Sujung Cho, Ph.D.
Assistant Professor
Criminology and Criminal Justice
Southern Illinois University Carbondale
1000 Faner Drive
Faner Hall Room 4230, MC 4504
Carbondale, IL 62901
E-mail: sujung.cho@siu.edu
Office Phone: 618. 453. 6373

EDUCATION

2015	Ph.D.	**University of Cincinnati**
		School of Criminal Justice

Dissertation Title: *A Multi-Level Model of Personal Victimization among South Korean Youths*
Dissertation Committee: John Wooldredge (Chair), Pamela Wilcox; Bonnie Fisher; Seongho Song

2015	M.S.	**University of Cincinnati**
		Statistics

Concentrations: Statistical Modeling, LGCM Analysis, Bayesian Analysis
Advisor: Seongho Song

2008	M.S.	**Hansung University**
		International Drug Criminology

2000	B.A.	**Chungnam National University**
		German Language and Literature

RESEARCH INTERESTS

Developmental Criminology; Juvenile Delinquency; Cross-national and Comparative Criminology; Bullying/Peer Victimization; Cyberbullying Victimization; Advanced Statistical Methodology

PROFESSIONAL EXPERIENCE

2017–present   Assistant Professor,
Criminology and Criminal Justice, Southern Illinois University, Carbondale, IL

2015–2016   Assistant Professor,
Social Justice and Criminology, Delta State University, Cleveland, MS

2007–2008   Police Officer,
              Seoul Metropolitan Police Agency, Seoul, Republic of Korea

2000–2007   Security Officer,
              Presidential Security Service, Seoul, Republic of Korea

PEER-REVIEWED JOURNAL ARTICLES

Cho, S. (Accepted). Strainful Sources, Negative Emotionality, and Suicidal Behaviors: Latent Class Analysis using the Manual 3-step Approach. *Journal of School Violence*.

Cho, S., & Glassner, S (Accepted). Examining the mediating effects of negative emotions on the link between multiple strains and suicidal ideation: A longitudinal analysis. *The Archives of Suicide Research.*

Kim, D. H., Lee, J. M., **Cho, S**., Peguero, A. A., & Misuraca, J. A. (2019). From bullying victimization to delinquency in South Korean adolescents: Exploring the pathways using a nationally representative sample. *Children and Youth Services Review*, *98*, 305-311.

Choi, K. S., Earl, K., Lee, J. R., & **Cho, S**. (2019). Diagnosis of cyber and non-physical bullying victimization: A lifestyles and routine activities theory approach to constructing effective preventative measures. *Computers in Human Behavior*, *92*, 11-19.

Cho, S., & Norman, L. (2018). The mediating effect of social controls on marijuana use among adolescent bullies, victims, and bully-victims. *Substance Use and Misuse,* 1-15*.*

Cho, S., & Lee., J. R. (2018). Impacts of low self-control and delinquent peer associations on bullying growth trajectories among Korean youth: a latent growth mixture modeling approach. *Journal of interpersonal violence*, 1-31.

Cho, S., & Lee, J. (2018). Explaining physical, verbal, and social bullying among bullies, victims of bullying, bully-victims: Assessing the integrated approach between social control and lifestyles-routine activities theories. *Children and Youth Services Review.91,* 372-382.

Cho, S. (2018). Bullying victimization-perpetration link during early adolescence in South Korea: Applying the individual trait approach and opportunity perspective. *Journal of School Violence,* 1-21.

Cho, S. (2018). The impact of low self-control and delinquent peer associations on bullying perpetration and victimization among South Korean adolescents: Time-concurrent, time-lagged, and latent growth curve modeling. *Journal of school violence*, *17*(4), 500-520.

Glassner, S. D., & **Cho, S.** (2018). Bullying victimization, negative emotions, and substance use: utilizing general strain theory to examine the undesirable outcomes of childhood bullying

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victimization in adolescence and young adulthood. *Journal of Youth Studies*, *21*(9), 1232-1249.

Cho, S., & Wooldredge, J. (2018). Direct and indirect effects of low self-control on the personal victimization of South Korean youth. *Journal of Youth Studies*, *21*(7), 958-982.

Cho, S., & Wooldredge, J. (2018). Lifestyles, informal controls, and youth victimization risk in South Korea and the United States. *Journal of Child & Family Studies,* 27(4), 1358-1371.

Cho, S., Lee, J.M., Hong, J.S., & Thornberg, R. (2018). Applying the lifestyle routine activities theory to explore predictors of various types of offending behaviors among adolescents in the United States. *Criminology and Forensic Studies.1*(4), 1-16.

Cho, S. (2017). Explaining the overlap between bullying perpetration and bullying victimization: Assessing the time-ordered and the correlative relationships. *Children and Youth Services Review.79,* 280-290.

Hong, J. S., Voisin, D. R., **Cho, S.**, Smith, D. C., & Resko, S. M. (2017). Peer victimization and substance use among African American adolescents and emerging adults on Chicago's Southside. *The American Journal of Orthopsychiatry.88(4),*431-440.

