

JONATHAN P. SIEGRIST

OBJECTIVE

Obtain permanent employment as an engineering manager, director level or higher, in the area of medical devices / sensors / diagnostics

I want to strategically drive & technically manage programs/projects focused on revolutionary technologies that will drastically improve healthcare.

TECHNICAL PROFILE

- Strong interdisciplinary engineering and biomedical background
- Extensive experience with systems & technology integration
- Design, prototyping, and manufacture of polymer meso/microfluidic devices
- Hardware and software development for instrumentation support
- Assay development including surface chemistries and signal transduction

PERSONAL PROFILE

- Proven technical engineering leadership in both R&D and mfg. environments
- Proven program/project management with 10+ IVD product launches
- Natural leader with excellent communication and management skills
- Self-motivated and hard working
- Persistent and creative problem solver
- Excels in challenging environments
- Strong entrepreneurial drive

EDUCATION

2009, **Ph.D., Biomedical Engineering**

University of California, Irvine

Dissertation: Centrifugal Microfluidic Platforms Towards Sample-to-Answer Nucleic Acid Diagnostics

2006, **M.S., Biomedical Engineering**

University of California, Irvine

2005, **B.S., Electrical Engineering w/Biomedical Engineering Option**

University of California, Los Angeles

EXPERIENCE HIGHLIGHTS

DIRECTOR, ENGINEERING PROGRAMS AT CEPHEID: Director of Consumables Engineering (group size 30+ across R&D and Mfg. Eng.) and technical program director of the Cepheid-USPS-Northrop Grumman Biohazard Detection System (BDS) *Key Outputs:* established the Engineering Consumables R&D and Injection-Molding R&D groups, led the R&D groups to design and develop a new injection-molded GeneXpert cartridge component for highly-multiplexed PCR detection, led the Mfg. Eng. groups through validation protocol (IOPQ) & CAD/drawing harmonization efforts incl. establishment of a metrology program, and addressed BDS program business continuity concerns to maintain the multi-million dollar yearly revenue stream

PROGRAM/PROJECT MANAGER AT CEPHEID: Product development program/project manager across all areas at Cepheid, including hardware/instrument systems, software, and assays/cartridges *Key Outputs:* 10+ IVD product launches including worldwide launch of the GX Infinity-80 instrument and Xpert CT/NG assay

LEAD ENGINEER & RESEARCHER FOR MICROFLUIDIC IMMUNOASSAY SYSTEM WITH EMD MILLIPORE: International collaboration with Millipore to develop a microfluidic system capable of performing automated immunoassays *Key Outputs:* designed & built a fluidic reagent device and integrated it with the assay, surface chemistry, and instrument

CO-FOUNDER & LEAD ENGINEER OF IGLYKO, INC FOR GLUCOSE SENSING: Worked in the business, financial, and technical arms of the company for the development of a fluorescence-based continuous glucose-sensing intravenous catheter *Key Outputs:* developed hydrogel chemistries, fabricated fiber-optic systems, and established proof-of-concept in whole blood

SKILLS OVERVIEW

MANUFACTURING: injection-molding & tooling, bonding/sealing/welding, surface treatment, MEMS processes/cleanrooms

BIO/CHEMICAL: DNA/RNA assays (amplification reactions), immunoassays, surface immobilization, gel/matrix chemistries

INSTRUMENTATION: Electrical, optical (fiber-optics, LEDs), thermal (thermoelectrics, thermal modeling), magnetics

SOFTWARE: CAD (SolidWorks, Pro/E, AutoCAD), CAM (Pro/E), LabVIEW, Microsoft Project, Minitab, Windows, Mac

PUBLICATIONS: 30+ conferences and papers including 1st authorships in industry-leading publications (IVD Tech.)

