Characterize who is at risk, vulnerable periods of risk, and key biological and environmental mechanisms of risk for common adolescent psychopathologies.
My research focuses on developing new quantitative methods to study interpersonal processes in physiology and emotions.

Ongoing projects:

- Synchronization in stress physiology in married couples.
- Physiological dynamics between therapists and children with autism during psychotherapy.
- Day-to-day emotional interactions between romantic partners.

Contact Information:
Siwei Liu, PhD
Human Development and Family Studies
University of California, Davis
Email: swelius@ucdavis.edu
GxE interaction and differential susceptibility: A Model

Positive outcome

Negative outcome

high susceptibility

no genetic risk/low susceptibility

genetic risk

environment


Jay Belsky
Conger Studies of Social Interactions

**Goals:** Our lab is focused on understanding how family and peer social interactions influence child and adolescent psychological, personality, social, academic, & economic outcomes.

Dr. Nicole Hollis, Megan Waechter, Michelle Wong, Alice Wuemli, Maricela Plascencia, Dr. Kathi Conger, Christy Hollifield, Dr. Ben Reeb, & Jonah Cox
Early Relationships & Emotion Development
- Development of Emotion Understanding Study
- Infant Social Referencing Study
- Maternal Affective Nonverbal Expressions

Conscience Development
- Early Social Understanding Study
- Preschoolers’ Emotional Responding & Communication Study

Applied Research and Policy Work
- Consultation with local, state and national policymakers on topics such as school readiness, early childhood mental health, and early social-emotional assessment

Support from the Amini Foundation for the Study of the Affects and WestEd
Suad Joseph Lab

- 18-year longitudinal study of the socialization of children for citizenship in the aftermath of the Lebanese Civil War
- Founded and coordinates the Arab Families Working Group (www.arabfamilies.org) which produces research and reports on families and youth in Egypt, Lebanon, Palestine and their diaspora.
- General Editor of the Encyclopedia of Women and Islamic Cultures, now in its 18th year of production (http://sjoseph.ucdavis.edu/ewic).
Peer Relationships & Social Contexts
Adrienne Nishina ~ anishina@ucdavis.edu

What do lab members
And affiliates study?
Neat stuff about peers.

Bullying in school,
Ethnic diversity, and
How coping can help.

Popularity?
Sure, benefits aplenty;
but, can it get you dates?

Emerging adults
Date cross-ethnically and there's
My research topic

What do school kids eat?
Maybe what their friends do
Maybe what is cool
One like all the others
Center for Public Policy Research (CPPR)
University of California, Davis

– Bringing Science to Policy
  – Child Protection, Foster Care, Families in Poverty, Welfare
  – Juvenile Justice, Prisons, Recidivism, Childhood Trauma and Criminal Behavior

– Funders (present and past) include the California Department of Social Services, California Department of Corrections and Rehabilitation, Stuart Foundation, New Alternatives Inc., and the Sierra Foundation

– Director, Dr. Gail S. Goodman, Distinguished Professor

– Present and Past Staff and Associates:
  – Ingrid Cordon, Ph.D.    Michael Lawler, Ph.D.
  – Kevin Grimm, Ph.D.     Phillip Shaver, Ph.D.
  – Liat Sayfan, Ph.D.     Jane Mauldin, Ph.D.
  – Cathi Christo, Ph.D.   Yoojin Chae, Ph.D.
  – Ivan Vargas, J.D.      Keith Widaman, Ph.D.
  – Macaria Mendoza, M.A.  Rudy Haapanen, Ph.D.
  – Alexandra Shelley, B.A. Shay O’Brien, MSW
  – Rachel Narr, B.A.      Sue Hobbs, M.A.
  – Annie Kalomiris, B.A.  Mitchell Eisen, Ph.D.
LABORATORY ON LANGUAGE DEVELOPMENT IN NEURODEVELOPMENTAL DISORDERS

Current Research Projects

• Cognitive predictors of language development in youth with Down syndrome

• Evaluation of expressive language sampling as an outcome measure for children, adolescents, and young adults with Down syndrome or fragile X syndrome

• Biological, behavioral, and environmental influences on language development in adolescents with fragile X syndrome or autism spectrum disorder

