U N I V E R S I T Y O F C A L I F O R N I A , S A N D I E G O

TechTIPS

Technology Transfer & Intellectual Property Services' newsletter for updates on licensing, patents, and other intellectual property matters.

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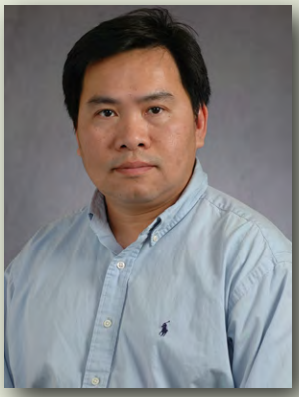
Wavelets of Technology

Professor Truong Nguyen joined the university in 2001 as professor in computer sciences and engineering at the Jacobs School of Engineering. Along with his research, he manages the Video Processing Group, and teaches courses associated with the Signal Image Processing Program (SIP).

Innovation is an intrinsic part of Professor Nguyen's career. Prior to coming to UCSD, he also taught at Massachusetts Institute of Technology, Northeastern University, University of Wisconsin at Madison, and Boston University.

Since his arrival at the university, Professor Nguyen continues to be a prolific innovator with nearly 30 disclosures submitted to the technology transfer office. He is an author of multiple patents on wavelet applications with the most recent, US Patent No. 7,197,074 – "*Phase plane correlation motion vector determination method*", issued March 27, 2007. In addition, he has several additional patent applications filed with the US Patent & Trademark Office.

In late 2005, technology developed by Dr. Nguyen, that provides for smother motion animations on wireless systems that normally lack sufficient bandwidth to sustain frame rates high enough to avoid jerky movement, was licensed to startup company Video Processing Technologies (VPT). Broadcast International, a publicly traded company that provides video-powered business solutions, acquired VPT in February 2006 to complement and expand their product lines.



Truong Nguyen, Ph.D.

Professor of Computer Science & Engineering

UCSD's Video Processing Group's research objective is to generate enabling technology for low-cost mobile devices. The research involves the invention, development, analysis and implementation of multi-rate systems with emphasis on low-power applications in image and video processing.

The group's current research topics include:

- Complex wavelet transform and applications
- Motion compensated frame rate conversion for interlaced and progressive video
- Integer transformations in image and video processing
- De-blocking algorithms for video compression

Professor Nguyen received B.S., M.S., and Ph.D. degrees in electrical engineering from the California Institute of Technology, in Pasadena, California. With over 200 publications, he is also a co-author, with Professor Gilbert Strang of MIT, of a popular textbook, *Wavelets & Filter Banks*, Wellesley-Cambridge Press, 1997, and the author of several matlab-based toolboxes on image compression, electrocardiogram compression and filter bank design.

Professor Nguyen was conferred with the Institute of Electrical and Electronics Engineers (IEEE) Transaction in Signal Processing Paper Award (Image and Multidimensional Processing) for the paper he co-wrote with Professor P. P. Vaidyanathan (of the California Institute of Technology) on linear-phase perfect-reconstruction filter banks (1992).

(Nguyen continued on page 2)

Outreach Events

UCSD $50K Entrepreneurship Competition: Awards Ceremony

The Triton Innovation Network's (TIN), a UCSD-based student organization, first annual $50k Entrepreneurship Competition held it's final presentations and judging for the $50K awards. The presentations and awards were held in the Calit2 Auditorium from 9:30 am to 2:00 pm on Saturday, June 9, 2007. TechTIPS, a sponsor of the competition, matched the 3rd Place prize awarded to Image Aware – rapid, automated, comprehensive platform for monitoring brand references in internet video – with a TechTIPS Topper, for using a UCSD invention in their winning business plan.

