

UPSILON PI EPSILON

Jeffrey L. Popyack

Alan Kay Receives Abacus Award at UPE 2012 Convention

GREETINGS!

I write these words having just returned from the UPE National Convention, held during SIGCSE 2012 in Raleigh in early March. It is always invigorating to attend the conference and convention, and this year it was a special treat to spend some time with one of the true luminaries of the personal computing era, this year's Abacus Award winner, Alan Kay.

Upsilon Pi Epsilon

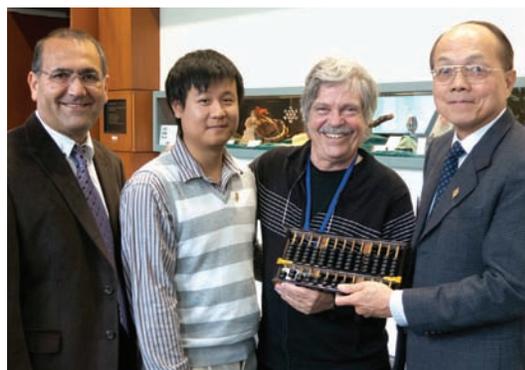
Upsilon Pi Epsilon is an honorary society whose membership consists of outstanding undergraduates and graduate students in the computing and information disciplines. It is the first, and only, existing national honor society serving these disciplines. If your college or university does not have a chapter, this would be a very good time to look into establishing one! You can find a wealth of information on UPE's website at <http://upe.acm.org/>.

2012 UPE Convention

The UPE National Convention was held once again during the Friday lunch slot of the SIGCSE Technical Symposium, which included business items, presentation of the Abacus Award and an address from our awardee. UPE also sponsored the Student Volunteer Pizza Party.

Highlights of the business meeting were:

- Chapter activity reports (presenta-



Orlando Madrigal, UPE Executive Director, presenting Alan Kay with the Abacus Award. From left, Ali Orooji of UPE Executive Council, Tony Chen from North Carolina State, Alan Kay, and Orlando Madrigal.

tions from Baldwin-Wallace College, College of Charleston, DePaul University, Florida International University, Kettering University, University of New Haven, University of Nebraska – Lincoln, Southwestern University, and St. Joseph's College, NY.

- Report of scholarships and awards given in 2011 (see the December 2011 ACM Inroads for UPE scholarships, and others reported at the end of this article);
- New chapters chartered in the last year (Rhode Island College, University of New Haven, Georgia Gwinnett College, South Carolina State University, Wayne State College, University of Washington-Bothell, South Dakota State University), bringing us to 258 chapters. With the addition of Rhode Island College, UPE inched ever closer to its goal of

having at least one chapter in every US state, leaving only Alaska, Idaho and Montana with no chapter;

- Election of a new Executive Council member (Robert Roggio, University of North Florida);
- Presentation of the Abacus Award to Alan Kay, President and CEO of Viewpoints Research Institute [1], followed by an address.

The Chapter reports were inspirational as always, involving many accounts of invited speakers, field trips, and academic tutoring. Some novel activities were FIU's Master the Mainframe activity, designed by IBM, Nebraska-Lincoln's assistance to provide tech services to enhance their

university's graduation ceremony, and a progressive dinner at Southwestern.

Abacus Award

The Abacus Award is UPE's most prestigious award, given to "an individual who has gained international renown in the profession, and over a period of several years has provided extensive support and leadership for student-related activities in the computing and information disciplines." The award is named in recognition of the abacus as a personal computing device. The awardee receives

a specially-engraved abacus, along with a cash award.

Alan Kay's biography reveals a man of diverse talents and impressive accomplishments, with a lifelong passion for education – both in computer science and enhancing learning through computing. He is well-known for his contributions to object-oriented programming, Smalltalk, the Dynabook, and the overlapping windowing graphical user interface. He has received numerous awards, including the Turing Award, Kyoto Prize and Charles Stark Draper Prize. A succinct bio may be found at [2]. One of the central missions of Viewpoints Research Institute is to help improve teaching and learning of "powerful ideas", which includes developing new technologies. VRI is a strong supporter of the "One Laptop Per Child" initiative.

