New York City College Of Technology

PDAC Faculty Travel

Book of Abstracts

Spring 2019

The generous support of the City Tech Foundation, which helped to make this faculty travel and scholarship possible, is gratefully acknowledged

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Jill Belli, PhD
Associate
Professor
English

Performing Public Writing: The Composing Community of City Tech's OpenLab
Conference on College Composition and Communication 2019
performance rhetoric, performance composition

ABSTRACT
This presentation shares research based on City Tech's OpenLab (openlab.citytech.cuny.edu), an open-source digital platform for teaching, learning, and collaborating launched in Fall 2011 at New York City College of Technology, CUNY. While many scholars have advocated for students to write in public, rarely are there systematic, institutionalized opportunities for doing so. The OpenLab is an exception, attracting over 24,000 members (the majority of whom are students) and challenging a siloed academic experience by creating virtual community at an urban commuter campus and making visible connections across disciplines and courses.

The OpenLab also exists as a vast, diverse corpus of networked, public, multimodal writing. Currently, there are over 1,900 courses on the OpenLab, including hundreds of first-year writing courses, collaborative sites for first-year learning communities and interdisciplinary courses, as well as student clubs, research projects, Open Educational Resources (OERs), and over 5,800 student ePortoflios.

Through qualitative methods and data mining, I offer insights into the myriad of composing activities on the OpenLab. I highlight the OpenLab's community focus: how students, faculty, staff, and alumni co-create and co-perform the college community in this digital space. Members and their profiles, sites, and texts are analyzed alongside their connections, networks, and multiple audiences, as well as with the platform as a whole, which archives, aggregates, and surfaces this content. The OpenLab will be released publicly in 2018 via a grant-funded digital humanities partnership, so any institution will soon be able to leverage its possibilities for community-building, open digital pedagogies, and academic and public composing.

Oleg Berman, PhD
Associate Professor
Physics
Physics

Spin Hall effect for polaritons in a TMDC monolayer embedded in a microcavity

The American Physical Society (APS) March Meeting 2019 in Boston, Massachusetts, USA
03/04/2019 - 03/08/2019

The APS March Meeting is an annual physics conference that attracts the world's experts in Condensed Matter Physics. More than 11,000 physicists, scientists, and students from all over the world participated in the APS annual March Meeting 2019 in Boston, Massachusetts to share groundbreaking research from industry, universities, and major labs.

ABSTRACT

The spin Hall effect (SHE) for polaritons in a transition metal dichalcogenides (TMDC) monolayer embedded in a microcavity is predicted. We demonstrate that two counterpropagating laser beams incident on a TMDC monolayer can deflect a polariton flow due to generation the effective gauge vector and scalar potentials. The components of polariton conductivity tensor for a weakly-interacting Bose gas of polaritons in the presence of Bose-Einstein condensation (BEC) and superfluidity and for non-interacting polaritons without BEC are obtained. We propose to study the superfluidity of microcavity polaritons by experimental measurement of components of a total conductivity tensor as functions of the effective gauge magnetic field at different temperatures. It is shown that the concentrations of the normal and superfluid components and the Kosterlitz-Thouless temperature of occurrence of superfluidity can be determined by experimental measurement the components of the total conductivity tensor. The possible experimental observation of the SHE for microcavity polaritons is proposed, which provides the signature of the superfluidity of microcavity polaritons.

abstract for OSHA 501 2018

Susan B. Brandt
Associate Professor
Production Management
Entertainment Technology

OSHA 501
Trainer Course in Occupational Safety & Health Standards for General Industry 6/18/18 to 6/21/18
OSHA Training Institute Education Center

Abstract
Safety in live entertainment has become a crucial component of live event work environments. Local venues such as the Public Theatre now employ full time production manager's whose sole focus is safety. Osha 501 is the last course I need to become a certified OSHA Trainer. This will allow me to conduct both 10-hour and 30-hour general industry safety and health outreach courses and to issue cards to participants. Many local venues and unions are now requiring members to have the 10 hour card before starting work. My intension is to add a new safety course to the Entertainment Technology curriculum and complete the Live Entertainment Event Management track.

THE FASEB JOURNAL

Physiology

Does Estrogen Act as a Neuroprotective Agent on *In Vitro*-Induced β-Amyloid Plaques in N38 Hypothalamic Neuronal Cells?