For more information please visit:
http://www.ucsd50K.com/frontend/index.html

UCSD Technology Roadshow to Los Angeles

In mid-May, UCSD TechTIPS presented physical science technologies to a group of venture capitalists and entrepreneurs in Los Angeles. The lunchtime presentation was hosted by Stephen Rothman and sponsored by his law firm, Thelen Reid Brown Raysman & Steiner LLP. Thelen Reid has offices in New York, San Francisco, Washington, DC, Los Angeles, Silicon Valley, Hartford, Northern New Jersey, Shanghai, and London; and offers top-tier legal services in the capital markets through their finance practices in the areas of real estate, private equity, energy, infrastructure, and projects, as well as in the technology, media, communications, and intellectual property sectors. www.thelen.com

Technologies promoted at the roadshow included:
- Media and display technologies;
- Network technologies;
- Network interface applications; and
- Devices and systems.

In addition, two UCSD startup ventures presented to this select group of industry partners:
- App2You – allows users to create custom, interactive web applications without coding; and
- Listengame – online music annotation.

Triton Innovation Network Team Members

Nguyen (continued)

Professor Nguyen received the NSF Career Award in 1995 and is currently the Series Editor (Digital Signal Processing) for Academic Press. He has served as Associate Editor for the IEEE Transaction on Signal Processing from 1994-1996 and for the IEEE Transaction on Circuits & Systems from 1996-1997. Currently, he is an Associate Editor for IEEE Transaction on Image Processing and a Fellow of the IEEE.

TRANSFERRING RESEARCH MATERIALS/MTAs

A New Option for Transferring Plasmids

In our quest to provide value-added services to the UCSD community, the UCSD TechTIPS recently entered into an agreement with AddGene to allow faculty and researchers to outsource some of the material transfer requests that they receive from other academic institutions or private companies. In recent years, the office has noted an increasing number of material transfer request for materials developed by university faculty. To fulfill these request, university researchers have had to commit resources such as time and man-hours.

With this new agreement, university researchers can deposit their plasmids with Addgene, and approve requests prior to fulfillment.

Why Deposit Plasmids at Addgene?

addgene

Depositing plasmids at Addgene is a convenient way to archive your plasmids and make them available to the scientific community.

Archive plasmids and information

Depositing plasmids at Addgene ensures the preservation of your plasmid stocks and associated information. Addgene uses a robust sample tracking system to manage plasmids and stores samples on-site and at an off-site backup facility.

Save time and money by referring requests to Addgene

The time you spend finding and shipping plasmids is time away from research. After depositing, Addgene creates a website for your laboratory (see Example). You can refer scientists requesting your plasmids to this page. A log of requests for your plasmids is also available through your Addgene account.

Share your plasmids with the community

Scientists can find your plasmids when they search for genes or articles of interest on Addgene's website. Addgene groups plasmids by article (see Example) and provides cloning information for each plasmid. Addgene also asks scientists using your plasmids to acknowledge your laboratory and cite the appropriate article.

Addgene handles the Material Transfer Agreement process

Addgene distributes your plasmids with the approval of your institution's technology transfer office. Each plasmid transfer is accompanied by an MTA. Addgene has created an efficient on-line MTA system and can obtain a signed MTA for a transfer in just a couple of days.

Addgene is a non-profit organization dedicated to promoting sharing of plasmid constructs described in published literature. Addgene stores original plasmid samples submitted by scientists and distributes them for use in advancing life science research. For more information on how to deposit your plasmids, please visit Addgene.

Coming Soon – New MTA Portal

UCSD TechTIPS has partnered with the Office of Contract and Grant Administration (OCGA) to develop a one-stop portal for managing MTAs at UCSD.. As you all know, OCGA manages incoming MTAs, and the TechTIPS office manages outgoing MTAs. The important difference between the two is the oversight of university intellectual property that may be part of outgoing agreements. With this new portal, UCSD researchers will be able to better navigate the MTA process and find the information needed in one location. OCGA and TechTIPS are committed to facilitating the understanding of UCSD's MTA process and providing tools to lessen confusion on which group handles the different types of MTAs, and for improved efficiency and responsiveness. Please visit this new site at ocga.ucsd.edu.

The following US patents were issued from Q1 to Q3 of FY2007.