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Kay's career as a computer scientist was preceded by work as a professional jazz guitarist. While he stopped performing professionally, he has evidently never lost his love for music, and his home's music room houses a custom-built pipe organ with 1450 pipes. This therefore marks consecutive years in which the Abacus Award has been given to a certifiable pipe organ aficionado, with Donald Knuth as the 2011 awardee.

In his address, "Super-Settings for Computing Education", Dr. Kay challenged educators to look beyond their usual learning objectives and reach for greatness, proposing that rather than focus on what the next generation has to know, we should ask what they have to invent. When looking at topics covered in today's curricula and presentations, he suggested we consider the supersets of these areas, asking "Instead of goals, why not visions? Instead of tactics, why not strategies?" His message was largely summarized by his statement, "Life is a grand endeavor. To help the children stay grand, we need to act grand."

Kay lamented especially that schools do not teach systems, whereas systems are what we all deal with. He identified the four systems of importance for people in the 21st Century as the systems we live in (natural, social, technological) along with the systems we are. He illustrated with an example of how bricks can be used to make walls and other simple structures – but inventing the arch allows you to build really complex things, and so strategies are of great importance. As another example, he cited the coevolution of engineering and science, with mathematics acting as a magnetic field.

He also suggested using not only computers, but children themselves as items of study, and illustrated with examples of how they can develop their own rules and paradigms, citing particularly what you can learn by watching children play Little League baseball. He concluded with several demos using Squeak Etoys [3], a visual programming and authoring environment designed to be simple and compelling enough for a child, but with considerable power. With the statement, "Don't give kids simulations, let them

build simulations", he made the point that if you can't do these things with whatever you're using in your introductory course, you should scrap it.

In summary, Kay's overall themes were to inspire our youth to recognize the complexities of the universe, to find the greatness within them, and to empower them to achieve it – which recalls his famous statement: "The best way to predict the future is to invent it".

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UPE/ACM Student Chapter Scholarship Award

The UPE/ACM Student Chapter Scholarship Awards are given jointly by UPE and ACM to those who best "display excellence and professional commitment to the computing and information technology field." The 2010-2011 winners, announced this fall were:

Muhammad Waqar Hameed
(National University of Computer and Emerging Sciences/Pakistan)

David Riggelman
(Cedarville University)

Evan Shelhamer
(University of Massachusetts Amherst)

Mateusz Stankiewicz
(Drexel University)

Each received \$1,000. Additionally, three students were awarded *Honorable Mention*:

Ergys Ristani
(American University/Bulgaria)

Nathanael Thorn
(Worcester Polytechnic Institute)

Ed Quigley
(Grove City College)

Congratulations to all, on behalf of UPE and ACM, and many thanks to all awardees and applicants. Your hard work and dedication has distinguished your chapters and created a positive experience for your members and associates.

IEEE Computer Society Upsilon Pi Epsilon Student Award

The UPE/CS Award for academic excellence is offered to encourage academic excellence by IEEE Computer Society student members and to promote the development of our future professionals. It consists of a \$500 UPE/CS Scholarship, Certificate of Commendation, and an IEEE Computer Society one-year periodical subscription.

The 2011 awardee was:
Gabriella Asprella Libonati
(King's College London)

In closing, UPE bids a fond farewell to longtime Executive Council member Ali Orooji, whose term expired at the end of the convention. **lr**

Cheers,
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References

- [1] Viewpoints Research Institute, <http://vpri.org>
- [2] Alan Kay, Biography, <http://vpri.org/AlanKayBio0411.pdf>
- [3] Squeakland: Home of Squeak Etoys, <http://www.squeakland.org/>



Jeffrey L. Popyack
Department of Computer Science
Drexel University
Philadelphia, Pennsylvania 19104-2875
USA
<http://www.cs.drexel.edu/~jpopyack>
JPopyack@CS.Drexel.edu

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