• Word learning in children with fragile X syndrome or autism spectrum disorder

• Parent-mediated language intervention using distance teleconferencing

Principal Investigator: Leonard Abbeduto, PhD
We conduct experiments exploring mechanisms involved in children’s learning and examining environmental factors that shape children’s thinking.
UC Davis Has Many Applied Research Opportunities

Study positive youth development through the 4-H program

Create and test new curriculum

Evaluate new youth programs

4-H Thrive
http://www.ca4h.org/About/Thrive/
Emilio Ferrer – Research Interests

- Models to examine developmental changes over time
  - changes in brain structure and function underlying the development of reasoning in children and adolescents

![Brain structure and function diagrams](image)

Models to study short-term fluctuations
The Center for Child and Family studies

To advance the field of child development, the Center serves as
• a laboratory for the development of experimental programs for children and families
• an observation site for UC Davis students and community members
• a research facility for UC Davis faculty and graduate students

The Center includes
• a setting for child development research
• family programs, seminars and meetings
• research labs for faculty and students
Over 200 million children in developing countries are not reaching their developmental potential, partly due to undernutrition.¹

In the International Lipid-Based Nutrient Supplements (iLiNS) Project*, we are investigating whether provision of small quantity lipid-based nutrient supplements to pregnant women and infants in Malawi, Ghana, and Burkina Faso (N= ~8000) can help children fulfill their developmental potential in motor, language, cognitive, and socio-emotional abilities.

*Funded by the Bill & Melinda Gates Foundation. See http://ilins.org

Nancy Erbstein

- Understanding place, power, and the production and disruption of disparities in youth well-being
- Using the conceptual frameworks and tools of critical human geography, community development and youth development
- Working with policy-makers and advocacy networks to build knowledge about effective translational strategies
APA- Division 7

- Official Developmental Psychology section of APA
- President: Dr. Jacquelynne Eccles, UC Irvine
- Past President: Dr. Gail S. Goodman, UC Davis
- Secretary: Dr. Kali Trzesniewski, UC Davis
- Includes
  - Grant and fellowship opportunities
  - Eligibility for various awards and grants (e.g., G. Stanley Hall Award, Dissertation grant)
  - Influence psychological science and social policy
  - Keep up with the latest information on developmental science
    - APA Convention - Toronto, Canada, August 6-9, 2015
  - Network with others interested in development
  - Receive the Developmental Psychologist (our newsletter)
- Cost
  - Free for the first year (after first year only $24 per year)
  - Free for student members
  - Do not need to be a member of APA!
- Interested in joining?
  - Contact: Dr. Bonnie Klein-Tasman, Division 7 Membership Chair
    bklein@uwm.edu or visit http://ecp.fiu.edu/APA/div7/
How do infants learn from the patterns present in their environments?

Statistical regularities help infants to detect and understand words in fluent speech, and to learn what words refer to and how they function.

Learning native language patterns leads infants to become better learners: they develop expectations about what makes a good word.

Funded by NSF, NIH, and the Hellman Foundation
Solomon Lab

Dr. Marjorie Solomon

Her Cognition in Autism Spectrum Disorders

- Examine cognitive control using fMRI protocols
- Investigate learning and memory performance in adolescents

Clinically-Oriented Research and Activities

- Social skills interventions for children with ASD
- Social workshop for adults with ASD
- Compare profiles of social behaviors between children with ASD
Lorena Garcia, MPH, DrPH

- Associate Professor
- Department of Public Health Sciences, Division of Epidemiology
- UC Davis School of Medicine

Dr. Garcia has been engaged in Latino health research since the early 1990s with a special interest in health disparities, chronic disease, aging, behavioral health, injury and violence prevention in the Latino community.
Personality and Adolescent Development
Richard W. Robins, PhD

- Risk and resilience in Mexican-origin families
- Adolescent personality development
- Self-esteem processes and development
- Regulation and expression of pride and...
California Families Project

Richard W. Robins & Rand D. Conger

Longitudinal study of 674 Mexican-origin families assessed annually from 5th through 2nd grade

Understand risk for and resilience to drug use and other adolescent outcomes

funded by: NIDA, NIAAA
The MIND Institute, Center for Mind and Brain

Vision

- The UC Davis MIND Institute (*Medical Investigation of Neurodevelopmental Disorders*) is a collaborative international research center, committed to the awareness, understanding, prevention, care, and cure of neurodevelopmental disorders.