Division of Biological Sciences

Ethan Bier et al.– 7,193,126 – Method for generating overexpression of alleles in genes of unknown function

Martin F. Yanofsky et al. – 7,135,621 – Control of fruit dehiscence in plants by Indehiscent1 genes

Division of Physical Sciences

Robert C. Fahey et al. – 7,183,094 – Bacterial mycothiol S-conjugate amidase family

Roger Y. Tsien et al.

– 7,087,416 – Detection of transmembrane potentials by optical methods

– 7,115,401 – Detection of transmembrane potentials by optical methods

– 7,118,899 – Detection of transmembrane potentials by optical methods

– 7,138,503 – Synthetic molecules that specifically react with target sequences

– 7,157,575 – Substrates for .beta-lactamase and uses thereof

– 7,157,566 –Monomeric and dimeric fluorescent protein variants and methods for making same

– 7,173,130 – Detection of transmembrane potentials by optical methods

Jacobs School of Engineering

Anthony Acampora – 7,197,326 – Adaptive local wireless communication system

Nathan J. Delson – 7,168,513 – Dynamic legged robot

Andrew B. Kahng et al. – 7,149,999 – Method for correcting a mask design layout

Noriya Kobayashi et al. – 7,093,130 – System and method for delivering and examining digital tickets

Truong Q. Nguyen et al. – 7,197,074 – Phase plane correlation motion vector determination method

Bernhard O. Palsson et al. – 7,127,379 – Method for the evolutionary design of biochemical reaction networks

Benjamin D. Sullivan – 7,111,502 – Systems and methods for reducing the effect of corruptive signals during nanoliter osmometry

Kenneth S. Vecchio – 7,188,559 – Fabrication of interleaved metallic and intermetallic composite laminate materials

School of Medicine

Mark Bydder – 7,078,898 – Methods and apparatus for magnetic resonance imaging

Dennis A. Carson et al.

– 7,094,597 – Vaccine compositions and methods useful in inducing immune protection against arthritogenic peptides involved in the pathogenesis of rheumatoid arthritis

– 7,098,216 – Thiazolopyrimidines useful as TNF.alpha. inhibitors

–7,105,560 – Use of etodolac in the treatment of multiple myeloma

– 7,105,561 – Use of etodolac for the treatment of prostate cancer

– 7,129,262 – Indole compounds useful for the treatment of cancer

– 7,151,100 – Indole compounds useful for the treatment of cancer

– 7,189,752 – Use of etodolac for the treatment of chronic lymphocytic leukemia

Mark H. Ellisman (trademark) – 3,195,514 – TS Telescience Project

Richard L. Gallo et al. – 7,173,007 – Therapy for microbial infections

Randal S. Goomer – 7,132,404 – Compositions for receptor/liposome mediated transfection and methods of using same

Michael Karin et al. – 7,189,832 – Gamma subunit of cytokine responsive I.kappa.B-alpha kinase complex and methods of using same

Michael Kelner et al. – 7,141,603 – Antitumor agents

Thomas J. Kipps et al. – 7,070,771 – Methods of expressing chimeric mouse and human CD40 ligand in human CD40+ cells

Wen-Hwa Lee et al. – 7105156 – Method of using an adenoviral vector encoding a retinoblastoma protein to treat hyperproliferating cells

Sanjay K. Nigam et al. – 7,074,552 – Method of forming vascularized kidney tissue

Mark H. Tuszynski et al. – 7,157,435 – Methods for modulation of the effects of aging on the primate brain

Robert M. Winslow – 7,101,846 – Methods and compositions for optimization of oxygen transport by cell-free systems

Hoi Sang U et al. – 7,090,668 – Time-released substance delivery device

Scripps Institution of Oceanography

William H. Fenical et al.

