



## CHARLES RIDGELY

**Patent Agent**  
Intellectual Property

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Charles Ridgely is a Patent Agent and Physicist in the firm's Intellectual Property group and is focused primarily on patent preparation and prosecution. He has extensive experience preparing patent applications and illustrations in a wide variety of technology areas, including medical devices, vascular catheters, blood occlusion, phlebotomy devices, hematology, pharmacology, automotive devices, off-road vehicles, aviation, beverage containers, fitness equipment, as well as optical devices.

Prior to joining Rutan & Tucker, LLP, Charles worked for Thienes Engineering, Inc., a civil engineering firm in La Mirada, California, where he gained exposure to cutting-edge GPS-related technology, geodetic surveying software and equipment, and CAD software systems used for commercial land surveying and civil engineering design. Before becoming involved with civil engineering and surveying, he worked as a Patent Scientist for Knobbe, Martens, Olson & Bear, LLP, assisting patent attorneys with the protection of a wide variety of medical devices for foreign and domestic clients. He drafted patent applications and illustrations for inventions relating to a variety of medical conditions and treatments, including blood occlusion devices for bypass surgeries, noninvasive and minimally invasive blood glucose testing devices, eye shunts for treating glaucoma, and suturing devices for use after vascular catheter procedures.

Charles has over 15 years of experience researching various scientific topics and has authored several papers in the American Journal of Physics, the European Journal of Physics, and Annalen der Physik (Berlin). He also has extensive experience in nearly all areas of automobile mechanics, as well as experience with many aviation topics. He received a Master of Science degree in Physics from California State University, Long Beach in 1996, and a Bachelor of Science degree in Physics from California State University, Fullerton in 1994. He is admitted to practice before the United States Patent and Trademark Office. Aside from patent work, Charles is licensed by the FAA as a Part 107 Remote UAS Pilot and licensed by the FCC as an Amateur Radio Operator.

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### Related Services

- Intellectual Property
- Patents

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### Related Industries

- Apparel, Retail and Consumer Products
- Automotive
- Entertainment and Media
- Technology
- Aerospace and Defense
- Blockchain, Smart Contracts and Cryptocurrencies
- Cybersecurity
- Internet of Things (IoT)
- Hardware
- Software
- Clean and Renewable Energy
- Nutritional Supplements
- Physical Sciences
- Medical Devices
- Life Sciences and Healthcare

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### Education

- California State University, Long Beach (M.S., 1996)

## Scientific Publications

- "Relativity, thermodynamics and entropic forces," *Annalen der Physik* (Berlin) 523, 805-812 (2011).
- "Gravitation in Material Media," *European Journal of Physics* 32, 299-304 (2011).
- "Archimedes' Principle and Gravitational Levitation," *Galilean Electrodynamics* 22, 63-67 (2011).
- "Forces in General Relativity," *European Journal of Physics* 31, 949-960 (2010).
- "Archimedes' Principle in General Coordinates," *European Journal of Physics* 31, 491-499 (2010).
- "On the Gravitation of Exotic Matter," *Galilean Electrodynamics* 19, 118-120 (2008).
- "Gravitation and Forces Induced by Zero-Point Phenomena," *Galilean Electrodynamics* 19, 37-39 (2008).
- "Can Zero-Point Phenomena Truly be the Origin of Inertia?" *Galilean Electrodynamics* 15, 91-93 (2004).
- "A Macroscopic Approach to the Origin of Exotic Matter," *Galilean Electrodynamics* 15, 31-34 (2004).
- "Inertia: A Purely Relativistic Phenomenon," *Galilean Electrodynamics* 13, 15-18 (2002).
- "On the Origin of Inertia," *Galilean Electrodynamics* 12, 17-20 (2001).
- "On the Nature of Inertia," *Galilean Electrodynamics* 11, 11-15 (2000).
- "Applying Covariant Versus Contravariant Electromagnetic Tensors to Rotating Media," *American Journal of Physics* 67, 414-421 (1999).
- "Applying Relativistic Electrodynamics to a Rotating Material Medium," *American Journal of Physics* 66, 114-121 (1998).

- California State University, Fullerton (B.S., 1994)

## Memberships & Associations

United States Patent & Trademark Office