Eugene R. Cochran

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PROFESSIONAL EXPERIENCE

Oak Ridge National Laboratory, Oak Ridge, TN

Group Leader, Technology Commercialization, Partnerships, 2023 - present

- Lead a team of technology transfer professionals to grow and promote licensing, patent portfolio, innovator engagement, and outreach functions of the Group.
- Ability to manage a team, including setting individual and team goals, conducting performance reviews, offering mentorship, and providing constructive feedback.
- Maintain streamlined processes and procedures that enable the staff's success and fosters a collaborative environment.
- Subject Matter Expert (SME) for standard operating procedures related to IP and technology transfer agreements.
- Train and mentor staff regarding intellectual property portfolios and strategic negotiating skills for technology transfer agreements.
- Ensure effective, streamlined, and transparent processes and communication with all stakeholders.
- Implement both ORNL and DOE programs to stimulate intellectual property disclosure and technology deployment through licensing and partnering agreements.
- Maintain and develop outreach efforts with industry, academia, investment community, entrepreneurs, and potential collaborators for partnering.
- Responsible for managing an assigned IP portfolio and individual licensing goals.
- Oversee all negotiation of commercialization-related agreements in the Group.
- Works in a collaborative team with inventors, management, program managers, private industry, and partners. Initiates and negotiates solutions or agreements.
- Serves as the primary relationship manager between the Technology Transfer Division and key ORNL research directorates. Provides relevant training and outreach.
- Manages the commercialization of large collaborative efforts such as the DOE Innovation Hubs.
- Mentors staff and assumes leadership roles in communities of practices and associations of technology transfer.
- Represents ORNL in local, regional, and national meetings.
- Continue professional growth and hold leadership roles in professional organizations that maintain knowledge of current trends, practices, and developments.
- Deliver ORNL's mission by aligning behaviors, priorities, and interactions with our core values of Impact, Integrity, Teamwork, Safety, and Service. Promote diversity, equity, inclusion, and accessibility by fostering are spectful workplace in how we treat one another, work together, and measure success.

Technical Staff Consultant/Sr. Commercialization Manager, Partnerships, 2014-2023

- Independently manage all aspects of developing, protecting, marketing and licensing a portfolio of ORNL technologies.
- Evaluate the intellectual property (IP) opportunity of 50-70 new inventions per year by working with ORNL inventors and patent agents and external law firms.
- Identify the commercial opportunities of the intellectual property portfolio by evaluating the commercial applications and markets, estimating market size, and comparing with competing technologies. Outline licensing plans based on these commercial opportunity evaluations and the patenting strategies.
- Independently select inventions for patenting (and copyrights for assertions) based on commercial upside.
- Execute a marketing strategy for her/his IP portfolio based on the licensing plan.
- Aggressively drive intellectual property business volume by identifying and engaging potential licensees.
- Successfully negotiate terms in license agreements and options, and using the companies' business plans, negotiate appropriate due diligence milestones.
- Work as a collaborative team member with inventors, sponsors, potential licensees and licensees.
- Propose, promote and/or negotiate solutions or agreements.
- Serve as the primary relationship manager between the ORNL S&T Partnerships Directorate and key

research directorates.

- Manage the commercialization of large collaborative efforts such as the DOE Innovation Hubs.
- Assist the Technology Transfer Specialist and inventors with Material Transfer Agreements and Non-Disclosure Agreements.
- Represent ORNL in local, regional, national and international meetings and forums related to her/his technology portfolio or the interests of ORNL.
- Participate in national meetings of licensing associations as speaker, workshop leader, committee member, officer, etc.

University of Arizona, Tucson, AZ

Sr. Licensing Associate and Sector Lead Physical Sciences, Office of Technology Transfer, 2010-2014