–7,144,723 –Marine actinomycete taxon for drug and fermentation product discovery

– 7,176,233, 7176232, and 7,179,834 – Salinosporamides and methods for use thereof

Patent Reform Legislation

Patent reform legislation has resurfaced in the 110th Congress in the forms of HR 1908 and S. 1145. House and Senate Judiciary Committee hearings currently are in progress. As reported by the press, these bills represent the most sweeping changes to the U.S. patent system in the last 50 years, such as:

- A switch from a First to Invent to a First-Inventor-to-File system.
- The establishment of a post grant opposition procedure with more than one window for opposition that allows others to challenge the validity of a patent throughout its life.
- The expansion of prior user rights to allow "substantial preparation for use" to be a defense from infringement.
- A change to specify how courts determine a reasonable royalty in infringement cases rather than allow judges to continue using discretion under current case law to consider the specific circumstances of the case.

These proposed changes may have an effect on how academic technology transfer offices license inventions and provide disincentives for industry to license early stage inventions from universities.

More information about the proposed reforms is available from an AUTM press release.

http://www.autm.net/news/dsp.newsDetails.cfm?nid=103
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BIO White Paper Dispels Over-Patenting Myth

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WASHINGTON, D.C. -Patenting is a Critical Element in Fostering Research and Development. The theory claiming that the over-patenting of biotechnology research hinders the research and development of new treatments is not supported by empirical evidence, concludes a white paper entitled The Myth of the Anticommons released today by the Biotechnology Industry Organization (BIO). The paper was released as Congress considers a variety of changes to current U.S. patent law. The theory of the tragedy of the anticommons, put forth in 1998, claims that patents have the potential to stifle innovation in the biotechnology industry. The theory claims that too many patent holders of upstream technology may inhibit downstream innovation due to transaction costs and strategic behaviors.

The BIO white paper found that the biotechnology industry is actively engaged in discovering and inventing innovative therapies. Research, development and employment in the biotechnology industry are steadily increasing, as are the number of therapies in the clinical pipeline. The white paper also cited a study by the National Academy of Sciences (NAS) which examined the impact of patents on university research. The NAS study found that only 1% of academic respondents experienced delays on their projects of more than a month due to patents and not a single respondent abandoned a project due to a patent on knowledge inputs.

Biotech companies and university scientists agree that patents are a key force behind biotech innovation, stated BIO President and CEO Jim Greenwood. Biotech companies rely on patented intellectual property to attract the funding they need to conduct the years of research and development necessary to bring a product to market and into the hands of patients and other consumers.

As Congress considers changes to the patent system, we encourage them to recognize and protect the key role patents play in encouraging innovation in the biotechnology industry, concluded Greenwood.

The white paper can be accessed at http://bio.org/ip/domestic/TheMythoftheAnticommons.pdf.

BIO represents more than 1,100 biotechnology companies, academic institutions, state biotechnology centers and related organizations across the United States and 31 other nations. BIO members are involved in the research and development of healthcare, agricultural, industrial and environmental biotechnology products. BIO also produces the annual BIO International Convention, the global event for biotechnology.

TechTIPS Dialogues - Fall 2007

TechTIPS with CalIT2, is presenting again for the new academic year, a series of town hall meetings for CalIT2 researchers. These meetings are informal Q and A discussions about the functions of technology transfer at the university and how the office can assist researchers with protecting and marketing their innovations.

- September 13: "Everything You Always Wanted to Know about Disclosing Your New Inventions (but Were Afraid to Ask)"
- October 18: "The Patent-filing Process: Much Better than Going to the Dentist"
- November 5: "Copyright, Trademark and Open-source Issues: Finding a Happy (Digital) Medium"
- December 6: "Permissible Consulting and Start-ups: How to Get Involved with Businesses without Ending Up on the Front Page of the San Francisco Chronicle"

Postdoctoral Professional Development Seminar Series

The Office of Research is launching the Postdoctoral Professional Development Seminar Series in the Fall 2007. This seminar series will cover various topics to cultivate and promote professional development for UCSD postdocs. On November 14, 2007, TechTIPS will be presenting a workshop on intellectual property covering patents, who owns inventions, and the UCSD process for managing intellectual property. The workshop will be held from 12 noon to 1:30 pm in the Price Center Gallery A.

UCSD TechTIPS ... pipeline to innovation

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