Eugene J. (Gene) Alexander, PhD
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SUMMARY

- A seasoned, focused, energetic technologist with more than 20 years of experience in building IP, multi-disciplinary development teams, and innovative products, from conception to delivery

- Computer Scientist specializing in complex optical/software/hardware system design for computer vision of humans, 3d reconstruction, real-time video processing, optimization, human biomechanics, and the estimation of human facial expressions

- Skilled architect, technical leader and manager with proven effectiveness in fundraising, public speaking, IP development and protection, and program and project management

TECHNICAL SKILL SET

Invention, mathematics, algorithms, computer vision, machine learning, image processing, biomechanics, estimation, optimization, complex multi-disciplinary system architecture and design. Human gait and facial expressions.

PROFESSIONAL EXPERIENCE

2011 – Current: Chief Technical Officer, Body Surface Translations, Atlanta, GA

First employee in this animal health startup, funded by Georgia Research Alliance, Elanco, and gates Foundation. Developed computer vision and machine learning algorithms to characterize livestock body characteristics for animal husbandry purposes. Supervised outsourced hardware development team and farm experiments.

2014 – 2015: Clinical Assistant Professor and Director, Launch Labs, Leatherby Center for Entrepreneurship and Business Ethics, Argyros School of Business and Economics, Chapman University

Work with faculty and students to define technologies and tools needed for projects. Review, evaluate and recommend existing and emerging technologies for current and future project needs. Work with faculty and students to assess needs for their websites and other engineering problems. Mentor students in determining technology solutions as they shape ideas into products or businesses. Coordinate and/or teach short courses in currently relevant software engineering or entrepreneurship business topics. Act as director of student incubator.

2009 – 2013: Vice President and General Manager Motion Analysis Corporation, Santa Rosa, CA

Integration of MaMoCa into MAC, development of intellectual property, design of overall system architecture, directing software and hardware development teams in the technology integration.

2005 – 2009: Founder and CEO MaMoCa, Inc., Santa Ana, CA
Managed and oversaw all functions of this angel funded technology start-up, which employed computer vision biomechanics to produce 3D content for the animation industry. Acquired 2009

1998–2004: Lecturer and Senior Research Engineer, Stanford University, Stanford, CA
Directed day-to-day research laboratory operations for a research group for one of the top three mechanical engineering departments in the world, with an annual budget in excess of $3M. Supervised 8-10 students and junior employees. 90% appointment, promoted from Research Associate & Lecturer to Research

Engineer to Senior Research Engineer. Supervised the team and operation of three motion capture laboratories (clinical, population studies, and technology development).

2000 – 2004:   **Co-founder and Chief Technical Officer, Imaging Therapeutics, San Mateo, CA**
Orthopedic medical device startup. Co-founder & original CTO, later 20% position as development engineer. Company went public in 2015.

1990 - 1998:   **Director of Engineering, Computerized Functional Testing Corp., Chicago, IL**
Designed, developed, built, installed and serviced an orthopedic system/laboratory along with an enabling service. Promoted from Electronic Technician to Engineer to Director. Split position with Rush Presbyterian.

1988 - 1998:   **Research Engineer III, Rush Presbyterian St. Luke's Medical Center, Chicago, IL**
Directed day-to-day orthopedic research laboratory operations for a research group within the Department of Orthopedic Surgery, a leader in human motion capture for orthopedic applications. Promoted from Electronic Technician to Engineer I then II and finally III. Split position with CFTC. Supervised 5-6 students and one employee in clinical orthopedic research.

EDUCATION

1994 – 1998:   PhD. Electrical Engineering and Computer Science, University of Illinois at Chicago
Estimating the Motion of Bones from Markers on the Skin
1991 – 1994:   MSc. Electrical Engineering and Computer Science, University of Illinois at Chicago
Distributed Experimentation through Networked Measurement Servers
1988 – 1991:   BSc. Electrical Engineering, High Honors, University of Illinois at Chicago

PATENTS

E. Alexander, T. Andriacchi, P. Lang, D. Steines; Assessing the Condition of a Joint and Devising Treatment, US Patent #7,239,908, EU Patent # 1,322,225.
E. Alexander, Method for synchronizing the operation of multiple devices for generating 3D surface models of moving objects, US Patent #7,643,158.
E. Alexander, T. Andriacchi, P. Lang, D. Steines; Assessing the Condition of a Joint and Devising Treatment, US Patent #8,112,142
E. Alexander, T. Andriacchi, P. Lang, D. Steines; Assessing the Condition of a Joint and Devising Treatment, US Patent #RE43,282
E. Alexander, Device and method for calibrating an imaging device for generating three dimensional surface models of moving objects, US Patent #8,223,208.
E. Alexander, T. Andriacchi, P. Lang, S. Napel; Assessing the Condition of a Joint and Preventing Damage, US Patent#8,265,730
E. Alexander, T. Andriacchi, P. Lang, S. Napel; Assessing the Condition of a Joint and Preventing Damage, US Patent# 8,862,202
E. Alexander, Device for generating three dimensional surface models of moving objects, US Patent# 8,848,035.

P. Lang; D. Steines; **E. Alexander**, T. Andriacchi, Joint and Cartilage Diagnosis, Assessment and Modeling, US Patent #9,289,153 B2.