- Led expanded licensing and placement opportunities for university intellectual property through effective business-to-business marketing, creative strategic business development or sound planning for new start-ups in the fields of biomedical devices, engineering, and physical sciences.
 - a. Worked as an integral part of the OTT licensing team;
 - i. Identifying clear market opportunities for specific technologies under OTT management where expanded team effort would lead to better technology placement outcomes;
 - ii. Defining simple, measurable, attainable, realistic time-based goals for the team in managing the technologies and the get-to-market opportunity; and
 - iii. Creating concise operations plans and associated business development strategies for taking advantage of the identified opportunities on the timeline required.
 - b. Implemented business development strategies defined in operations plans for team selected projects that add significant value or opportunity to OTT technologies including bundling technologies, sourcing capital or linking with new resources or partners.
 - c. Utilized broad and detailed knowledge of markets and players, aided other licensing professionals in licensing lead generation and opening substantive discussions for technology placement.
- Mentored and served as resource to Licensing Associates in the sector on complex intellectual property matters, technology transfer practice and licensing. Contributed strongly as member of the OTT team toimprove OTT practice and systems. Supervised, at the request of the Director, interns and student workers functioning as part of the sector licensing team within the office.
- Served as a primary catalyst in creating new projects with researchers in the fields of biomedical devices, engineering, and physical sciences that, with OTT's involvement, have strong potential to lead to extraordinary technology transfer opportunities.
 - a. Working as an integral part of the OIT licensing team;
 - i. Identifying clear new market opportunities for specific research areas where expanded team outreach effort would lead to high potential opportunities; and
 - ii. Creating concise outreach strategies for taking advantage of the identified opportunities as well as simple, measurable, attainable, realistic time-based goals for the team that define outreach success.
 - b. Implemented new project development strategies that lead to viable additions to the sector licensing pipeline.
- In capacity as Sr. Licensing Associate managed select cases including:
 - a. Perfecting of intellectual property rights including activities surrounding rights consolidation and management, management of issues related to intellectual property perfection and on-going assessment of rights perfection against resource requirements and project goals.
 - b. Licensing of intellectual property owned by ABOR and other transactions related to intellectual property management.
 - c. Enablement, organization and management of complex intellectual property-based relations including start-ups, inter institutional interactions and industry-sponsored research agreements.
- Maintain and enhance ability to engage senior private sector business development personnel through involvement in conferences, industry organizations, presentations and professional societies.
- Engage in other activities as assigned by the Director.

University of Arizona, Tucson, AZ

Administrative Director, <u>Center for Integrated Access Networks</u> an NSF ERC, 2008-2010

- Assisted the Center Director in overall management of the Engineering Research Center.
- Developed and recommended, and administered program policies and budgets.
- Established policies, methods, procedures and work rules for Center administrative staff.
- Interviewed and recommended selection of applicants, conducted training, assigned and schedule work, acted upon leave request, conducted annual performance evaluations, and recommended disciplinary

actions.

- Assured that Center programs conform to institutional and departmental policies and regulations.
- Overseer of the administrative and management functions of the Center including day-to-day management of grant totaling \$18.5 plus university cost share and industrial sponsorships.
- Supervised professional staff while coordinating the efforts of numerous other professionals and staff employed by partner and participating universities.
- Overseer of Education, Diversity, and IT functions.
- Updated the Center's Strategic Plan as needed and ensured the plan is carried out effectively.
- Serve as liaison with University departments, NSF and broad spectrum of Center partners.
- Oversees and coordinated Center website development, internal database and communications.
- Coordinated annual NSF site visit and other advisory board and oversight committee meetings.
- Worked with Center's Education and Diversity Directors to ensure planned goals and programs are carried out according to established timetables.
- Worked with Center's Industrial Collaboration and Innovation Director to ensure efficacy of IP Management Agreement and servicing of tech transfer needs within the Center.
- Prepared annual report and contribute to proposal writing for external funding.
- Led overall compliance with NSF Cooperative Agreement.

Piezo Energy Technologies, Tucson, AZ

Vice President for Business Affairs, 9/2011 – 12/2012 *Business Manager*, 1/2010 – 6/2011 *Consultant*, 8/2004-12/2009

- Administrative support on National Institute of Biomedical Imaging and Bioengineering, NIH Grant.
- Generated marketing report exploring the feasibility of energy harvesting products in the medical arena, such as improvements to the battery capability for pacemakers or other devices where batteries are implanted; and where high voltage, low current impulses might provide a beneficial effect
- DCN SBIR/STTR Mentor on Company Commercialization Plan.
- Prior art patent searches rendering patentability and freedom to operate opinions.
- Generated financial and accounting reports.
- Marketing and outreach activities, including Oil and Gas Innovation Showcase and BMES.