Rakhsim Yakubov, Rayan Almathhur, Catherina Suh, Jihyung Yoon, Deborah Cooperstein, Sanjoy Chakraborty, and Tandra R Chakraborty

Published Online: 1 Apr 2019 **Abstract Number:** 557.5

Abstract

A key characteristic of Alzheimer's disease (AD) is the deposition of beta-amyloid fibrils in extracellular plaques, as well as the intracellular accumulation of tau in neurofibrillary tangles in the brain. This study is designed to induce plaques on N38 hypothalamic neuronal cells under *in vitro* conditions using synthetic beta-amyloid and subsequently to treat with estrogen as a neuroprotective reagent. The cell viability, toxicity and proliferation were determined using different bioassays like cell count, Congo red, MTT and lactate dehydrogenase assay. Results indicate a significant loss in cell death, amyloidosis, mitochondrial dysfunction and increased cytotoxicity in cells treated with beta-amyloid and neuroprotection when exposed to estrogen. Further, in order to understand the mechanism by which neuronal death by plaque formation and neuroprotection by estrogen western blotting was performed to determine the changes associated with biomarker Tau protein. Taking together the biochemical and molecular data, the neuroprotective effect of estrogen on beta amyloid plaque formation will be analyzed.

This abstract is from the Experimental Biology 2019 Meeting. There is no full text article associated with this abstract published in *The FASEB Journal*.

PDAC Abstract Formatting Guidelines

Awardees should follow this format. These abstracts may be presented to the college community unless you indicate otherwise.

Ting Chin
Assistant Professor
Architectural Technology
Architectural Technology

Concept Catalysts: A Catalog Contextualizing Typologies of Concept Building Strategies in Beginning Design Studios
National Conference on the Beginning Design Student, March 14-16, 2019
Constructing Context: Situating Beginning Design

Abstract

Ting Chin
Assistant Professor
Architectural Technology
Architectural Technology

Concept Catalysts: A Catalog Contextualizing Typologies of Concept Building Strategies in Beginning Design Studios
National Conference on the Beginning Design Student 2019
Constructing Context: Situating Beginning Design

ABSTRACT

"Durability will be assured when foundations are carried down to the solid ground and materials wisely and liberally selected."[1]

In addition to obtaining foundational design skills, first-year students in architecture programs are required to undergo a transformation where they are charged with removing any preconceived notions about design, with the intention of accessing innovation and creativity, while maintaining excellence in the process of making. This focus can be traced back to the teaching philosophy of the Bauhaus where craftsman meets artist. The artist embodies notions of creativity and innovation while the craftsman focuses on the poetics of making.[2] In observing several first-year programs throughout the United States, one can identify an additional strategy being employed in first-year studio curricula. Rule-based design has become a recurring theme that has shifted the context of concept and project development into a process focused and bottom up approach, where specific methodologies are introduced to the students and iterating is employed as a means of achieving complexity and sophistication. One of the questions that surfaces most often in the development of design studio curricula is how to establish a framework for students that yields meaningful connections between concept derivation and design strategy.

Ledewitz writes "...only a fraction of the content of most studios is articulated explicitly and taught directly. The content is largely implicit in the nature and organization of the projects we give. Students learn much about what "architecture" is and what "design" is even in the type of problems we select." [3]

June 5, 2019

Susan H. Davide
Associate Professor
Dental Hygiene

Course Coordination – What's That All About?

ADEA Allied Dental Program Directors' Conference - June 1, 2019
Dental Education

ABSTRACT

The purpose of a Course Coordinator Liaison (CCL) is leading course-level improvement of student learning and the student experience in the respective area of study. Working with course instructors, other members of the department, fellow liaisons, deans, members of the Gen Ed and Assessment Committees and others to evaluate course content, course materials and pedagogical practices, and implement, reassess, and share effective course coordination practices. (Methods) Since the inception of an evening program, the department has experienced a significant growth in faculty, particularly part-time/adjunct instructors. On-site workshops have limitations and/or nonattendance by adjuncts, so an alternative means was to offer specific topic workshops designed and available to all faculty using the college's Blackboard digital platform. The CCL coordinated with a full-time faculty member to present a topic subject in a PowerPoint Presentation accompanied with a pre- and post-survey quiz to determine background knowledge.