MED DEVICE STANDARDS: ISO 13485, Technical File, ISO 14971, Risk Management/FMEA, 21 CFR 820, 510k, PMA

Contact

Mobile: +1 (925) 385 8203

Email: siegristj@mac.com

URLs

www.thesiegrists.com

www.linkedin.com/in/siegristj

Location

Seeking positions in:

West Coast, USA

US Citizen

SELECT WORK EXPERIENCE

2013-CURRENT : DIRECTOR, ENGINEERING PROGRAMS

Cepheid

www.cephoid.com

Overall:

- Director and lead across Cepheid for all of Consumables Engineering, including R&D and Manufacturing Engineering
- Managing 30+ team members across 5 groups covering 2 sites (Sunnyvale & Lodi) with diverse cross-functional backgrounds including Biomedical Engineers, Chemical Engineers, Mechanical Engineers, Biologists, Mold/Die Makers, Process Engineers, System Integration Engineers, Automation Engineers, and technicians
- Significant cross-functional responsibilities including interfacing with Manufacturing, Regulatory, Quality, Supply Chain, Bio R&D, Facilities, and Planning, among others, to ensure all requirements are gathered and incorporated into each project
- Responsibilities have included equipment/infrastructure updates to the consumables labs as well as to Cepheid's molding/tooling facility, overall project schedule management, department budgets across several cost centers, recruitment/hiring/team building, and deliverables tracking (including regular updates to the Senior Executive team)
- Have driven the teams to develop, learn, and grow including sponsoring SolidWorks trainings, onsite Minitab trainings, PMP courses, leadership courses, book clubs, and volunteer events among others
- Have coached individual Consumables R&D team members and managers to develop the group into a high-functioning, productive, and innovative product development and validation team

R&D Engineering:

- Established a new Consumables R&D group (2014) to accelerate a strategic project to enable highly-multiplexed PCR in Cepheid's GeneXpert systems
- Led the Consumables R&D group (incl. individual contributor duties) to perform all research, development, and testing of specific microfluidic parts, establish feasibility for injection molding of these parts as a new consumable cartridge component, achieve robust PCR functionality using integrated chemistries, and transfer of the new platform to Cepheid Bio R&D groups for oncology assay development
- Established a new Injection-Molding and Tooling R&D group (2015) to provide prototyping services across all of Cepheid including projects to resolve issues within Cepheid plastics manufacturing, molding of prototype consumables components followed by production tool design and build, and molding of prototype instrument components incl. gears and lenses

Manufacturing Engineering:

- Responsibilities and oversight were significantly increased in 2015 with the addition of Consumables Manufacturing Engineering groups including engineers and technicians responsible for design-for-manufacturing (DFM) improvement projects as well as production qualification/validation of new injection-molding tools and automation lines for capacity/growth
- Mfg. Eng. responsibilities included ownership of cartridge consumables part designs, and ownership of validation (OPQ) activities on tools associated with the cartridge consumables parts including the injection-molding presses/tools and automation lines for subassembly and finished IVD goods
- Drove major capacity initiatives to improve supply of overmolded cartridge body parts by working with Supply Chain, external vendors, and Manufacturing to initiate & accelerate additional tool builds/qualifications, initiate scrap reduction projects, and implement swing tool strategies
- In 2016 alone, Mfg. Eng. teams successfully completed validation/qualification of 15+ new molding tools, re-qualification (due to site transfer or repair/refurbishment) of 20+ molding tools, and validation of 3 new manufacturing lines on schedule to restore the cartridge body supply chain and improve capacity to maintain Cepheid's double-digit percentage sales growth
- Drove major effort within Mfg. Eng. teams to rebuild, clean-up, and harmonize all component CAD models, 2D drawings, visual aid documents, and validation/qualification protocols (OQ/PQ)
- Initiated metrology program to develop, document, and validate consumables metrology measurement methods and harmonized methods across multiple external molding vendors leading to expedited qualification and injection-mold tool bring-up timelines

Cepheid-Northrop-USPS BDS Program:

- Cepheid's technical program lead for the Biohazard Detection System (BDS), a national security partnership between Cepheid, United States Postal Service (USPS), and Northrop-Grumman (NG) to screen mail for Anthrax w/molecular testing
- Leading all of Cepheid's technical, business, and customer aspects of the BDS program, including supply of consumable test cartridges to USPS and service/support of system hardware for NG
- Duties have included forecasting, supply chain management, manufacturing management, shipping/transportation logistics, technical change control, contract negotiations, resolution of field issues, database management & monitoring, and regular partner meetings with both USPS & NG incl. ISO audits
- Successfully addressed several business continuity (BCP) concerns with the BDS program while maintaining a \$20 mil+ yearly revenue stream in a time of rapid change with USPS and mail demand
- Successfully drove negotiation of new multi-year program contracts with USPS & NG as well as external suppliers to Cepheid to continue support of the program through 2020 while concurrently addressing legacy program issues

