

HOW TO WRITE AN ABSTRACT:

Links and Tips

An abstract is a short summary of your completed research. If done well, it makes the reader want to learn more about your research.

These are the basic components of an abstract in any discipline:

1) Motivation/problem statement:

Why do we care about the problem?
What practical, scientific, theoretical or artistic gap is your research filling?

2) Methods/procedure/approach:

What did you actually do to get your results? (e.g. analyzed 3 novels, completed a series of 5 oil paintings, interviewed 17 students)

3) Results/findings/product: As a result of completing the above procedure, what did you learn/invent/create?

4) Conclusion/implications: What are the larger implications of your findings, especially for the problem/gap identified in step 1?

However, it's important to note that the weight accorded to the different components can vary by discipline. For models, try to find abstracts of research that is similar to your research.



Below are links and sample abstracts that you may find helpful.

LINKS:

This link has a very thorough description of each of the components named above. It is aimed especially at **engineers** but is relevant for all disciplines.

<http://www.ece.cmu.edu/~koopman/essays/abstract.html>

This link is especially relevant for **natural scientists**:

<http://darwin.bio.uci.edu/~sustain/Abstract.html>

SAMPLE ABSTRACTS:

History/social science:

"Their War": The Perspective of the South Vietnamese Military in Their Own Words

Author: Julie Pham (UCB participant in UC Day 2001)

Despite the vast research by Americans on the Vietnam War, little is known about the perspective of South Vietnamese military, officially called the Republic of Vietnam Armed Forces (RVNAF). The overall image that emerges from the literature is negative: lazy, corrupt, unpatriotic, apathetic soldiers with poor fighting spirits. This study recovers some of the South Vietnamese military perspective for an American audience through qualitative interviews with 40 RVNAF veterans now living in San José, Sacramento, and Seattle, home to three of the top five largest Vietnamese American communities in the nation. An analysis of these interviews yields the veterans' own explanations that complicate and sometimes even challenge three widely held assumptions about the South Vietnamese military: 1) the RVNAF was rife with corruption at the top ranks, hurting the morale of the lower ranks; 2) racial relations between the South Vietnamese military and the Americans were tense and hostile; and 3) the RVNAF was apathetic in defending South Vietnam from communism. The stories add nuance to our understanding of who the South Vietnamese were in the Vietnam War. This study is part of a growing body of research on non-American perspectives of the war. In using a largely untapped source of Vietnamese history & oral histories with Vietnamese immigrants & this project will contribute to future research on similar topics.

Humanities:

Violence, Subalternity, and El Corrido Along the US/Mexican Border

Author: Roberto Hernandez (UCB participant in UC Day 2001)

The Geopolitical divide that separates the United States and Mexico has long plagued the region with violence and conflict. However, its extent and political nature is often overshadowed and undermined by mainstream information outlets. The boundary inspires polarized reactions: tough on crime/immigration rhetoric from politicians and enforcement officials & exemplified in current border militarization & appeasement through feel-good news reporting. Such contradictions desensitize and deny the essence and root cause of the conflict & an ongoing sociopolitical, cultural, and economic struggle between the two nations. While information transmission in the north has a U.S. focus, south of the divide knowledge distribution is very Mexico-centered. However, the border region acts as a third space that gives birth to a distinct border gnosis, a unique form of knowledge construction among subaltern communities on both its sides. One form of subalternity, corridos, (border folk ballads), has functioned to create an alternative discourse to the borderlands imaginary. This study is an examination of the analysis and critique found in corridos that seek a critical approach to the violence at the nations' shared edges and its ensuing political implications. To illustrate their subaltern function, I will examine two incidents: the 1984 McDonalds shooting in San Ysidro, California, and the 1997 death of Ezequiel Hernández in Redford, Texas. these cases are indicative of the politically charged environment of a border region that in becoming an increasingly militarized zone has also set the stage for a cultural battle amongst different forms of knowledge construction and legitimation.

Biological Sciences:

"The *Listeria monocytogenes* p60 Protein is not Essential for Viability in vitro, but Promotes Virulence in vivo"

Author: Sina Mohammedi, 2002 UC Day nominee and runner-up

Intracellular pathogens (agents which infect host cells), such as *Mycobacterium tuberculosis* and *Listeria monocytogenes*, cause very high mortality rates in the United States. Therefore, deciphering the mechanisms through which the pathogens cause disease is of great interest. *Listeria* infection of mice is a well-developed model system for studying the fundamentals of host-pathogen interactions. In vitro assays in animal cell cultures have helped show that *Listeria* causes illness by secreting molecules, called virulence factors, to the outside of the bacterial cell in order to affect the host organism. My work involves one such secreted protein, called p60. P60 is an antigen (an agent seen by the host immune system) implicated in regulated bacterial cell wall breakdown. The objective of this study was to examine two questions: first, is p60 essential to the viability of *Listeria*, as previously published? and second, is p60 a virulence factor in *Listeria*? To examine these questions, I constructed a *Listeria* strain lacking p60 (p60-). This new strain displayed no defect in viability. In fact, most standard in vitro pathogenicity assays were normal for p60-. However, when p60- was tested in a mouse (in vivo), a 1000-fold reduction in virulence was observed. This discovery suggests that p60 is indeed a key factor in the disease-causing ability of *Listeria*, but not essential for viability. Future studies will focus on the precise role of p60 in *Listeria* pathogenesis. This work increases our understanding of such diseases as tuberculosis, various food poisonings, and meningitis.

Engineering:

"Quantifying the Mechanics of a Laryngoscopy"

Laryngoscopy is a medical procedure that provides a secure airway by passing a breathing tube through the mouth and into the lungs of a patient. The ability to successfully perform laryngoscopy is highly dependent on operator skill; experienced physicians have failure rates of 0.1% or less, while less experienced paramedics may have failure rates of 10-33%, which can lead to death or brain injury. Accordingly, there is a need for improved training methods, and virtual reality technology holds promise for this application. The immediate objective of this research project is to measure the mechanics of laryngoscopy, so that an advanced training mannequin can be developed. This summer an instrumented laryngoscope has been developed which uses a 6-axis force/torque sensor and a magnetic position/orientation sensor to quantify the interactions between the laryngoscope and the patient. Experienced physicians as well as residents in training have used this device on an existing mannequin, and the force and motion trajectories have been visualized in 3D. One objective is to use comparisons between expert and novice users to identify the critical skill components necessary for patients, to identify the mechanical properties of the human anatomy that effect laryngoscopy, and thus enable the development of a realistic training simulator. In the future an advanced training mannequin will be developed whose physical properties will be based on our sensor measurements, and where virtual reality tools will be used to provide training feedback for novice users.

More Sample Undergraduate Research Abstracts in the Arts, Humanities, Science and Social Science:

<http://www.scur.uci.edu/sampleabstracts.html>

(note: These are not UC Day abstracts. Disregard application instructions on that site.)

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