During the Spring 2017 semester, the first workshop was developed and launched, allowing all faculty members to complete it on their own time and off-campus. (Results) More than half of faculty participated and were pleased to have the ability to complete this workshop on their own time and in the comfort of their home. This alternative format facilitates faculty calibration and has been implemented on an annual basis with a continued increase in faculty participation rates and currently offered during fall and spring semesters. (Implications) Offering alternative approaches to disseminate new topics and updates to faculty proves to be effective and well received from post-workshop survey questionnaires. Coordination and use of your institutions digital platform may be an innovative consideration for dental programs to provide professional development that is accessible for all members in effort to have knowledge in current education theory and concepts, relative to subjects taught and applied throughout clinical care in effort to maximize cohesive student instruction.

Andrew Douglas
Professor
Department of Mathematics

Title: Closed subset of root systems and regular subalgebras

Abstract: We describe recent work on classifying closed subsets of roots system, and on the related topic of classifying regular subalgebras of semisimple Lie algebras. In particular, we classified the closed subsets of the irreducible root systems of ranks 3 through 7, up to conjugation by the associated Weyl group. We then employed this root system classification to classify all regular subalgebras of the rank 3 simple Lie algebras, up to inner automorphism. This is joint work with Willem de Graaf from the Univeristy of Trento, Italy.

Lubie Grujicic-Alatriste, Ed.D.
Professor
English and Applied Linguistics
ENGLISH
Arts and Humanities

Demystifying the Academic Publishing and Review Process
Teaching English to Speakers of Other Languages (TESOL) International Annual Conference 2019

ABSTRACT

Scholarly activities such as conference presentations, articles and books are expected both as part of one's job and for promotion. However, the processes of doing academic work are complex, varied and intimidating mostly because they are depending on the blind review of unknown entities who read and decide on the quality, acceptability, and relevance of one's long and hard scholarly work. TESOL International has thus decided to invite notable scholars who are also journal editors, to preside over a panel on the journal publication process in order to offer a place for junior scholars to ask question and learn. As one of invitees, I will participate on the panel as Editor-in-Chief of NYS TESOL Journal, a double blind reviewed academic journal on the New York State TESOL platform as an affiliate of TESOL International. The power point presentation will include the goals and mission of the journal, the description of the submission types, review process, and rationale for submitting to this journal. The review process will be addressed in great detail as part of the effort to 'demystify it' and make junior scholars less weary and more encouraged to submit work. The second half of this two hour long session will be devoted to guidelines how to write a successful submission, how to communicate with the editorial office and how to fill out the submission forms. The end of session Question and Answer will be encouraged.

Ivan L. Guzman PhD, PE
Assistant Professor
Construction Management and Civil Engineering Technology
Geotechnical Engineering

Use of Repurposed Fibers to Decrease Hydraulic Conductivity without Compromising Load Restrictions in Urban Roof Farms

ASCE G-I Geo Congress 2019
Geotechnical Engineering

ABSTRACT

Rooftop farming systems deliver the benefits of rural and suburban agriculture to an urban setting by taking advantage of seldom-used roof real estate. One of the challenges preventing the industry from reaching a bigger audience is the existing building's roof ability to withstand additional structural loads imposed by soil, vegetation, retained water and increased activity. To help minimize added structural loads designers have used lightweight engineered soil to mimic the characteristics of natural soil. However, lightweight engineered soils have poor water retention properties which leads to the need for heavy irrigation schedules, which in turn leads to rapid leaching of nutrients. This imposes an economic deterrent to the wider use of this green technology. The conundrum leaves the designers and/or farmers with the difficult choice of sacrificing soil depth available for plant growth by adding heavier fine grained soils; or, planning for heavy irrigation schedules accompanied by nutrient loss which results in added economic liability. Through laboratory experiments, the authors have found results which indicate that the addition of repurposed textile to lightweight engineered soils has the effect of modifying the hydraulic properties of the soil without compromising its weight. The results of our experimental program are presented as well as the implications on imposed roof weights, loss of nutrients, and economic benefits of adopting the technology. By presenting this work to the geotechnical community the authors intend to create awareness to this niche technical area, where soil mechanics and structural knowledge can be used to solve problems faced by Agronomists.