2011-2013 : PRODUCT DEVELOPMENT PROGRAM/PROJECT MANAGER

Cepheid, Inc.

www.cepheid.com

- Worked as a project manager for Cepheid's Research and Development groups, including Engineering, Systems Integration, Software, and BioAssay projects
- Acted as the sole Systems/Software program/project manager, including projects for developing GeneXpert systems, GeneXpert software, and new consumables/cartridges
- Duties included core team formation, schedule development and tracking, conflict management, resource management, risk management, and adherence to ISO 13485 from concept to product launch & post-market surveillance
- Managed large, cross-functional, international core teams while significantly contributing to design, verification/validation, manufacturing, regulatory, and marketing initiatives, among others
- Additional duties included strategic program planning at the Executive level and product lifecycle improvements
- Successfully launched over 10+ IVD products in 2 years, including systems projects (Infinity-80 and Infinity-48s instruments, Xpert Calibration), software products (Xpertise and Dx product software), and assays (Xpert CT/NG, Xpert Flu)

2010-2011 : MICROFLUIDIC IMMUNOASSAY RESEARCH AND DEVELOPMENT

Biomedical Diagnostics Institute - Dr. Jens Ducreé

www.bdi.ie

- Worked as a post-doctoral researcher in the microfluidics group at the Biomedical Diagnostics Institute in Dublin, Ireland
- Research work was focused on development of an automated, microfluidic immunoassay system in collaboration with Millipore, including integration of microfluidic sample prep, surface chemistry, fluorescence detection, and hardware systems
- Other projects included a magnetics-based bioseparation platform, unique valving methods, and new surface chemistries
- Also set up entirely new labs and installed new lab infrastructure, including process development and lab management
- Additional tasks involved student mentoring and supervision, including the management of several M.S. and B.S. students

2006-2011 : CONTINUOUS GLUCOSE MONITORING RESEARCH AND DEVELOPMENT

iGlyko, Inc.

- Worked on the development of an intravenous, fiber-optic glucose sensor for in-hospital tight glycemic control (TGC) using genetically engineered proteins, including co-founding a start-up company (iGlyko, Inc.)
- General duties included setting up laboratory space and assisting in creation of research and business teams through training and recruitment
- Scientific duties included management of a small team for fiber-optic system design, protein handling chemistries, hydrogel optimization, development of protocols, hardware automation, and detailed development planning
- Established *in vitro* sensitivity & specificity proof-of-concept in whole blood
- Business duties included business plan writing/presentations, searching for funding from investors (angels, investment bankers, and VCs), grant writing (SBIRs), and webmaster

2006-2009 : RESEARCH ON MICROFLUIDIC PLATFORMS FOR NUCLEIC ACID-BASED DISEASE DIAGNOSTICS

UC Irvine - Dr. Marc Madou

www.biomems.net

- Research for doctorate degree on development of microfluidic sample lysis, PCR, and DNA microarray hybridization platforms to integrate into a sample-to-answer system as part of a multi-million dollar, international Genome Québec initiative
- Developed a microfluidic system for bacterial detection that combined cell lysis with real-time PCR as part of a DARPA-sponsored initiative within the unique MF3 center
- Utilized microfabrication and manufacturing skills to create disposable, low-cost, polymer microfluidic devices both in and out of cleanroom facilities
- Fabricated and automated platform instrumentation, including fluorescence detection systems, feedback control systems for thermocycling, and magnetic actuation systems for sample preparation
- Research work also included handling and performing relevant biological assays, such as the optimization of qPCR reactions and the handling of blood/cells
- Additional duties included lab management, webmaster, and numerous grant writing efforts (NIH, NSF, and others)

