

CEED Undergraduate Research Program—RISE-UP

The Center for Excellence in Engineering and Diversity (CEED), in the UCLA Henry Samueli School of Engineering and Applied Science (HSSEAS), is committed to the recruitment, development, retention, and graduation of underrepresented engineering and computing students. *The CEED Mission is to work with a community of partners to ensure equity and parity in the K-20 public education pathways that lead to engineering and computing degrees.* CEED's undergraduate retention approach offers numerous programs and services focused on the personal, academic, and career development of economically disadvantaged and underrepresented engineering and computing students at UCLA.

During the Summer of 2005, CEED began its Research Intensive Series in Engineering for Underrepresented Populations (RISE-UP) program. With support from the National Science Foundation (NSF) Science Technology Engineering & Mathematics Talent Expansion Program for Underutilized Populations (STEP-UP), Intel, Hewlett-Packard, the University of California Leadership Excellence through Advanced Degrees (UC LEADS), the UCLA Undergraduate Research Center - Center for Academic and Research Excellence (URC-CARE) and the NSF-funded Center for Scalable and Integrated Nano-Manufacturing (SINAM), CEED had a total of fifteen undergraduate students involved in its inaugural 10-week, summer immersion, research program. The program has since been expanded to include academic year, as well as summer research appointments, and is now funded by the Semiconductor Research Corporation (SRC) and the NSF.

The purpose of this program is to keep CEED's engineering and computing students, particularly from underrepresented groups, interested in the excitement of learning. The ultimate goal of this program is to encourage these young scholars to go on to graduate school and perhaps the professoriate. RISE-UP challenges and inspires students to stay on in engineering and computing or to use those problem-solving skills no matter their future endeavors. In addition to conducting research, RISE-UP scholars also attend workshops on preparing for graduate school and present their work at the annual CEED RISE-UP Poster competition in August of each year.

To date, there have been sixty-seven RISE-UP Scholars, and 97% have been retained in their major. Thirty-seven have graduated, with twenty-six graduates (70%) going to industry and eleven (30%) going on to advanced studies.

The 5th Annual CEED RISE-UP Poster Competition was held at UCLA on August 27, 2009 in the California NanoSystems Institute (CNSI) lobby. There were seventeen presenters, and the competition was judged by: Stephen Jacobsen, Associate Dean Emeritus of HSSEAS; Richard Wesel, Associate Dean of HSSEAS; and Rick Ainsworth, CEED Director. First place was awarded to Dianne Pulido, who is a 3rd year Bioengineering student, for her work on Vesicular Monoamine Transporter as a Neuroprotective Agent in a *Drosophila* Model of Parkinson's Disease sponsored by Amgen, under the direction of Professor David Krantz. Second place was awarded to Alex Franceschi, who is a 5th year Mechanical Engineering student, for his work on The Effects of Particle Size and Processing on the Properties of a Barium Titanate (BaTiO₃) Polymer Composite sponsored by SINAM, under the direction of Professor H. Thomas Hahn. Third place was awarded to Anthony Erlinger, who is a 5th year Electrical Engineering student, for his work on Lens-free On-chip Cell Counting and Characterization for Wireless Health Applications sponsored by Intel, under the direction of Professor Aydogan Ozcan.

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UCLA HSSEAS Dean Vijay K. Dhir with poster presenter Maricela Maldonado



(Front: L-R) Alfonso Roman, Stephanie Gachot, Dianne Pulido, Maricela Maldonado, Gabriela Bran, David Moreno-Magana, Tihut Kebede, Kilty Inafuku, Richard Gaona, Alex Franceschi, Audrey Pool O'Neal (Rear: L-R) Stephen Jacobson, Rick Ainsworth, Jian Sorge, Alex Martinez, Marcel Martin, Romulo Magallanes, George Torres, Anthony Erlinger, Drew Stanley, Richard Wesel



(L-R) Alex Franceschi (2nd Place), Dianne Pulido (1st Place), Anthony Erlinger (3rd Place)