PDAC Abstract

Abstract

M. Genevieve Hitchings
Associate Professor
Communication Design
COMD Department

Visualize, Art Revealing Science: *Simplifying Complex Science*
50th Anniversary Juried Exhibition, 2018
Art Gallery of the American Association for the Advancement of Science, Washington, D.C.

ABSTRACT

Hitchings, M.G. (05. 16 — 10. 15 2018). "Bioluminescent Beetles." Guild of Natural Science Illustrators (GNSI) 50th Anniversary Juried Exhibition. Art Gallery of the American Association for the Advancement of Science, Washington, D.C.
An info-graphic poster I illustrated and designed was selected as part of GNSI's "Simplifying Complex Science" category to be featured in a curated gallery exhibit. Each year, in conjunction with the Guild's annual conference, GNSI holds an international member's exhibition to celebrate the beauty and wonder of scientific illustration. The juried exhibits showcase the very best work from emerging and professional scientific illustrators and visualizers.

Poster designed for the Massachusetts Audubon Society. Fireflies, as with many organisms, are directly affected by land-use change. This poster is designed as a promotional item, to be given as a thank you, in support of a community-based effort to help researchers track firefly populations during the summer of 2019

Lucas Kwong, PhD
Assistant Professor
Literature, English Department

"Masonic Meta-Religion at the Borderlands in Rudyard Kipling's 'The Man Who Would Be King'"
October 27, 2018
North American Conference On British Studies

ABSTRACT

This paper examines how, in Rudyard Kipling's "The Man Who Would Be King," the frontier setting of Kafiristan dismantles Freemasonry's interreligious vision of Empire. In British India, as throughout the Empire, Freemasonry was closely bound up with the military and administrative establishment. Members of "The Craft" asserted a special role in colonial government, on the grounds that Freemasonry preserved a kind of ancient meta-religion, an ur-myth that comprised the "missing link" between the Christianity of the colonizers and the faiths of the colonized. As such, Freemasons argued that they alone could solidify British-Indian relations and restore Hinduism's ancient Masonic character. When he became a Freemason, Kipling's lifelong fascination with India's religious diversity translated into enthusiasm for the sect's ecumenical aspirations. In non-fiction essays and short stories, Kipling repeatedly invoked
the interchangeability of religious archetypes, a mainstay of Masonic theology.

In this context, "The Man Who Would Be King" stands out for how sharply it contests Kipling's
devotion to Freemasonry's meta-religious ambitions. The story's Masonic protagonists determine to find glory and riches in Kafiristan, a region northwest of British India's borders, and known for its idiosyncratic polytheism. Kafiristan initially offers an ideal staging ground for Masonic triumphalism, as the protagonists discover that the region's religious practices, in fact, constitute a degraded form of Freemasonry. However, their attempts to remake Kafiristan as a Masonic empire quickly run aground. Indeed, I argue that Freemasonry fails as a channel of religious reconciliation because Kipling imagines Kafiristan as a borderland, not only between Empire and wilderness, but also between differing construals of reality. Through a series of increasingly surreal events, the protagonists' interactions with Kafiristan's inhabitants disturb Freemasonry's ecumenical fantasy, underscoring the violence that issues from irreconcilable religious visions. Ultimately, the story's fantastical excursion to Kafiristan negates both the notion of a pan-religious Real and the imperial brotherhood that it might secure: religious difference not only divides British masters from native subjects, but also alienates the story's Freemasons from one another.

In "The Man Who Would Be King," then, the borderlands offer a space in which Kipling subverts the very zeal for Empire-building for which he has become (in)famous. Moreover, to the extent that this subversion involves the violent resurgence of religious differences, the story highlights the degree to which narratives of pan-religious unity undergirded the maintenance of Empire. If Kafiristan lay just outside British control, the story suggests, then a comprehensive view of the Real similarly lies beyond the reach of Masonic bromides that Kipling championed

PDAC Abstract

Nan Li, PhD
Assistant Professor
Differential Geometry
Department of Mathematics

Quantitative Estimates on the Singular Sets of Alexandrov Spaces
Australian-German Workshop on Differential Geometry in the Large, 2019
Presentation of research results

ABSTRACT

We study the quantitative singular sets S^k_ϵ for collapsed Alexandrov spaces. We prove a new covering theorem and the packing estimates for S^k_ϵ. We also show that S^k_ϵ are k-rectifiable, and for every $1\le k\le n-2$, we construct examples for which S^k_ϵ is a Cantor set with positive H^k-measure. This is a joint work with Aaron Naber.