Research Corporation Technologies, Tucson, AZ

Director, Commercialization, 2000-2008

Senior Associate, Commercialization, 1998-2000

Associate, Technology Transfer, 1991-1998

- Managed business development projects involving a broad range of technologies.
- Coordinated technical product development programs with P&L responsibilities.
- Spearheaded venture investment fund which activities included identifying venture-gap investment-grade opportunities primarily in optics and photonics and funding their early development.
- Contributing member of a medical device incubator which focused on incubating 510k medical device technologies in the areas of cardiac, spine, and gastro-intestinal disorders.
- Created development and business strategies for commercialization of technology resulting from basic and applied research.
- Director/manager of multiple early-stage companies.
- Guided preparation and prosecution of patent applications, both US and foreign.
- Prepared patentability and freedom to operate opinions.
- Identified, solicited and cultivated potential licensees and/or venture partners for technology projects.
- Marketed technology opportunities to investors and potential buyers.
- Negotiated over 30 licensing agreements generating over \$30M in royalty revenues.
- Extensive knowledge of due diligence efforts with respect to investment opportunities
- Financial and pro-forma modeling of investment opportunities.
- Excellent working knowledge of discounted cash flow analysis for investment and project planning purposes.

WYKO Corporation, Tucson, AZ

Senior Optical Engineer, 1986-1991

- Product manager for optical wavefront analysis system.
- Developed a long-scan optical surface profiling instrument.
- Designed an automatic focusing system for an interference microscope.

- Interfaced lens design and wavefront analysis software.
- Assisted in the development of diverging and collimated reference sources.
- Designed 12" beam expander and 1.75, 6, 12, 18" collimator lenses for Fizeau interferometer.
- Generated specifications for optical components in real-time interferometer products.
- Supported engineering and manufacturing.
- Attended trade shows and assisting sales and marketing with regard to sales of real-time interferometer products.

GCA/Tropel, Fairport, NY

Optical Engineer, Summer 1985

• Developed and prototyped a radial-shearing phase modulated interferometer.

Perkin-Elmer Corporation, Wilton, CT

Optical Engineer, 1983-1984

• Applied phase measuring interferometer to the absolute calibration of flats and the mapping of infra red material homogeneity.

IBM Corporation, East Fishkill, NY

Pre-Professional, Summer 1982

• Developed a qualification plan for an image size measurement tool.

OTHER EXPERIENCE

Registered Technology Transfer Professional, RTTP, 2019-present

Alliance of Technology Transfer Professionals (ATTP)

• Awarded to professionals who demonstrate core competency and achievement in the field of Technology Transfer.

Certified Licensing Professional, CLP, 2019-present

- Publicly recognize the licensing professional's experience and qualifications.
- Publicly recognize the licensing professional's education and professional development.
- Focus the licensing professional's individual development on internationally applicable standards, ethics, and excellence.
- Provide greater visibility to the licensing profession with added credibility and prestige.

Adjunct Professor of Optical Sciences, 2002-2010, 2016-2022

University of Arizona, Tucson, AZ

• Advise faculty in commercialization of optics and photonics inventions.

Adjunct Professor of Electrical Engineering, UT-ORNL Joint Faculty Appointment, 2016-2020

University of Tennessee, Knoxville, TN

- Advise faculty in commercialization of power electronics and smart grid inventions.
- Worked with Curent DOE/NSF ERC.
- Interfaced with joint ORNL/UT faculty on commercialization of inventions.

AUTM, 2018- Present

- Finance Committee Member 2018-present
- Liaison to Membership Committee, 2018-present

TTWG, 2014-Present

- Equity subcommittee member.
- IP bundling project.
- Education subcommittee member.

Member Board of Advisors, Arizona Center for Innovation, 2003-2012

University of Arizona, Tucson, AZ

- Advisory committee member lending expertise to early stage startup companies.
- Member of expert panel for providing management and strategic advice to incubator companies.
- Mentor early stage companies on business development, market analysis, and product development.

Consultant, 12/2008-1/2009

REhnu, Tucson, AZ

- Prior art searches and intellectual property investigations.
- Advised company founders on early stage company formation.

