

September 2010

Kelly Robinson, PhD, IEEE Senior Member
Professional Engineer, Patent Agent
Electrostatic Answers LLC

15 Piping Rock Run • Rochester, NY 14450-9596 USA

Email: Kelly.Robinson@ElectrostaticAnswers.com

TEL: 585-425-8158 • FAX: 585-425-0915

GOAL Diagnose root causes and deliver robust solutions for electrostatic problems in technology invention, development, product commercialization, manufacturing, industrial production, assembly, and in customer applications.

SUMMARY OF QUALIFICATIONS

- **Over 20 years of engineering experience** solving static and other technical problems in copier technology, roll-to-roll manufacturing, web conveyance and converting (slitting, chopping, sheeting, packaging), solvent coating operations, plastic parts manufacturing (injection molding, vibratory sorting, pneumatic transport), ESD protection in product design, manufacturing, and customer use.
 - **Professional Engineer** – License number: 088222 – New York State
 - **Patent Agent** – Registration number: 66336 – US Patent and Trademark Office
 - **Ph.D. & M.S.** in Electrical Engineering – electrostatics, data acquisition, circuits, interfacing instruments with computers, computer programming
 - **B.S.** in Engineering Science (Engineering Physics) – electromagnetics, fluid mechanics
 - **Programming Skills** - proficient in Matlab, LabView, C, Basic
 - **Engineering Science Adjunct Instructor** – Monroe Community College, Rochester, NY
 - **13 US Patents** on sheet and film products, electronic displays, copier technologies, and coating technologies.
 - **6 Pending Patent Applications** on electrostatic instrumentation, electronic displays, coating technologies, nanoparticle generation, and roll-to-roll manufacturing technologies.
 - **Award winning** technical author and engineer
2009 Distinguished Service Award, Electrostatics Society of America
2005 IEEE James Melcher Award (excellence in a peer reviewed journal article)
 - **Leadership** experience in industrial R&D and technical professional organizations.
-

PROFESSIONAL CAREER

Electrostatic Answers LLC

Rochester, NY

Consulting Engineer

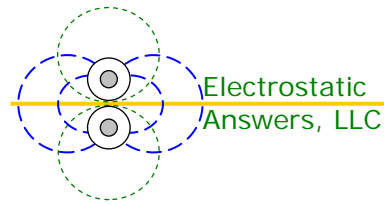
2007 - present

Dr. Robinson, PE founded and owns Electrostatic Answers LLC, an engineering consulting firm known internationally for solving static problems and developing electrostatic technology during technology invention, development, product commercialization, industrial production, assembly, and in customer applications.

Patent Agent

2010 - present

Kelly works with clients obtain broad and comprehensive patent protection for their inventions in electrostatic technologies & processes, electronic circuits & instrumentation, software, and methods for using these technologies. I provide unique insights gained from my technical background and experience in industrial research and engineering.



September 2010

PROFESSIONAL CAREER (continued)

Monroe Community College	Rochester, NY	2009 - present
Dr. Robinson is an adjunct instructor in the Engineering Science and Physics Department where he teaches ENR 261 – Engineering Computing II (Matlab).		

Eastman Kodak Company	Rochester, NY	1982 - 2007
Dr. Robinson has served in multiple leadership and individual contributor roles throughout his career in invention, product/manufacturing process development, and commercialization.		

<u>Research Scientist / Group Leader</u>		2003 – 2007
Electrostatics Group, Global Manufacturing Technology Organization Senior Scientist and Group Leader (5 people) responsible for solving static problem, helping design new products, technical strategy for my Group, & performance appraisals.		

<u>Unit Director, Manufacturing Research & Engineering</u>		1998 – 2002
Surface Modification and Electrostatics Unit, responsible for technical strategy, project definition and deliverables, performance appraisals, hiring and daily operation of an R&D unit (18 people) with an annual budget of ~\$3.0M		

<u>Scientist, Manufacturing Research & Engineering</u>		1991 – 1998
Diagnosed and solved static problems in industrial manufacturing, electronic manufacturing and circuit board assembly, conducting applied research, assist in the design and commercialized new products.		