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Awardee(s)
Eric Lobel

Rank: Asst. Professor
Discipline: Radiologic Technology
Department: RAD-TECH

Presentation Title
Association of Educators in Radiologic Technology of the State of New York Annual Conference

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I attended the Association of Educators in Radiologic Technology of the state of New York (AERT) in Lake George NY.

The conference was well attended by educators in the field of radiography. Lectures were structured around educational topics and accreditation of programs by the JRCERT. More information can be found in the conference brochure found on AERTSNY.org.

PDAC Abstract

Elizabeth Milonas, PhD
Assistant Professor
Computer Systems
Technology Department

Meta-analysis of Knowledge Organization

Domain Analysis Clinic 1(DAC1)
Institute for Knowledge Organization and Structure

ABSTRACT

The Institute of Knowledge Organization and Structure promotes and conducts research in order and structure of knowledge, including empirical, experimental and quasi-experimental research using domain analytical methods (https://knoworg.org/about/). As part of the Institute's mission to discover, document, disseminate and generate implementations of the orders and structures of knowledge, the Domain Analysis Clinic brought together a group of invited researchers for two days to work together to identify and fill specific gaps in knowledge organization. During this clinic, the researchers looked at the domain of knowledge organization through a meta-analytical lens. Dr. Joseph Tennis from the University of Washington's iSchool and former president of the International Society for Knowledge Organization (ISKO) was the moderator and keynote speaker.

My participation in the two-day clinic involved evaluating Dahlberg's classification and Smiraglia's index to identify unique facets within the two works through an examination of the themes presented in each of the works. The examination was conducted through the use of data analytic software Voyant. Data gathered from the works was stripped to theme format and entered into Voyant. Term frequencies were calculated and correlations noted. Terms were compared to themes and graphs were generated identifying the strong and weak themes. The results from my preliminary analysis was an identification of clear and persistent themes within the domain of Knowledge Organization which include classification, systems, indexing, thesauri and knowledge. However, the most notable finding from my analysis was the absence of two vital themes: identity and ethics. This analysis was the first step in a broader and deeper understanding of the themes present and absent within the domain of knowledge organization. My future research will focus on the reasons contributing to the absence of the identity and the ethics themes. The work generated in the clinic will be used as the basis of a future publication.

Robert Polchinski
Professor
Environmental Control Technology

HVAC Educators Conference March 1 – 5 , 2019

Abstract

This is an annual conference organized by ESCO Group, a non-profit organization serving the HVAC education field and geared toward HVAC educators. ESCO is authorized by the US EPA to administer certification exams for Refrigerant safe practice exams (EPA 608) for which I am a proctor.

I did not present at this year's conference. The purpose of my attendance was to attend various workshops on: regulatory changes, increasing enrollment, new developments in the industry and digital controls. There were also networking opportunities with instructors at other colleges and a Trade show featuring the latest equipment.

From the Conference Organizer:

"Instructors can participate knowing that the sessions are conducted by professionals who are involved in many aspects of the HVACR industry, including: manufacturing, designing, engineering, or teaching.

Learn how to incorporate emerging technologies into the classroom.

Network with peers from across North America to share ideas, gain new skills and become a better instructor.

Discover innovative approaches to teaching the same curriculum.

Improve your knowledge of the subject matter required to teach your curriculum.

Learn new teaching techniques that can improve student outcomes."

Nandi Prince
Assistant Professor
Library

Abstract:

I wish to be considered for the travel grant to attend the "Computers in Libraries 2019: User Engagement in the Digital Age," conference. The conference will be most beneficial to my professional growth because I expect to come away with practical tools that I will incorporate into my teaching. I am new to the tenure track, my appointment commenced on September of 2018. I am currently teaching one-shot instruction information literacy sessions that are integrated into many courses. I am slated to begin teaching one of the library's three-credit courses in the fall of 2019. Specific areas relevant to instruction and part of the program are: social justice; strategies for teaching fake news; new ways of incorporating technology in the classroom and tips to culturally responsive teaching. When I return, I hope to share with my colleagues, new research strategies and current trends in technology to impart to our many students. I am also interested in makerspaces and hope to learn about successful implementations at other libraries of comparable size to City Tech. Attendance would further my endeavors to maintain a standard of excellence in teaching by networking with colleagues and engaging in discussion on share solutions to problems in higher education. I embrace opportunities to improve my skill sets.