Consultant, 9/2003-1/2006

Breault Research Organization, Inc., Tucson, AZ

- Independent review and audit of intellectual property assets generating report on most promising technologies and strategic plan for further development.
- Market competition analysis for strategic direction in eLearning, physics toolbox, and light analysis projects.

Board Director, Extreme Photonix, 2001-2005

Board Director, <u>NP Photonic Technologies</u>, <u>LLC</u>, 1998-2000 Advisor to the Board, <u>Micro Photonix Integration</u>, <u>Inc.</u>, 1999-2002

COMMUNITY/PROFESSIONAL SERVICE

Assistant Block Leader – Los Ceros de Kino, 2005-2014 Concord Hills Homeowners Association, Board Member, Unit 7 Representative, 2016-2018 TTWG – Technology Transfer Working Group, 2014-2019 BCC – Battelle Commercialization Council, 2014-2019 AUTM – Finance Committee Member, 2018-2023 AUTM – Membership Committee Liaison, 2018-2020

EDUCATION

<u>UNIVERSITY OF ARIZONA</u>, Tucson, AZ Doctor of Philosophy in Optical Sciences, August 1988 Ph.D. Dissertation Title: Extending the Measurement Range of an Optical Surface Profiler Dissertation Advisor: <u>James C. Wyant</u>, Dean, College of Optical Science, University of Arizona

<u>UNIVERSITY OF ARIZONA</u>, Tucson, AZ Master of Business Administration, December 1992 Concentrations in Accounting and Finance

<u>UNIVERSITY OF ARIZONA</u>, Tucson, AZ Master of Science in Optical Sciences, May 1987

<u>UNIVERSITY OF ARIZONA</u>, Tucson, AZ Bachelor of Science in Biology, May 2015

<u>UNIVERSITY OF ROCHESTER</u>, Rochester, NY Bachelor of Science in Optical Engineering, May 1983

PIMA COMMUNITY COLLEGE, Tucson, AZ

(Highest Honors, Phi Theta Kappa) Certificate in Automotive Technology, May 2001 Associate of Science, May 2007 Associate of Liberal Arts, May 2007 AGEC-S Certification, May 2007

Graduate Course work included:

Electromagnetic Wave Theory, Fourier Optics, 1st Order Optical Design, Introduction to Lasers, Quantum Optics, Interference and Interferometry, Principles of Optical System Design, Statistical Optics, Solid State Optics, Optical Testing, Image Processing, Microcomputer Interfacing, Radiometry, Photoelectric Devices, Thin Films, Lens Design, Optical Communication, Fiber Optic Communication Systems.

MBA Course work included:

Financial Accounting Analysis, Organizational Theory and Behavior, Managerial Economics, Statistical Decision Making, Management Information Systems, Marketing Management, Managerial Finance, Informational and Financial Decision Making, Intermediate Tax Accounting, Environmental Scanning,

Investment Analysis, Business Strategy and Policy Making, Advance Corporate Finance.

Undergraduate Course work included:

Anatomy (1,II), Advance General Chemistry (I,II), Organic Chemistry (I,II), Biology (I,II), Biochemistry, Bioethics, Cell Biology, Microbiology, Genetics, Evolution, Population Genetics, Nutrition, Vertebrate Physiology, Plant Physiology, Physics (Mechanics, EM, and Modern), Mathematics (Integral, Differential, Differential Equations, Multidimensional, Boundary Value Problems, Applied Complex Analysis), Programming (Visual Basic, Data Structures), Optics (Physical, Geometrical, Opto-Electronics (I,II),Colorimetry, Interference Coatings, Optics Laboratory, Electro-Optics Systems), Digital Circuits, Psychology, Cognition, Ethics, History, Economics, English, Anthropology, Political Science.