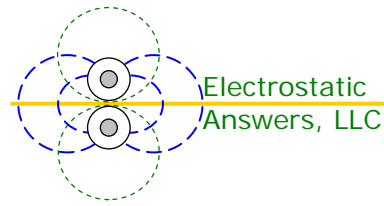
<u>Scientist, Copy Products Division</u>		1982 – 1990
The technical area was photocopier technology, responsible for conducting applied research, designing and commercializing new products, and lead manufacturing problem solving projects involving the toning process.		

Sandia National Laboratory	Albuquerque, NM	1978
<u>Project Engineer Summer Intern</u> , Capital Project Group, Security Clearance required Assisted in project management of the construction of the Electron Beam Fusion Facility		

Lawrence Livermore National Laboratory	Livermore, CA	1976
<u>Physicist Summer Intern</u> , Laser Fusion Target Fabrication Group Security Clearance required Investigated using colliding liquid droplets as a new method to form laser fusion targets.		

PROFESSIONAL ACTIVITIES

Professional Engineer – NYS License Number 088222	2010
Patent Agent – US Patent and Trademark Office Registration Number 66336	2010



September 2010

PROFESSIONAL ACTIVITIES (continued)

Short Course: Electrostatics in Web Handling

- scheduled for presentation at the AIMCAL Fall Technical Conference, 2010
10/17/2010, Myrtle Beach Marriott, Myrtle Beach, South Carolina
- with Prof. T. B. Jones, University of Rochester, presented at the AWEB 2010 2010
AIMCAL Applied Web Handling Conference, 5/17/2010, Rochester, NY

Paper Film and Foil Converter (PFFC) Contributing Editor 2009 – Present

- Trade Publication for the converting industry
- Kelly on Static, PFFC Blog

Handbook of Troubleshooting Plastics Processes edited by John Wagner Jr. 2011

- Scrivener Publishing LLC., 3 Winter Street, Suite 3, Salem, MA 01970
- Chapter on static issues in plastics processes to be published 2011

Electrostatics Society of America (ESA)

- ESA Distinguished Service Award 2009
- Technical Program Chair, 2009 Electrostatics Joint Conference, Boston, MA 2009
- President, Electrostatics Society of America 2005 – 08
- General Conference Chair, 2004 Annual Meeting, Rochester, NY 2004
- ESA Executive Council 2003 – present

Institute of Electrical and Electronics Engineers (IEEE)

- Chairman, Industry Applications Society, Electrostatic Processes Committee 1987 – 88
- Chairman, IAS EPC Technical Awards Sub-Committee 2007 – present
- James Melcher Award (excellence in peer reviewed publication) from IAS EPC 2005
- Established the IAS EPC “Creativity and Innovation Prize Paper Award” 2003

Journal of Electrostatics, Guest Editor, Vol. 35, Issues 2-3 (August 1995) 1995

- 1993 IEEE Industry Applications Society Meeting, Toronto, Canada,
October 3 – 8, 1993 Edited by K. Robinson and J. Doshi

Academic Appointments

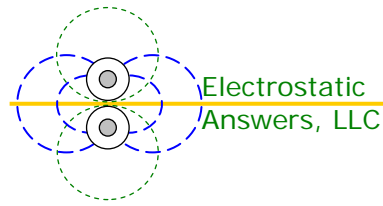
- Monroe Community College Adjunct Faculty, Engineering Science Dept 2009 – Present
ENR261 - Engineering Computing 2 (Matlab Programming)
- Univ. of Western Ontario External Examiner, PhD Defense 2007
- Univ. of Arkansas at Little Rock Adjunct Faculty, Applied Science Dept. 2003 – 05