Mission

- To find effective treatments and cures for autism and other neurodevelopmental disorders.
Developmental Psychology and Law
Gail S. Goodman
Distinguished Professor
Director, Center for Public Policy Research

Memory Development
- Trauma and Memory Development
- Attachment and Memory
- True and False Memory
- Forensic Interviewing of Children
- Lost/“Repressed” Memory
- Memory and Suggestibility

Child Maltreatment
- Executive Function
- Child Victims in Court
- Children and Child Protective Services
- Mental Health and Socioemotional Development
- Foster Care

Jurors’ Evaluations
- Discerning True and False Memory
- Child Sexual Abuse and Child Victims
- Children’s Evidence in Court
SELF-ESTEEM ACROSS THE LIFESPAN LAB

Kali Trzesniewski (PI)     Michelle Harris     Julia Singleton

SELF-ESTEEM

- Can young children reliably report on their self-esteem?
- Do correlates of self-esteem vary by age?

GROWTH MINDSET

How does context shape growth mindset?
- Does growth mindset develop?

What makes you like or dislike yourself?

- Pre
- Post

Percentage of total responses

<table>
<thead>
<tr>
<th>Age groups</th>
<th>5-7 (n = 20)</th>
<th>8-10 (n = 17)</th>
<th>Adult (n = 21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I just do</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relational</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significance level
psycho-social studies of social & emotional development

HERD LAB

Healthy Emotions, Relationships, Development

Stress Diagram

Immune System Suppression

Anterior Pituitary

Adrenal Gland

Physiological Changes

Hypothalamic Hormones
Family Physiology Lab
PI: Leah Hibel

examine the transaction among family stress and conflict, mother-child relationships, and stress physiology.

My lab uses:
- Naturalistic and laboratory designs
- Behavioral and biological measures
- A family approach
Central Question: How does episodic memory develop during childhood?

– Typical and atypical development
– Behavioral and neural mechanisms
Randi Hagerman: Fragile X- a Family Affair

- Fragile X syndrome
- Full mutation (>200 CGG repeats in FMR1)
- Targeted treatments to reduce intellectual and behavioral disabilities of FXS: Controlled trials of minocycline, arbaclofen, AFQ056, RO491753 and ganaxolone with molecular biomarkers
- Learning interventions: CogMed, iPAD applications, literacy & language Rx

- Premutation Disorders (55 to 200 CGG repeats in FMR1)
- FXTAS
- FXPOI
- Autoimmune disorders
- Depression and anxiety
- Hypertension
- Migraines, sleep apnea
- Anxiety
Developmental Research Center
1301 Social Sciences and Humanities Building

Graduate Students:     Post-Doc:
Debbie Goldfarb, J.D.  Dr. Deb Alley
Daniel Bederian-Gardner

Gent Silberkleit     Lab Manager:
Sue Hobbs            Alexandra Shelley
Jonni Johnson
Selected Recent Publications


Ford, C. M., & Lagattuta, K. H. (2012). Looking on the bright side: Children’s knowledge about the
The Family Research Group (FRG):
Longitudinal Investigations of Family Relationships and Individual Well-being in Multiple Groups & Across Generations

The Purpose:
Understand the contribution of interpersonal processes, genes, and social & cultural environments to family functioning and individual development across life transitions.
Family Transitions Project: Started in 1989, the FTP has followed 550 families as part of an ongoing, longitudinal investigation of the effects of economic hardship, family relationships and individual adjustment over three-generations. Recently, DNA samples were collected from FTP participants to investigate genetic contributions of health and wellbeing.

Family and Community Health Study: The FACHS is a longitudinal study of African American family relationships and adolescent risk and resilience in a two cohort (urban Iowa and rural Georgia), multiple wave design. The project began in 1995 and there are 4 waves of data from late childhood/early adolescence to early adulthood. The study examines economic hardship and other stressful experiences within the context of the African American community.

California Families Project: Started in 2005, the CFP is an ongoing, two-cohort, longitudinal study of 674 Mexican origin families focused on family relationships, adjustment in middle childhood and adolescence. It extends earlier research on economic hardship and other stressors to the immigrant experience and the processes of acculturation. Dr. Amanda Guyer and Dr. Paul Hastings are collaborating with FRG as they are recruiting sub-samples from the CFP study to...