Professional continuing education short courses:

CLP Exam Review Class, LES 2019 How to Communicate Effectively to Management, FLC 2019 Demystifying I-Corps for Technology Transfer, AUTM 2019 CRADA Workshop, FLC 2018 Licensing and Negotiation Workshop, Intermediate Level, FLC 2017 PLI Patent Agent Class, June 1, 2012 David Meeks Patbar Course, Jan. 15, 2011 Pulse Coding Techniques in Ultrasound, AIUM, June 21, 2004 Ultrasound Harmonic Imaging, AIUM, June 22, 2004 Introduction to Lens Design Using Code V, ORA, February 1989 Advanced Topics I in Code V, ORA, March 1989 ASAP Introductory Tutorial, BRO, March 22-26, 2004 Optical filters for WDM systems, OFC, March 24, 2003 Fiber Amplifiers and Lasers for Lightwave System Applications, August 1, 2000 Digital Halftoning, IST, May 2000 Introduction to Wavelet Sub-band Image Processing, SPIE, January 27, 1999 193-nm Lithography Fundamentals and Issues, SPIE, February 22, 1998 Infrared Photodetectors, SPIE July 28, 1997 InGaAs/InP Monolithic and Hybrid OEICs, IPRM, May 11, 1997 Digital X-Ray Imaging with Emphasis on Mammography Applications, SPIE, February 22, 1997 Principles of Halftoning, IST, January 31, 1996 Optical Technology in Printers, CLEO, June 4, 1996 Introduction to Electronic Imaging, SPIE, August 4, 1996 Resists for Deep-UV Lithography, SPIE Microlithography, March 14, 1996 Fundamentals of Photochemistry and Photodynamic Therapy, SPIE, January 29, 1996 Quantum Well Devices for Optics and Optoelectronics, CLEO, May 22, 1995 Laser Diodes: Specification, Fabrication, and Packaging for Commercial Applications, SPIE, February 5, 1995 Spatial Light Modulator, Smart Pixel Arrays, and Their Applications, SPIE, July 28, 1994 Photorefractive Nonlinear Optics, SPIE, May 10, 1994 Critical Issues in Semiconductor Laser Technology, CLEO, May 4, 1993 Vertical-Cavity Surface-Emitting Lasers and Applications, CLEO, May 2, 1993 Optical Interconnects, OELASE, January 17, 1993 Introduction to Opto-Mechanical Design, SPIE, July 21, 1992 Analysis, Design, and Fabrication of Binary Optics, SPIE, July 22, 1992 Introduction to Nonlinear Optical Materials, SPIE, July 20, 1992 Diode-Laser-Pumped Solid State Lasers, Optcon, November 6, 1990 Modern Coherence Theory, Opticon, November 4, 1990 Wavefront Measurement and Analysis, SPIE, July 10, 1990 Scanning Tunneling Microscope and Atomic Force Microscope, SPIE, July 9, 1990 Introduction to Alignment Techniques, SPIE, August 10, 1989 Confocal Microscope, SPIE, August 10, 1989 Precision Measurement with Surface Profiler Instruments, SPIE, August 9, 1989 Methods of Optical Design, SPIE, August 18, 1988 Modulation Transfer Function in Optical and EO Systems, SPIE, August 16, 1988 Optical Engineering with Zoom Lenses, SPIE, July 24, 1991 Laser System Design, CLEO, January 13, 1987 Diode Lasers, OELASE, January 12, 1987 Fundamentals of Radiometry, SPIE, August 17, 1986 Elements of Optical System Design, SPIE, August 18, 1986

MEMBERSHIPS

- American Ceramics Society (<u>ACerS</u>)
- Association of University Technology Managers (<u>AUTM</u>)
- Biomedical Engineering Society (<u>BMES</u>)
- Federal Laboratory Consortium (FLC)
- Institute of Electrical and Electronics Engineers (<u>IEEE</u>)
- Licensing Executive Society (<u>LES</u>)
- Optical fna Optical Society of America (<u>OSA</u>)
- Society of Photo-Optical Instrumentation Engineers (SPIE)
- Society of Automotive Engineers (<u>SAE</u>)

PATENTS

E. Cochran, D. Cohen, and J. Ayres, "Apparatus and Method for Automatically Focusing an Interference Microscope," US patent no. <u>4,931,630</u>.

E. Cochran, D. Cohen, and J. Ayres, "Apparatus and Method for Automatically Focusing an Interference Microscope," US patent no. <u>5,122,648</u>.