2007, FALL : RNA AMPLIFICATION ASSAY DEVELOPMENT

Hologic (formerly Gen-Probe) - Dr. Norm Nelson

www.hologic.com

- Worked in Gen-Probe's biochemistry R&D group on RNA amplification and detection assays
- Developed and optimized various forms of transcription-mediated amplification (TMA) assay for prostate cancer diagnostics
- Reactions were run in a 96-well plate format using real-time molecular probes for multiplexed detection
- Work included designing and carrying out experiments as well as data analysis and quantitation
- Additional tasks involved instrumentation optimization such as protocol development for magnetic bead-based target-capture and automated well-plate dispensing

OTHER EXPERIENCE

2016 : UC BERKELEY HAAS SCHOOL OF BUSINESS EXECUTIVE LEADERSHIP COURSE

- Immersive 5-day course led by Dr. Homa Bahrami covering personal and team leadership topics such as organizational tools & styles, coaching, communication styles & effectiveness (incl. non-verbal), active listening, and fostering collaboration
- Course included 360° evaluations, live recording and feedback/analysis of mock negotiations, storytelling, and team analysis

2014 : SITUATIONAL LEADERSHIP TRAINING

- Hands-on, 1-day seminar focused on employing a dynamic management style based on the employee and situation at hand

2010 : ACADEMY LEADERSHIP TRAINING - LEADERSHIP BOOTCAMP

- Intensive, hands-on, 3-day leadership seminar led by previous members of the US Military
- Topics focused on included communication, motivation, conflict management, coaching, and goal setting

DETAILED PROFILE

WORK EXPERIENCE

I offer a unique combination of technical engineering leadership, technical engineering skill, and project management ability. My career has consisted of a mixture of roles and responsibilities in a diversity of industry and academic environments. I have worked in established IVD companies (**Cepheid, Hologic (formerly Gen-Probe)**), small start-up companies (**iGlyko, Inc.**), academic institutions in collaboration with large, multi-national companies (**EMD Millipore**), government labs (**Lawrence Berkeley National Lab**), and purely academic settings (**UC Irvine, UCLA**). My positions have included work as an engineering manager & director, an individually-contributing engineer, a biochemist, and a project/program manager on application-driven, real-world products, often in the clinical diagnostics space. I have established technical groups as well as project teams and have led them to success. Technically, I have focused on all aspects of diagnostic systems from sample preparation to amplification to detection, including consumables, assays, systems, and software. I have designed and integrated systems in light of the considerations involved with IP/freedom-to-operate restrictions, CE Mark/FDA clearance requirements (*incl.* 510k, PMA, and CLIA-Waiver), and I have driven the implementation and qualification of low-cost, feasible manufacturing. Thus, I am able to work within the myriad of specifications and restrictions required to achieve success.

TECHNICAL SKILLS

Specializing in the design, engineering, and integration of diagnostic devices and sensors, I am especially well-suited for projects involving both meso and microfluidics. I am equally as comfortable in an engineering setting as I am in a biological/chemical setting. I have vast experience designing, prototyping, and manufacturing polymer diagnostic devices as well as moving those into scaled-up, validated production. I also have experience with the instrumentation, hardware, software, and automation required to support such devices. Additionally, I have experience working on the surface chemistries and assays for adaptation onto *in vitro* diagnostic systems. With a true interdisciplinary background, I can plan and execute a new project as well as contribute to an ongoing one, taking into account cross-disciplinary considerations such as marketing, regulatory, and manufacturing requirements. Finally, I excel in environments where novel, logical, and efficient integration and coordination of the various aspects involved (*i.e.*, engineering, manufacturing, biochemistry, surface chemistry, hardware) are required.

PERSONALITY AND LEADERSHIP PROFILE

I enjoy learning and seek out projects that require me to explore new fields and master new skills and techniques. I am particularly well suited for situations that require a combination of leadership, technical direction, and clear project structure & organization. I excel when faced with difficult tasks and find myself most creative under challenging conditions. My leadership and communication abilities are an important asset and, in particular, the **Academy Leadership** program I attended, designed and led by former US Military members, has had a large and positive impact on the way I lead, manage, and communicate in both engineering/technical and program/project settings. Using these skills and my experiences at the **UC Berkeley Executive Leadership** program, I have successfully managed individuals at many different ability levels, R&D groups, Manufacturing Engineering groups, and large program/project core teams of 20+ members. My leadership style is one of organized urgency, and this permeates through my own personal work ethic as well. I work in an efficient and analytical way and always strive for excellence, even in the mundane.