Reviewer

- IEEE Transactions on Dielectrics and Electrical Insulation 2009 – Present
- IEEE Transactions on Control Systems Technology 2010 – Present
- IEEE Transactions on Industry Applications 1982 – Present
- International Journal of Circuit Theory and Applications 2009 – Present
- Journal of Electrostatics 1982 – Present
- Natural Sciences & Engineering Research Council of Canada External Reviewer 2010

Memberships

- Institute of Electrical and Electronics Engineers, Inc. (Senior Member 1991) 1978 – present
- Electrostatics Society of America (ESA) 1978 – present
- Electrostatic Discharge Association (ESD Association) 2009 – present
- Sigma Xi (Research Honor Society) 1980 – present



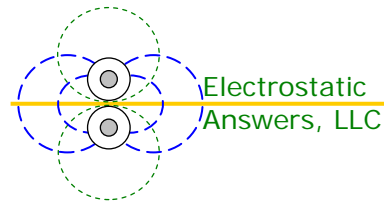
September 2010

EDUCATION

Ph.D.	Electrical Engineering, Colorado State University, Fort Collins, CO	1982
M.S.	Electrical Engineering, University of Illinois, Urbana, IL	1978
B.S.	Engineering Science, Colorado State University, Fort Collins, CO	1976
	Engineering Science, Montgomery College, Rockville, MD	1974

PRESENTATIONS (recent)

Conference Presentation: Sizing Static Neutralizers for Web Conveyance Applications	2010
Accepted for presentation: AIMCAL Fall Annual Conference 10/17 – 20/2010, Myrtle Beach Marriott, Myrtle Beach, South Carolina	
Conference Presentation: Electrostatic Force on a Charged Dielectric Sphere near a Grounded Conducting Plate	2010
Electrostatics Society of America Annual Meeting, 6/22 – 24/2010, University of North Carolina – Charlotte, Charlotte, NC	
Conference Presentation: Controlling Static in Winding Rolls	2010
AWEB 2010 - AIMCAL Applied Web Handling Conference, 5/18 – 20/2010, Rochester, NY	
Conference Presentation: Locate Static Dissipaters Using Film - Roller Electrification	2009
AIMCAL Fall Technical Conference, 10/18 – 21/2009, Amelia Island, FL	
Conference Presentation: Electrostatic Sticking of Sheets Fed from a Stack	2009
2009 Electrostatics Joint Conference, 6/16 – 18/2009, Boston University, Boston, MA	
AIMCAL-PFFC Webinar: Static Control in Converting	2009
6/12/2009, ConvertingPortal.com an AIMCAL Website	
Conference Presentation: Stay Ahead of Static Problems in Film Conveyance	2008
AIMCAL Fall Technical Conference, 10/19 – 22/2008, Myrtle Beach, South Carolina	
Conference Presentation: Voltage Diffusion in an Insulating Sheet with a Conductive Layer with Robert Brearey and John Szafraniec	2008
Electrostatics Society of America Annual Meeting, 6/17 – 19/2008, Minneapolis, MN	
Invited Lecture: Electrostatic Charge Control in Slitting Operations	2008
AWEB 08 AIMCAL Applied Web Handling Conference, 5/6 – 9/2008, Minneapolis, MN	
Invited Lecture with William Durkin: Electrostatic Issues in Roll-to-Roll Manufacturing	2007
2007 IEEE Industry Application Society Annual Conf, 9/23 – 28/07, New Orleans, LA	
Conference Presentation with Dr. Ravi Sharma: Electrophoretic Mobility Estimated from the Transient Current in a Parallel Plate Cell	2007
Electrostatics Society of America Annual Meeting, 6/12 – 14/2007, Purdue University, West Lafayette, IN	
Invited Lecture: Design Your Experiment to Deliver	2001
University Institute of Technology, Angoulême, Cedex, France The University of Western Ontario, London, Ontario, Canada	