HONORS

- CIBA-GEIGY High School Science Award May 17, 1979.
- NY State Regents Scholarship Award.
- GCA/Tropel Graduate Fellowship (\$50,000 stipend plus tuition).
- Graduate Research Assistantship University of Arizona Optical Sciences Center.
- 1994 R&D 100 Award RAINBOW High Displacement Actuator Technology Transfer Liaison.
- Phi Theta Kappa.
- Phi Kappa Phi.
- 2015 Larry Dickens Award Technology Transfer (Negotiator of ORNL's Most Significant Technology Transfer in 2015).
- Significant Achievement Award 2016 UT-Battelle Technology Transfer Smart Smoke Detector.
- FLC Federal Laboratory Consortium Award 2017 Award for Excellence in Technology Transfer "Superhydrophobic Transparent Glass Thin Film Innovation License to Samsung."
- FLC SE Federal Laboratory Consortium Award South East 2017 Honorable Mention 2017 Excellence in Technology Transfer "Large Area Additive Manufacturing."
- Significant Achievement Award 2017 UT-Battelle Technology Transfer "Superhydrophobic Coatings."
- FLC Federal Laboratory Consortium Award 2018 Award for Excellence in Technology Transfer "ORNL's Co-Development and Licensing of Large Additive Area Manufacturing Technologies."
- FLC SE Federal Laboratory Consortium Award South East 2018 Award for Excellence in Technology Transfer "ORNL Qrypt Licensing of Quantum Random Number Generator."
- FLC Federal Laboratory Consortium Award 2019 Award for Excellence in Technology Transfer "FLC Federal Laboratory Consortium Award 2019 Award for Excellence in Technology Transfer "Qrypt Licensing of Quantum Random Number Generator."
- FLC SE Federal Laboratory Consortium Award South East/Mid West 2019 Award for Excellence in Technology Transfer "Licensing of ORNL Catalyst for Energy Conversion Applications."
- IEEE, Senior Member, 2019-present.
- RTTP, Registered Technology Transfer Professional, 2019-present.
- CLP, Certified Licensing Professional, 2019-2025.
- Optica fka OSA, Senior Member, 2020-present.
- FLC Federal Laboratory Consortium Award 2020 Impact Award "A Catalyst to Produce Ethanol, Reduce Reliance on Fossil Fuels."
- FLC SE Federal Laboratory Consortium Southeast Award 2020 2020 FLC Southeast Excellence in Technology Transfer Award "Licensing ORNL's large scale additive manufacturing build platform to MVP."
- FLC Federal Laboratory Consortium Award 2021 Award for Excellence in Technology Transfer "Impactful Technology Transfer of Revolutionary Large-Scale, Energy-Efficient 3D-Printer."
- FLC Federal Laboratory Consortium Award 2022 Award for Excellence in Technology Transfer "3D-Printed SiC Technology Brings Zero-Carbon Energy Production to U.S."

- FLC Federal Laboratory Consortium Award 2022 Award for Excellence in Technology Transfer "Licensing Artificial Intelligence Software for Real-Time Monitoring of Additive Manufacturing."
- Significant Achievement Award 2022 UT-Battelle Technology Transfer "Licensing Artificial Intelligence Software for Real-Time Monitoring Peregrine."
- FLC Federal Laboratory Consortium Award 2023 Award for Excellence in Technology Transfer "ORNL's Licensing of MAVNet Novel Communication Protocol to Horizon31."
- FLC Federal Laboratory Consortium Award 2023 Award for State and Local Economic Development "Oak Ridge Reimagined: Nuclear Hub for a Carbon-free Energy Future."

