

CHRISTOS VELISSARIS

University of Central Florida, 4111 Libra Drive, Bld. 121 (PS), Physics
Department, PS 130, Orlando, Florida, 32816

Phone: (407)-823-2325 (department)

E-mail: Chris.Velissaris@ucf.edu;

Diploma's-Professional Preparation

- University of Rochester, Experimental Particle Physics, Ph.D. January 1995
Advisors: Prof Arie Bodek and Prof Steve Olsen. "*Dilepton production cross section and asymmetry measurements at 58 GeV $e^+ e^-$ annihilation with the AMY detector at TRISTAN, Univ. of Rochester*", March 1995, UR1356
- University of Rochester, M.Sc., Physics, August 1990.
- University of Athens, Physics, B.Sc., July 1985. "*Quarks and Structure Function phenomenology*". Advisors: Prof Antoniou and Prof Maintas.

Work Histosry - Appointments:

- Associate Lecturer, University of Central Florida (2015-Present)
- Lecturer of Physics, University of Central Florida (2006 – 2015)
- Adjunct Physics Instructor, Valencia College East Campus (2014-Present)
- Visiting Assistant Professor, Monmouth College (2005-2006)
- Assistant Scientist. University of Wisconsin-Madison. (2000 - 2005)
- Post-doctoral Associate stationed at Brookhaven National Lab. (1997-2000)
- Military Service. Corps of Engineers (1995-1997)

Teaching Portfolio.:

- PHY2053/48 Calculus and Algebra based Physics I.
- PHY2054/49 Calculus and Algebra based Physics II
- SCALE-UP Calculus based Physics II.
- PHY3101 Physics III (Modern Physics) for Scientists and Engineers.
- AST2001 Astronomy for non Science majors.
- PSC1121 Physical Science for non Science majors
- PHZ3361 Interaction of Radiation with Matter and Detection.
- Quantum Mechanics. (at Monmouth College)
- Statistical Mechanics. (at Monmouth College)
- PHY3722 Analog Electronics for Physicists Lab and lecture.
- PHY3752 Digital Electronics and Design for Physicists (Lab and lecture)
- PHY3802 Intermediate Physics Labs.

New Courses:

- PHZ3361 - Radiation Detection and Measurement (at UCF). Designated as Research Intensive (RI) from Fall 2024.
- PSC1121-WW Web based Physical Science that uses snippets of Films to clarify Physical Phenomena and Motivate non Science majors. It is a Web based implementation of the "Physics in Films" Physical Science Course flavour.
- Redesigned the PHY2048 course into a High Impact designated course (Official FCTL designation Fall 2023) as well as with Inclusive Design Designation (from Fall 2024)

Selected Pedagogic Publications – Manuals:

- “AC Circuit Analysis in a nutshell”. Written for the Intermediate laboratory and the Analog Electronics Physics courses at UCF.
- “Statistical data Analysis in a nutshell”. Written for the Intermediate laboratory Physics course at UCF.
- A time dependent solution for the operation of ion chambers in a high ionisation background” C. Velissaris. Nucl. Instrum. Meth A547(2-3) 511-516, 2005 ArXiv: physics/0501085

Undergraduate Students:

- Mikhael Bishoy. “Study and Optimization of a Gamma Camera Collimator. University of Central Florida. Spring 2024.
- Mikhael Bishoy. “Simulation of Galactic Cosmic Ray and Solar Flare particle penetration through Lunar Regolith” University of Central Florida. Summer 2024.
- Thomas Evaskis. “Physical Properties and operation principles of semiconductor microelectronic devices.” University of Central Florida, Fall 2013
- Adelaide Baker. “Statistical Error Analysis of Data”. University of Central Florida, Fall 2013
- Jacque Ernotte. “Charged Particle Beam Optics, Ring Stability and Accelerator Physics”. University of Central Florida Fall 2011.
- Jeremiah Champion. “The KTeV Experiment at Fermilab. Monmouth College. Spring 2006. (Now a High School Physics Teacher).
- Huican Ping. University of Wisconsin at Madison. (2000-2006) Supervised Dr. Ping (now a programmer in industry) to successfully complete his Ph.D Thesis.