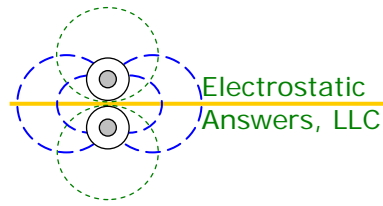


September 2010

PUBLICATIONS – Peer Reviewed Publications

- 1 **K. Robinson**, W. Durkin, “Electrostatic Issues in Roll-to-Roll Manufacturing Operations,” IEEE. Trans. on Industry Applications, Vol. 46, No. x, pg. yyyy – zzzz, 2010.
 - 2 **K. Robinson**, R. Brearey, J. Szafraniec, “Sheet sticking caused by charge flow in a buried conducting layer,” Journal of Electrostatics vol. 67, No. 5, pg. 781 – 788, 2009.
 - 3 **K. Robinson**, J. J. Coleman, “Spark Protection Circuit for Measuring Current in High voltage Circuits,” Journal of Electrostatics, vol. 63, No. 3 – 4, pg. 285 – 296, 2005.
 - 4 A. Chirokov, A. Gutsol, A. Fridman, K. Sieber, J. Grace, **K. Robinson**, “Self Organization of Microdischarges in Dielectric Barrier Discharge Plasma,” IEEE Trans. on Plasma Science, Vol. 33, No. 2, pg. 300 – 301, April 2005.
 - 5 A. Chirokov, A. Gutsol, A. Fridman, K. Sieber, J. Grace, **K. Robinson**, “Analysis of two-dimensional microdischarge distribution in dielectric-barrier discharges,” Plasma Sources Sci. Technol., Vol. 13, pg. 1 – 13, 2004.
- IEEE MELCHER AWARD** for excellence in a peer reviewed journal publication:

 - 6 **K. Robinson**, “Charge Relaxation Due to Surface Conduction on an Insulating Sheet Near a Grounded Conducting Plane,” IEEE Trans. Industry Applications, vol. 40, No. 5, pg. 1231 – 1238, 2004.
- 7 S. Conti, P. I. Porshnev, A. Fridman, L. A. Kennedy, J. M. Grace, K. D. Sieber, D. R. Freeman, **K. Robinson**, “Experimental and numerical investigation of a capacitively coupled low frequency nitrogen plasma,” Exp. Thermal Fluid Sci., vol. 24, pg. 79 – 91, 2001.
 - 8 P. Krein, **K. Robinson**, “Printers” in Handbook of Electrostatic Processes, edited by J.S. Chang, A. J. Kelley, and J. M. Crowley, Marcel Dekker, Inc., Chap. 14, pg. 295 – 320, 1995.
 - 9 T. B. Jones, R. D. Miller, **K. Robinson**, W. Y. Fowlkes, “Multipolar Interactions of Dielectric Spheres,” Journal of Electrostatics, Vol. 22, pp. 231, 1989.
 - 10 W. Y. Fowlkes, **K. Robinson**, “The Electrostatic Force on a Dielectric Sphere Resting on a Conducting Substrate,” Particles on Surfaces, Ed. K. L. Mittal, Plenum Publishing Corp., pg. 143 - 155, 1988.
 - 11 **K. Robinson**, T. B. Jones, “Particle-Wall Adhesion in Electropacked Beds,” IEEE Transactions on Industry Applications, Vol. IA-20, No. 6, pp. 1573, 1984.
 - 12 **K. Robinson**, T. B. Jones, “Slope Stability of Packed Beds,” IEEE Transactions on Industry Applications, Vol. IA-20, No. 2, pp. 253, 1984.
 - 13 **K. Robinson**, R. J. Turnbull, K. Kim, “Electrostatic Spraying of Liquid Insulators,” IEEE Transactions on Industry Applications, Vol. IA-16, No. 2, pp. 308, 1980.