RELEVANT EXPERIENCE AND QUALIFICATIONS

- Negotiation of Master Agreements, Inter-Institution Agreements, Option and Licensing Agreements, CDAs and BMTAs.
- Management of Patent Prosecution US and Foreign.
- Ability to manage large multi-institution research grants.
- Experience with UA accounting and information systems such as UAccess, UIS, PSOS, ISW.
- Expert user: Anaqua, Inteum, IPManager, iBridge, Delphion, PatSnap, BCC, D&B, Hoovers, Venture Source, Thompson Innovation, PitchBook.
- Experience with NSF Fastlane, ERCWeb, Grants.gov, and NIH PMS systems.
- Administrative experience with large NSF Engineering Research Center.
- Project and business management for high tech companies.
- Excellent business, communication and technical management skills.
- Ability to present technical information in concise and profession manner to a variety of individuals.
- Ability to respond to priority matters in timely fashion and to manage multiple projects simultaneously.
- Adept at creating business strategies for emerging technology.
- Ability to negotiate multi-million-dollar licensing contracts.
- Ability to sell technology concepts and products.
- Ability to raise venture capital for early-stage, start-up companies, over \$35 million raised.
- Broad technology exposure, both physical and life sciences.
- Strong engineering and science background.
- Excellent understanding of intellectual property prosecution and litigation.
- Lens design, geometrical analysis, optical specification, and optical fabrication and test expert.
- Interferometer design, specification and manufacture.
- Design and use of computer controlled optical test equipment.
- Modeling work with Code-V, Super-Oslo, and ASAP.
- Experienced with MathCAD, MatLab, Mathmatica, MathLab, AutoCAD, and Spreadsheets.
- Software development using Visual BASIC, C, FORTRAN, and PASCAL.
- Expert user of Microsoft Excel, Word, Power Point, Access, and Outlook.
- Understanding of optoelectronics, fiber optics, and telecom components.
- Understanding of quantum information sciences.
- Understanding of medical devices especially in cardiac, spine and GI indications.
- Understanding of medical device reimbursement and regulatory issues.
- Understanding of fission and fusion sciences.
- Understanding of neutron sciences.
- Understanding of smart-grid, power electronics, and energy storage technologies.
- Understanding of issues in additive manufacturing.
- Understanding of superhydrophobic materials.

PUBLICATIONS/PRESENTATIONS

Laura Schoppe, Jennifer Caldwell, Eugene Cochran, Ilia Ivanov, Mike Paulus, "Researcher Liaisons for Tech Transfer: A Valuable Internal Partnership." AUTM Webinar, June 15, 2021.

Gabriel M. Veith, Sergiy Kalnaus, Eugene R. Cochran, "Safe Impact Resistant Electrolyte (SAFIRE)" <u>iMatSci</u> <u>Innovator Presentation</u>, MRS, Boston, MA (Dec. 2019). E. Cochran, "SAFIRE – Safe Impact Resistant Electrolyte," EBETA, <u>Business Opportunities Panel</u>, Knoxville, TN (2019).

E. Cochran, "Oak Ridge National Laboratories Technologies Available in Quantum Information Sciences," CLEO, San Jose, CA (2019).

E. Cochran, "ORNL Technology Innovation Program," Association of Technology Managers Annual Meeting (AUTM 2019), Austin, TX (Feb. 13, 2019).

E. Cochran, "ORNL Grid Resilience Licensing Opportunities," DOE XLab Grid Modernization Summit, Seattle, WA (Jan. 23-25, 2019).

E. Cochran, et al., "ORNL's Co-Development and Licensing of Large Additive Area Manufacturing Technologies," Federal Laboratory Consortium Meeting, Philadelphia, PA (April 2018).

E. Cochran, K. Chipps, S. Pain, M. Febbraro, and W. Peters, "Commercialization of a Hand-held, Directional, Neutron Detector," 2017 IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA (Oct. 2017).

E. Cochran, Partnerships Directorate Overview," Neutron Sciences Directorate, Oak Ridge National Lab, Oak Ridge, TN (Aug. 2017).

E. Cochran, "Lab Bridge – IP Bundling Project," Battelle Commercialization Council Meeting, Dept. of Energy, Washington, DC (May 2017).

E. Cochran, "Working with Partnerships Directorate," Quantum Information Sciences Group, Oak Ridge National Lab, Oak Ridge, TN (Jan. 2017).

T. Aytug, J. Simpson, E. Cochran, M. Filigenzi, Y. Lee, and D. Bera, "Superhydrophobic Transparent Glass Thin Film Innovation License to Samsung," Federal Laboratory Consortium Meeting, Austin, TX (April 2017)

E. Cochran, "Partnering with National Laboratories," Presented to the Petronas Corporation, Oak Ridge National Lab, Oak Ridge, TN (Dec. 2016).

E. Cochran, "Introduction to the Partnerships Directorate and the Technology Transfer Process," Reactor and Nuclear Systems Division, Oak Ridge National Laboratory, Oak Ridge, TN (Dec. 2016).

E. Cochran, "ChemCatBio Review and Kick-off Meeting," Partnerships Directorate, Oak Ridge National Lab, Oak Ridge, TN (Sept. 2016).