GOALS

I am actively seeking permanent employment in an exciting company working on application-driven technologies that will have (or already do have) a significant and positive impact on healthcare. I want to ultimately help people by improving the quality and accessibility of healthcare. On a technical front, I want to work on projects that draw upon my interdisciplinary background while requiring me to keep learning. On a personal front, I want to be in a position where I can contribute to the strategic plan of a company while driving that strategy through technical leadership of teams.

SELECT SKILLS

MANUFACTURING/MICROFABRICATION

Conventional & micro machining
Mold making / wire & sinker EDM
Thermal bonding
E-beam/sputter deposition
Electrodeposition/polymerization

3D printing
Injection-molding (incl. TPE overmold)
Adhesives bonding
Photolithography
Profilometry (contact & non-contact)

Laser machining
Hot embossing
Ultrasonic welding
Soft-lithography
Film sealing

BIOLOGY/CHEMISTRY

DNA/RNA handling
Fluorescence/absorbance assays

PCR/alternate amplification assays
Surface chemistry/immobilization

Cell culture
Gel-electrophoresis

HARDWARE/INSTRUMENTATION

Fiber-optics
Electrical (basic circuitry)
Thermal (IR, thermoelectric, resistive)

Optical detectors (PMTs, CCDs)
Soldering/packaging
Magnetics

Light sources (lasers, LEDs)
Data acquisition (DAQ)
Motors (stepper/servo)

SOFTWARE

SolidWorks (CAD)
Pro/Engineer (CAD and CAM)
Microsoft Office

LabVIEW
Minitab
Windows, Mac OS

AutoCAD
ImageJ
MATLAB

QUALITY SYSTEMS & STANDARDS

ISO 13485
ISO 9001
Microsoft Project

CMDCAS
FDA/510k/PMA/CLIA-waiver
Verification & Validation

ISO 14971
Document control
IQ/OQ/PQ (Qualification)

TECHNOLOGY MANAGEMENT

Conflict resolution
WBS & PERT
6s

Scheduling/resource leveling
Budget planning & tracking
Value stream mapping

Risk analysis
Talent acquisition
Kaizen

SELECT JOURNAL PUBLICATIONS

1. 2013 : ANALYTICA CHIMICA ACTA JOURNAL PAPER

- C. Nwankire, G. Donohoe, X. Zhang, **J. Siegrist**, M. Somers, D. Kurzbuch, R. Monaghan, M. Kitsara, R. Burger, S. Hearty, J. Murrell, C. Martin, M. Rook, L. Barrett, S. Daniels, C. McDonagh, R. O'Kennedy, and J. Ducee, 2013, At-Line Bioprocess Monitoring by Immunoassay with Rotationally Controlled Serial Siphoning and Integrated Supercritical Angle Fluorescence Optics, *Analytica Chimica Acta*, **781**, 54-62.

2. 2012 : MICROFLUIDICS AND NANOFUIDICS JOURNAL PAPER

- D. Kirby, **J. Siegrist**, G. Kijanka, L. Zavattoni, O. Sheils, J. O'Leary, R. Burger, and J. Ducee, 2012, Centrifugo-Magnetophoretic Particle Separation, *Microfluidics and Nanofluidics*, **13**, 899-908.

3. 2010 : SENSORS AND ACTUATORS B: CHEMICAL JOURNAL PAPER

- **J. Siegrist**, T. Kazarian, C. Ensor, S. Joel, M. Madou, P. Wang, and S. Daunert, 2010, Continuous Glucose Sensor Using Novel Genetically-Engineered Binding Polypeptides Towards *In vivo* Applications, *Sensors and Actuators B: Chemical*, **149**, 51-58.

4. 2010 : LAB ON A CHIP REVIEW PAPER

- R. Gorkin, J. Park, **J. Siegrist**, M. Amasia, B. Lee, J. Park, J. Kim, H. Kim, M. Madou, and Y. Cho, 2010, Centrifugal Microfluidics for Biomedical Applications, *Lab on a Chip*, **10**, 1758-1773.