• Substance Abuse in Young Men: a collaboration between Danny Shaw and Rand Conger on individual and family factors related to substance use.

• Dynamics of Financial Stress and Alcohol Problems: Started in 2012, a new four year grant from the National Institute for Alcohol Abuse and Alcoholism (NIAAA) to UCD (Dr. Kathi Conger) and the University of Arizona (Dr. Stephen Russell) will support research on the potential long term effects of family financial stress and compromised parent-child relationships and financial strain during adolescence as predictors of young adult family...
Food Label Communication

Food Environment

Food Label (Nutrition Facts Panels, Ingredient Lists, Health Claims)

Nutrition Information Processing → Decision Making Effectiveness → Dietary Quality

Developmental Changes in Individual Processes

Adult Life Course Context

Covariates
- Nutrition Knowledge
- Working Memory
- Numeracy
- Physical Activity/Exercise
- Motivation

M. Soederberg Miller
• Current Research involves a longitudinal study of development in students with ASD and ADHD.  
• **Major Finding:** See Figure A significant disruption of reading comprehension development is a characteristic of the phenotype of high IQ students with ASD.

---

**RESEARCH GOALS**

1) Define the *developmental phenotype* of the ASD in the school-aged period.
2) Better understand the development of learning in ASD.
3) Develop methods to improve assessment and intervention for learning in school aged children with ASD.

Supported by IES R324A110174.
NIMH 1R21MH085904
Questions we ask in the infant cognition lab

**How do babies categorize?**

**How does action shape cognitive development?**

**How does experience shape cognitive development?**

**How does visual short-term memory?**
Cognition and Aging Lab;  B.A. Ober, PI
Human Development, UC Davis

- Memory & Language in Alzheimer’s Disease

Memory & Language in Normal Aging
PARENT PROJECTS:

- Parenting factors related to obesity risk in low-income preschoolers: 2-year longitudinal study
- Extending to Spanish-speaking families
- Development & validation of parenting risk assessment tool

School-based intervention targeting 4th graders nutrition & physical activity class lessons, school level wellness, parent education year longitudinal study of impacts

- Parent education supplements to federally funded nutrition education programs for low-income parents of young children
- Tailoring of delivery method to different educational settings

Year multi-state study of rural, low-income mothers of young children examination of individual and family stress factors related to
Our mission is to design, study, and deliver effective interventions for people with ASD and their families. We value collaborative, reciprocal relationships with clients, families, patients, community members, and colleagues.

We are committed to life-long learning: for persons with ASD, for university and community learners, and for ourselves as autism scientists and interventionists.

The goal of our work is to improve the quality of life for each person with ASD. This goal requires both access to high quality education and treatment for all persons with ASD and the public’s support.
Director: Julie weitzer, Ph.D.

- Development of self-control in ADHD and typical adolescents and young adults via behavioral and neural measures
- Cognitive and neural vulnerabilities for substance abuse in ADHD
- Developing procedures to increase self-control
- Identifying ADHD subtypes and biomarkers via EEG coherence, ERP and fMRI
- Intervention research
  - Exploring cognitive training for children with autism and fragile X syndrome
  - Parent education, improving treatment adherence
  - Reaching more families: telemedicine
Typical Development:

Infant/Toddler Work

Numerical representation
Object individuation
Word learning
Dorsal/Ventral Stream processing

Older Children and Adults

Quantitative reasoning
Mental arithmetic
Proportional reasoning
Video game training

Atypical Development:

Fragile X & Autism:
- Dorsal/Ventral Stream Processing
- Multisensory Integration
- Statistical learning of social information

Fragile X:
- Arithmetic and spatial reasoning (fMRI)
- Affective processing

Autism:
- Multisensory integration (ERP)
- Biological motion processing
Research Internship

CAARE Center

Research Internship Supervisors: Susan G. Timmer, PhD, Anthony J. Urquiza, PhD, Deanna K. Boys, MA

Research Focus:
Parent-Child Interaction Therapy in home settings

Effects of child maltreatment on children and families

Characteristics of parent-child interactions in high risk families

Population

Skills Learned:

- Observational Coding
- Dyadic Parent Child Interaction Coding System
- Emotional Availability
- Interpretation of standardized assessments
- Opportunity to observe live PCIT coaching in clinic
Having fun at UC Davis!