E. Cochran, "ORNL Invention Review Process," Partnerships Office, National Energy Research Laboratory, Golden, CO (Aug. 2016).

E. Cochran, "Navigating, Intellectual Property Disclosure, Prosecution, and Commercialization Efforts," Research Accelerator Division Spallation Neutron Source, ORNL, Oak Ridge, TN (Aug. 2016).

E. Cochran, "Doing Business with National Laboratories," Presented to Tyco Corp., ORNL, Oak Ridge, TN (June 2016).

E. Cochran, A. Naskar, "Lignin-Derived High-Performance Plastics for Composite Matrix Applications," Tech Connect World Innovation Summit, Advanced Materials Section, Washington, DC (May 2016).

E. Cochran, "Overview of ORNL Technology Transfer Program and Current Invention Portfolio," Lawrence Livermore National Laboratory, Livermore, CA (May 2016).

E. Cochran, "Overview of ORNL Technology Transfer Program," Sandia National Laboratory, Livermore, CA (May 2016).

E. Cochran, "Innovation and Commercialization at Universities," University of Tennessee Department of Electrical Engineering and Computer Sciences, Curent NSF/DOE ERC, University of Tennessee, Knoxville, TN (March 11, 2016).

E. Cochran, "Overview of Oak Ridge National Laboratory," Kiwanis Club, Tennessee Wesleyan College, Athens, TN (Jan. 2016).

E. Cochran, "The Role of Technology Transfer at Universities and National Labs," University of Tennessee Department of Electrical Engineering and Computer Sciences, University of Tennessee, Knoxville, TN (Nov. 13, 2015).

E. Cochran, "Additive Manufacturing Licensing Strategy," ORNL Partnerships, Oak Ridge National Lab, Oak Ridge, TN (Oct. 2015).

E. Cochran, "Manufacturing Opportunities at ORNL," RAMP Conference, Knoxville, TN (Oct. 2015).

E. Cochran, "Doing Business with National Laboratories," Department of Energy Vehicle Transportation Office Meeting on Electric Vehicles, Oak Ridge National Lab MDF, Knoxville, TN (Sept. 2015).

E. Cochran, "Intellectual Property Benefits and Basics," ORNL Electrical and Electronics Systems Research Division, Oak Ridge National Lab, Oak Ridge, TN (2015).

E. Cochran, "Partnerships – Navigating Intellectual Property Disclosure, Prosecution, and Commercialization Efforts," ORNL Reactor and Nuclear Systems Division, Oak Ridge National Lab, Oak Ridge, TN (2015).

E. Cochran, "Partnerships – Navigating Intellectual Property Disclosure, Prosecution, and Commercialization Efforts," ORNL Electrical and Electronics Systems Research, Oak Ridge National Lab, Oak Ridge, TN (2015).

E. Cochran, "Partnerships – Navigating Intellectual Property Disclosure, Prosecution, and Commercialization Efforts," ORNL Nuclear Security and Isotope Technology Meeting, Oak Ridge National Lab, Oak Ridge, TN (2015).

E. Cochran, "Biometric Eye Model and Ray Tracing for Improved Iris Recognition," SPARK 2015, Oak Ridge, TN (2015).

E. Cochran, "University of Arizona's Proof of Concept Funding Process," CLEO, San Jose (2013).

E. Cochran, "UA's Technology Transfer Methodologies for Licensing the Optics, Photonics, and Laser Industry," CLEO, San Jose (2012).

Leon Radziemski and Eugene Cochran, "Wireless Energy and Power Transmission Using Ultrasound" Oil and Gas Innovation Showcase, Houston, TX (2010).

E. Cochran, "Introduction to the Office of Technology Transfer," Biomedical Engineering Department, Outreach Presentation, University of Arizona (2010).

E. Cochran, N. Peyghambarian, S. Fainman, S. Sukumar, "CIAN Management Structure," CIAN 2st Annual NSF Site Review, La Jolla, CA (2010).

R. Norwood, J. Wissinger, E. Cochran "CIAN's Industrial Partner and Innovation Program," CIAN 2st Annual NSF Site Review, La Jolla, CA (2010).

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SERVICE

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