5. 2010 : LAB ON A CHIP JOURNAL PAPER

- **J. Siegrist**, R. Gorkin, M. Bastien, G. Stewart, R. Peytavi, H. Kido, M. Bergeron, and M. Madou, 2010, Validation of a Centrifugal Microfluidic Sample Lysis and Homogenization Platform for Nucleic Acid Extraction with Clinical Samples, *Lab on a Chip*, **10**, 363-371.

6. 2009 : MICROFLUIDICS AND NANOFUIDICS JOURNAL PAPER

- **J. Siegrist**, R. Gorkin, L. Clime, E. Roy, R. Peytavi, H. Kido, M. Bergeron, T. Veres, and M. Madou, 2010, Serial Siphon Valving for Centrifugal Microfluidic Platforms, *Microfluidics and Nanofluidics*, **9**, 55-63.

7. 2007 : COLLOIDS AND SURFACES B JOURNAL PAPER

- G. Jia, **J. Siegrist**, C. Deng, J. Zoval, G. Stewart, R. Peytavi, A. Huletsky, M. Bergeron, and M. Madou, 2007, A Low-Cost, Disposable Card for Rapid Polymerase Chain Reaction, *Colloids and Surfaces B: Biointerfaces Special Edition*, **58**, 52-60.

SELECT CONFERENCES

1. 2011 : MICROTAS CONFERENCE ABSTRACT & POSTER (SEATTLE, WA)

- **J. Siegrist**, G. Donohoe, M. Sommers, D. Kurzbuch, R. Burger, S. Hearty, J. Murrell, C. Martin, L. Barrett, C. McDonagh, R. O'Kennedy, and J. Ducee, 2011, A Centrifugo-Microfluidic Cartridge with Integrated Detection Optics Towards Automated At-Line Bioprocess Monitoring of Immunoglobulin G, *Proceedings of MicroTAS 2011*.

2. 2011 : IEEE MEMS CONFERENCE ABSTRACT & POSTER (CANCUN, MEXICO)

- **J. Siegrist**, L. Zavattoni, and J. Ducee, 2011, Centrifugo-Magnetophoretic Separation and Routing of Particles, *Proceedings of IEEE MEMS 2011*.

3. 2010 : MICROTAS CONFERENCE ABSTRACT & POSTER (GRONINGEN, THE NETHERLANDS)

- M. Amasia, **J. Siegrist**, and M. Madou, 2010, Large-Volume Centrifugal Microfluidic Device for Whole Blood Sample Preparation, *Proceedings of MicroTAS 2010*.

4. 2010 : AMERICAN DIABETES ASSOCIATION CONFERENCE ABSTRACT & POSTER (ORLANDO, FL)

- D. Tobler, **J. Siegrist**, T. Kazarian, M. Madou, P. Wang, and S. Daunert, 2010, A Novel Genetically Engineered Biosensor for Real-Time *In vivo* Glucose Sensing, *Proceedings of American Diabetes Association's 70th Scientific Sessions 2010*.

5. 2009 : OAK RIDGE CONFERENCE: FRONTIERS IN CLINICAL DIAGNOSTICS ABSTRACT & POSTER (BALTIMORE, MD)

- N. Nelson, D. Lyakhov, S. Phelps, J. Chelliserrykattil, J. Carlson, M. Kaminsky, P. Gordon, S. Hashima, T. Ngo, **J. Siegrist**, and S. Brentano, 2009, Quantitative Detection of PCA3, PSA, and Internal Control in a Quantitative, Multiplex, Universal Real-time Transcription-Mediated Amplification Assay Format, *Proceedings of Oak Ridge Conference: Frontiers in Clinical Diagnostics 2009*.

6. 2008 : MICROTAS CONFERENCE ABSTRACT & POSTER (SAN DIEGO, CA)

- E. Roy, J. Siegrist, R. Peytavi, G. Diaz-Quijada, H. Roberge, F. Normandin, G. Jia, J. Zoval, M. Madou, M. Bergeron, M. Dumoulin, and T. Veres, 2008, Thermoplastic Elastomer (TPE) Block Copolymers. A New Material Platform for Microfluidics: Proof-of-concept for Complex Siphon Valving on a CD, *Proceedings of MicroTAS 2008*.