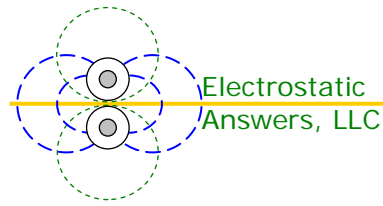
September 2010

PUBLICATIONS – Issued US Patents

- 1 P. Aylward, D. Majumdar, B. Fitzgerald, **K. Robinson**, “Antistatic conductive grid pattern with integral logo,” US Patent 7,255,912, 8/14/2007.
 - 2 R. Mehta, R. Jagannathan, S. Jagannathan, **K. Robinson**, K. Pond, B. Houghtaling, “Process for the deposition of uniform layer of particulate material,” US Patent No. 7,223,445, 5/29/2007
 - 3 P. Aylward, D. Majumdar, H. Yau, W. Durkin, D. Bigelow, D. Slater, **K. Robinson**, “Antistatic Layer for Electronically Modulated Display,” US Patent No. 7,087,351 8/8/2006
 - 4 P. Aylward, D. Majumdar, R. Daly, **K. Robinson**, B. Fitzgerald, P. Christian, “Transparent Invisible Conductive Grid,” US Patent 7,083,885 B2 8/1/2006.
 - 5 D. Majumdar, N. Dontula, S. Sunderrajan, P. Aylward, **K. Robinson**, M. Kestner, “Conductive Foam Core Imaging Member,” US Patent 6,566,033, 5/20/2003.
 - 6 **K. Robinson**, A. Lucas, T. Hilbert, “Developer flow rate regulation for an electrophotographic toning roller,” US Patent No. 5,227,848, 7/13/1993.
 - 7 W. Mey, J. May, W. Gruenbaum, S. Riblett, **K. Robinson**, O. Rodenberg, “Xerotyping Using a Corona Charge Injection Modifying Material, US Patent No. 5,101,216, 3/1992.
 - 8 **K. Robinson**, L. Hill, K. Arnold, “Replaceable Developer Station Having Indicator For Determining Whether Developer Station is Used or New,” US Patent No. 5,043,764, 8/27/1991.
 - 9 J. K. Lee, D. McJury, M. Pickup, **K. Robinson**, “Bar Magnet for Construction of a Magnetic Roller Core,” US Patent 5,019,796, 5/28/1991.
 - 10 K. Arnold, W. Chang, **K. Robinson**, “Developer Mix Monitoring for Replaceable Developer Stations,” US Patent No. 4,956,668, 9/11/1990.
 - 11 W. Mey, W. Gruenbaum, **K. Robinson**, “Electrographic Method for Multiple Images (Xerotyping),” US Patent 4,898,797, 2/6/1990.
 - 12 **K. Robinson**, A. Rushing, B. Steele, “Electrographic Magnetic Brush Development Apparatus and System,” US Patent No. 4,714,046, 12/22/1987.
 - 13 **K. Robinson**, R. Weitzel, A. Kroll, “Electrographic Development Apparatus,” US Patent No. 4,570,572, 2/18/1986.
-

PUBLICATIONS – Pending Patent Applications

- 1 **K. Robinson**, “Electrometer with in-measurement range adjustment and methods thereof for measuring electrostatic charge,” US Patent Application 2009/0045816A1, 2/19/2009.
- 2 P. Aylward, **K. Robinson**, K. Ng, J. Brewer, “Stacked-cell display with field isolation layer,” US Patent Application 2007/0195399A1, 8/23/2007.
- 3 R. Mehta, R. Jagannathan, B. Houghtaling, R. Link, **K. Robinson**, R. Sprout, K. Reed, A. Verma, S. Mahon, R. Gutierrez, T. Blanton, J. Fornalik, “Deposition of uniform layer of desired material,” US Patent Application 2006/0275542A1, 12/7/2006.
- 4 R. Mehta, R. Jagannathan, B. Houghtaling, R. Link, **K. Robinson**, R. Sprout, “Process for making an organic light-emitting device,” US Patent Appl. 2006/0273713A1, 12/7/2006.
- 5 H. Lei, B. Rice, R. Walton, **K. Robinson**, R. Updike, “Process for forming polarizer plate,” US Patent Application 2006/0225831A1, 10/12/2006.
- 6 H. Lei, B. Rice, R. Walton, **K. Robinson**, R. Updike, “Process for forming polarizer plate,” US Patent Application 2006/0225827A1, 10/12/2006.