Awards and Proposals related to Pedagogy:

- UDL Badge earned at the Universal Design for Learning UCF Workshop. August 2024.
- Integration for Laymen. Integrative learning Experience with modules introducing Integrals in Physics without Calculus. What’s next, Quality Enhancement Plan (QEP) Award. University of Central Florida. August, 2018 – July 19, 2019
- “Films as Virtual Physics Labs; An online alternative to PHY2048 and PHY2053 (Physics I) labs”. Digital Learning Course Redesign Initiative (DL CRI) Proposal, March 2021. (Not Awarded).
- European Community award to do research in Japan. Selection 1997. (Declined).

Conference/Workshops Pedagogy Presentations

- “Study of a Gamma Camera Collimator using GEANT”. Poster presentation at the 2024 UCF Research Computing Symposium. October 1, 2025.
- “Films as Virtual Physics Labs; An online alternative to Introductory Physics I labs” Valencia College Faculty Workshop, August 2020.
- “Films as Virtual Physics Labs” University of Florida STEM-Powered Faculty Symposium, October 2020.
- “Integration in Physics without Calculus” January 2020 AAPT meeting, poster presentation, by UCF Physics Department David Wright.

Synergistic Activities, Service and Outreach:

- Upper lab Committee Coordinator (Fall 2023 – current).

- COS Faculty Senate. (Fall 2023 – current).
- COS Recognition and Scholarship Committee. (Fall 2023-Current)
- PHY2049 Alignment Committee. (Fall 2023 -Current)
- Physics Outreach Committee. (Fall 2023 -Current)
- Physics Dept. Undergraduate Assessment Committee. (Fall 2023 – current).
- GEP Assessment Task Force (January 2022 - current)
- Physics Dept. Intermediate and Advanced Lab Committee. (2019 – 2020)
- Physics Dept. Undergraduate Assessment Committee. (2019 – 2020)
- Physics Dept. Lecture Promotion Committee. (2018-2019)
- Physics Dept. Undergraduate Assessment Committee. (2018-2019)
- Physics Dept. Intermediate and Advanced Lab Committee. (2018-2019)
- COS Undergraduate Curriculum and Standards Committee, (2018-2019)
- UCF Parking & Transportation Advisory Committee member. (2017-2018)
- UCF Faculty Senate Parking Advisory Committee member. (2017-2018)
- Undergraduate Assessment Coordinator (UCF): 2007- 2017.
- Developed the Undergraduate Assessment procedure for the Department’s Analog and Digital Electronics Laboratories.
- Upper Lab Committee (UCF): 2012, 2013, 2014.
- Undergraduate Curriculum Committee. (UCF): 2010-2011, 2014-2015.
- Physics of Bubbles. iSTEM Career Day Fall 2019
- Physics of Bubbles. iSTEM Career Day October 26, 2018
- Physics of Bubbles. iSTEM Career Day October 13, 2018
- Physics of Bubbles. ISTEM Day March 30, 2018
- Physics of Bubbles. Little River Elementary School, January 25, 2018
- Fun with Bubbles and Physics. Faculty and Family Fun. UCF Arboretum Park. November 12, 2017
- Physics of Bubbles. Boy Scouts of America. Central Florida Scouting Jamboree. Apopka Florida. December 1, 2017
- UCF Fall 2017 Outreach Program. “The Geometry and Physics of Soap Bubbles.” Presentation to Middle and High School Students.
- FCTL (Faculty Center for Teaching and Learning Annual Conference) High Impact Practices Track (UCF, May 2023).
- FCTL (Faculty Center for Teaching and Learning Annual Conference) General Education Track. (UCF, May 2022).
- FCTL (Faculty Center for Teaching and Learning Annual Conference) General Education Track. (UCF, May 2018).
- FCTL (Faculty Center for Teaching and Learning) (UCF, 2008-2012).
- IDL-6543 Course completion and Remote Education Certification. (2008)
- “Activity Based Faculty Institutes” workshop at Dickinson College, Pennsylvania (Summer 2008). One week workshop and activities for University and college faculty who want to transform their classes into an Activity Based learning environment and employ “Workshop Physics” pedagogical methodology.
- BattlebotsIQ: Taught introductory robotics to High School students (Orlando Science Center, Summer 2009).

Other pedagogy related skills:

- PASCO, iOLab, CANVAS (extensive usage).
- SCALE-UP, Flipped Classroom and Activity based Pedagogies.

- Analog and Digital Electronics laboratory. (Lab Management and Instruction).