilities

- Scripting of Human-like Behavior for Visualizations
- Web and Database interface Programming and Design
- Equipment and Hardware specifications, maintenance and upkeep for Human Simulation Lab
- Human Simulation Lab design and layout in CAD and 3D

Period: **July 2001 – December 2006**
Company: **Institute for Energy Technology**
Position/Role: **System Programmer & 3D Modeler**

Key Responsibilities

- 3D mesh Modeling of humans and environments from CAD sources or Photographical sources
- VRML 2.0 / X3D Optimization and setup
- Behavioral programming

EDUCATION

1994 – 1998	Associate of Natural Science, Ricks College Rexburg, ID, USA
2000 – 2007	Graduate of Computer Science Master of Science: Computer Science, Østfold University College, Halden, Norway

ATTENDANCE TO COMMITTEES

2014 – 2015	Deputy Safety Delegate, AMU	Rambøll Oil & Gas
2008 – 2009	Area Safety Warden	Idaho National Laboratory
2008 – 2010	Safety Delegate, SOAR	Idaho National Laboratory
2002 – 2013	Member of ACM SIGGRAPH	Association for Computing Machinery, Special Interest Group on Graphics and Interactive Techniques

LANGUAGES

<i>Norwegian</i>	Good Spoken, Good Reading, and Basic Writing [Europass CEFR – A2/B1]
<i>English</i>	Mother Tongue, Advanced Understanding

PUBLICATIONS

2010 – The Development of a Human Systems Simulation Laboratory at Idaho National Laboratory: Progress, Requirements and Lessons Learned

Authors: Kayta Le Blanc, David Gertman, Alan Mecham, William Phoenix
Presented at: NPIC& HMIT 2010
<http://www.inl.gov/technicalpublications/Documents/4781560.pdf>

2010 – Human System Simulation in Support of Human Performance Technical Basis at NPPs

Authors: David Gertman, Jeffery Joe, Alan Mecham, William Phoenix, Kayta Le Blanc, Samy Tawfik
Presented at: PSAM '10
<http://www.inl.gov/technicalpublications/Documents/4680319.pdf>

2007 – Cognitive Virtualization: Combining Cognitive Models and Virtual Environments

Authors: Tuan Tran, David Gertman, Donald Dudenhoeer, Ronald Boring, Alan Mecham
Presented at: Joint 8th IEEE HFPP / 13th HPRCT
<http://inl.gov/technicalpublications/Documents/3775294.pdf>

2006 – Intelligent Virtual Environment Design: Project Design Report and Master Thesis

Authors: Alan Mecham
Østfold University College, Avd. for informasjonsteknologi

INTERESTS

I am highly creative, imaginative and artistic. I enjoy making all forms of digital art and spend much of my free time working on personal CGI projects including 3D art and 3D printed sculptures. I also have an interest in traditional drawing and painting.

I enjoy hiking, climbing, Geocaching and many other outdoor family activities.