PDAC Abstract

Ryoya Terao
Associate Professor
Video Production
Entertainment Technology

Panel Title
Long-Term Career Planning and Professional Development

The annual convention of the Broadcast Education Association (BEA)
Las Vegas, NV, April 6 – 9, 2019

Abstract
Academia often focuses on theories, but perhaps not always on practical aspects. Even when faculty mentor students, it is usually to find jobs, but not how to stay employable. In today's rapidly changing technological climate, continuous professional development and adjustments according to one's career stage are paramount. The lack of this knowledge may end our students' careers sooner than expected. For strengthening curricula, this panel provides practical advice from industry experts on effective career management.

Retionale
Compared to a decade or two ago, quality video equipment today is significantly more affordable. As a result, many of our students plan to launch their own production companies after graduation. Since they can do so cost effectively, they will likely find clients more easily than newcomers could in the past. However, with so many others pursuing the same goals, they also face many competitors. It is important for us as educators to prepare students for this competition and guide them in succeeding. Equally important, by the time our (former) students are somewhat established and able to increase their service fees, they will likely witness younger filmmakers rising with more affordable rates. This panel will discuss what students need to do if they would like to succeed as owners of production companies or freelancers. Do they have all the necessary skills? How about keeping up with new technologies? As they age, how can they compete against others? How long can they keep working? What are realistic expectations in the field? How to stay active and succeed are topics that are often neglected in our curricula. We should share respective information and insights with the students, so that they are better prepared for the workplace. This panel will include experienced experts from academe and the industry who will share their voices in hope to assist future industry workers.

Panelists
Prof. Daniela Castillo (Colorado State University)
Prof. John Gallagher (Borough of Manhattan Community College)
Prof. Colleen Kopchik (Marist College)
Prof. Ryoya Terao (New York City College of Technology)

Adam J. Wilson, PhD
Assistant Professor
Emerging Media Technology
Entertainment Technology

***Plectrodon, II,* for fretless electric guitar and real-time software improvisation agent**
MOXSonic, Missouri Experimental Sonic Arts Festival, 2019
Experimental Electronic Music

ABSTRACT
Plectrodon, II represents the latest version of my evolving real-time human-computer improvisation system. The system incorporates a novel software component enabling the computer to improvise in the musical styles of its human collaborator. It also generates formal structures for independent musical accompaniment from the aggregate data supplied by the human performers. All of this is achieved with an adaptation of the online factor oracle algorithm, which is used to build and update automata representing all substrings of notes from the human performance—in the smallest number of states—and perform rapid pattern matching on the results to generate more or less stylistically coherent musical responses.

Lin Zhou, PhD
Associate Professor
Applied Mathematics
Mathematics Department

Stochastic Mesoscale Modeling for Wormlike Micellar and Networked Fluids
19th International Workshop on Numerical Methods for Non-Newtonian Flows
Peso da Regua, Portugal, June 16-20, 2019

ABSTRACT
Complex fluids can be modeled and studied at the macroscopic or mesoscopic level. Mesoscale stochastic models have the advantage over macroscale models in that they capture the local properties of the embedded structural elements. Mesoscopic elements are often modeled as bead springs (Hookean or non-Hookean) which in wormlike micellar mixtures or telechelic polymers self-assemble into long chains or networks that dynamically break and reform. Long wormlike micelles in concentrated mixtures entangle and their motion is conned by nearby worms. This confinement can possibly be captured by allowing weak cross-chain attractions. These weaker cross-chain attractions exist in mucins and may be a proxy for confinement modeling in wormlike-micellar mixtures. In this talk we discuss models and computational results for stochastic mesoscale breaking reforming systems and explore model parameter ranges which lead to capturing particular properties of each of wormlike micelles, telechelic polymers, and mucins.

September 17, 2010
Office of the Provost