September 2010

PUBLICATIONS – Trade Publications

- 1 **K. Robinson**, “Static Beat: Prevent Winter Static,” Paper, Film & Foil Converter, Vol. 84, No. 10, October 2010 pg. xx.
- 2 **K. Robinson**, “Static Beat: Static Control Charts,” Paper, Film & Foil Converter, Vol. 84, No. 9, September 2010 pg. yy.
- 3 **K. Robinson**, “Static Beat: How to Take a Static Survey,” Paper, Film & Foil Converter, Vol. 84, No. 8, August 2010 pg. 10.
- 4 **K. Robinson**, “Static Beat: Choosing Passive or Active Ionizers,” Paper, Film & Foil Converter, Vol. 84, No. 7, July 2010 pg. 10.
- 5 **K. Robinson**, “Static Beat: Corona Treaters and Ionizers Compared,” Paper, Film & Foil Converter, Vol. 84, No. 6, June 2010 pg. 10.
- 6 **K. Robinson**, “Static Beat: Use Electrostatic Voltmeter to Measure Static Charge,” Paper, Film & Foil Converter, Vol. 84, No. 5, May 2010 pg. 10.
- 7 **K. Robinson**, “Static Beat: Measure Static Charge,” Paper, Film & Foil Converter, Vol. 84, No. 4, April 2010 pg. 8.
- 8 **K. Robinson**, “Static Beat: Using an Electrostatic Fieldmeter to Measure Static,” Paper, Film & Foil Converter, Vol. 84, No. 3, March 2010 pg. 14.
- 9 **K. Robinson**, “Static Beat: When To Use Ionizing Blowers,” Paper, Film & Foil Converter, Vol. 84, No. 2, February 2010 pg. 10.
- 10 **K. Robinson**, “Static Beat: The Best Places for Static Bars,” Paper, Film & Foil Converter, Vol. 84, No. 1, January 2010 pg. 14.
- 11 **K. Robinson**, “Static Beat: How Static Bars Work,” Paper, Film & Foil Converter, Vol. 83, No. 12, December 2009 pg. 14.
- 12 **K. Robinson**, “Static Beat: Static, Be Gone!” Paper, Film & Foil Converter, Vol. 83, No. 11, November 2009 pg. 16.
- 13 **K. Robinson**, “Static Beat: Dissipating Static,” Paper, Film & Foil Converter, Vol. 83, No. 10, October 2009 pg. 16.
- 14 **K. Robinson**, “Static Beat: Winter Static,” Paper, Film & Foil Converter, Vol. 83, No. 9, September 2009, pg. 14.
- 15 **K. Robinson**, “Static Beat: How To Prevent Unwinding Roll Static,” Paper, Film & Foil Converter, Vol. 83, No. 8, August 2009, pg. 14.
- 16 **K. Robinson**, “Static Beat: How To Prevent Winding Roll Sparks,” Paper, Film & Foil Converter, Vol. 83, No. 7, July 2009, pg. 12.
- 17 **K. Robinson**, “Static Beat: Film Charge Causes Winding Static,” Paper, Film & Foil Converter, Vol. 83, No. 6, June 2009, pg. 10.
- 18 **K. Robinson**, “Static Beat: Stop Tribocharging Your Products,” Paper, Film & Foil Converter, Vol. 83, No. 5, May 2009, pg. 12.
- 19 **K. Robinson**, “Static Specified,” Paper, Film & Foil Converter, vol. 83, No. 4, April 2009, pp. 38–40.