7. 2008 : FRONTIERS IN BIOMEDICAL DEVICES CONFERENCE ABSTRACT & PRESENTATION (IRVINE, CA)

- J. Siegrist, M. Amasia, H. Kido, J. Zoval, and M. Madou, 2008, Microfluidic CD-Based Systems Towards Rapid Anthrax Detection in Whole Blood, *Proceedings of Frontiers in Biomedical Devices 2008*.

8. 2007 : SOCIETY FOR EXPERIMENTAL MECHANICS CONFERENCE PAPER & PRESENTATION (SPRINGFIELD, MA)

- J. Siegrist, G. Jia, H. Kido, J. Zoval, G. Stewart, D. Gagné, R. Peytavi, A. Huletsky, M. Bergeron, and M. Madou, 2007, Centrifugal (CD) Microfluidic Platforms for Nucleic Acid Analysis, *Proceedings of SEM 2007*.

SELECT PATENTS AND DISCLOSURES

1. 2012 : US PATENT

- J. Siegrist, R. Gorkin, R. Peytavi, M. Madou, H. Kido, M. Amasia, E. Roy, and T. Veres, 2009, Centrifugal Microfluidic System for Nucleic Acid Sample Preparation, Amplification, and Detection - US 8,303,911.

2. 2009 : SOFTWARE COPYRIGHT

- J. Siegrist, 2009, Multi-Level Gain-Scheduled PID Control Algorithm for Rapid & Stable Thermocycling using Thermoelectric Devices.

3. 2009 : INTERNATIONAL PATENT

- J. Siegrist, M. Madou, P. Wang, S. Daunert, E. Moschou, S. Joel, K. Turner, L. Bachas, B. Haley, and L. Rowe, 2009, Device for Detection of Molecules of Interest - WO 2009/021039.

OTHER SELECT PUBLICATIONS, PRESS, AND PRESENTATIONS

1. 2010 : IVD TECHNOLOGY WEBCAST

- J. Siegrist, Microfluidic Applications for IVDs, *IVD Technology Webcast*, Nov. 16, 2010.

2. 2010 : IVD TECHNOLOGY DX DIRECTIONS ARTICLE

- J. Siegrist, R. Peytavi, M. Bergeron, and M. Madou, 2010, Microfluidics for IVD Analysis: Triumphs and Hurdles of Centrifugal Platforms - Part 3: A Vision for Tomorrow, *IVD Technology DX Directions*, (March).

3. 2010 : CHIPS & TIPS

- J. Siegrist, M. Amasia, and M. Madou, 2010, Fast-iteration Prototyping and Bonding of Complex Plastic Microfluidic Devices, *Chips & Tips*, online.

4. 2010 : IVD TECHNOLOGY MAGAZINE ARTICLE

- J. Siegrist, R. Peytavi, M. Bergeron, and M. Madou, 2010, Microfluidics for IVD Analysis: Triumphs and Hurdles of Centrifugal Platforms - Part 2: Centrifugal Microfluidics, *IVD Technology*, **16** (January/February).

5. 2009 : DOCTORAL DISSERTATION

- J. Siegrist, 2009, Centrifugal Microfluidic Platforms Towards Sample-to-Answer Nucleic Acid Diagnostics.

6. 2009 : IVD TECHNOLOGY MAGAZINE ARTICLE (COVER ARTICLE)

- J. Siegrist, R. Peytavi, M. Bergeron, and M. Madou, 2009, Microfluidics for IVD Analysis: Triumphs and Hurdles of Centrifugal Platforms - Part 1: Molecular Fundamentals, *IVD Technology*, **15** (November/December).

HOBBIES/INTERESTS

- Camping, backpacking, and mountaineering
- Road and mountain biking
- Music - listening (concerts) and playing (drums and guitar)
- Traveling
- Ultimate (frisbee)
- Coffee & tea
- Food & wine

REFERENCES

References available upon request

For further personal and technical information, visit my website:

www.thesiegrists.com