Cho, S., Hong, J.S., Sterzing, P., & Yoo, Y. (2017). Parental attachment and bullying in South Korean adolescents: Mediating effects of low self-control, deviant peer associations, and delinquency. *Crime & Delinquency.* *63*(9), 1168-1188.

Cho, S. (2017). Self-control and risky lifestyles in context: Cross-level integration between opportunity and collective efficacy in the study of peer victimization among South Korean youths. *Journal of Child & Family Studies.* *26*(1), 67-79.

Cho, S., Hong, J.S., Espelage., D.L., & Choi., K. (2017). Applying the lifestyle routine activities theory to understand physical and non-physical peer victimization. *The Journal of Aggression, Maltreatment and Trauma.* *26*(3), 297-315.

Cho, S., & Wooldredge, J. (2016). The link between juvenile offending and victimization: Sources of change over time in bullying victimization risk among South Korean adolescents. *Children and Youth Services Review*. *71,*119-129.

Cho, S., Wooldredge, J., & Sun Park, C. (2016). Lifestyles/routine activities and bullying among South Korea youths. *Victim and Offenders, 11*(2)*,* 285-314.

Hong, J. S., Voisin, D. R., **Cho, S.**, & Espelage., D. L. (2016). Association among subtypes of bullying status and sexually- risky behaviors of urban African American adolescents in Chicago. *Journal of Immigrant and Minority Health.* *18*(5), 1007-1016.

Yoo, Y., & **Cho, S.** (2013). Routine activities self-control and direct-contact victimization in Korean adolescents. *Korean Criminological Association*, *7*(1), 241- 281.

ENCYCLOPEDIA ENTRIES

Cho, S., Lee, J.M., Prisner, A., & Hong, J.S. (2017). Crime and delinquency among Asian immigrants in the United States. In H.V. Miller & A. Peguero (eds), *The Routledge Handbook of Immigration and Crime*. New York: Taylor & Francis/Routledge.

MANUSCRIPTS IN REVISION

Cho, S. (revise/resubmit). Self-control, risky lifestyles, and bullying victimization among Korean youth: Estimating a second-order latent growth model. *Journal of Child and Family Studies.*

Cho, S., & Galehan, J. (revise/resubmit). Stressful life events and negative emotions on delinquency among Korean youth: An empirical test of general strain theory assessing longitudinal mediation analysis. *International Journal of Offender Therapy and Comparative Criminology*.

Cho, S., Lee, H., Peguero, A., & Seong, Park (under review). Social-ecological correlates of cyberbullying victimization and perpetration among African American youth: Negative binomial and zero-inflated negative binomial analyses. *Children and Youth Services Review*

Cho, S., Choi., K., & Lee., J. (revise/resubmit). Impacts of online risky behaviors and cybersecurity management on cyberbullying and traditional bullying victimization among Korean youth: Application of cyber-routine activities theory with latent class Analysis. *Computers in Human Behavior*.

MANUSCRIPTS UNDER REVIEW

Cho, S., Glassner, S. Kim, S., & Seong, Park (under review). Understanding the effects of lifestyles and routine activities on high risk and zero-inflation in physical and non-physical peer victimization: Zero-inflated negative binomial analysis of national crime victimization.

Cho, S., Glassner, S., & Lee, J.M. (under review). Examining the effects of low self-control and parental attachment on changes in bullying perpetration over time: A latent curve analysis of a sample of South Korean youth.

Lee, Y. H., & **Cho, S.** (under review). The mixed impact of deterrence, police effectiveness, and police legitimacy on public support for policing in South Korea: Assessing Tyler's process-based model of regulation.

Cho, S., & Lee, Y. H. (under review). Integrating self-control and general strain theories to specify pathways of delinquency among Korean adolescents: Conditioning influences of

delinquent peer association trajectories in a latent class growth analysis.

Cho, S., & Deryol. R. (under review). Examining the impacts of low self-control and online lifestyles on cyberbullying perpetration among Korean adolescents: Using parallel process latent growth curve modeling.

Cho, S., & Lee., J. (under review). Joint growth trajectories of bullying victimization and perpetration in Korean youth and relations with low self-control and opportunity covariates: Estimating a growth mixture model.

Cho, S., & Galehan, J. (under review). Impacts of parenting practices, self-control, and cyber risky lifestyles on cyberbullying: Assessing time-lagged, time-concurrent, and time-ordered risk heterogeneity and state dependence.

Lee, Y. H., & Cho, S. (under review). A multidimensional model of public perceptions of police legitimacy: Assessing latent class analysis.

Lee, Y. H., & Cho, S. (under review). Creating Crime Solving Style of Law Enforcement Agencies Using Latent Class Analysis of Nationwide Sample: A New Approach to Police Criminal Investigation Goals.

Cho, S., & Lee., J. R. (under review). Joint Growth Trajectories of Bullying Perpetration and Victimization among Korean Adolescents: Estimating a Second-order Growth Mixture Model-Factor-of-Curves with Low Self-control and Opportunity Correlates.

Cho, S. (under review): Low self-control and opportunity in developmental trajectories of delinquent peer associations for bullying victims during adolescence: Estimating a latent class growth analysis.

Cho, S. (under review): A life-course view of cyberbullying developmental trajectories among Korean adolescents: A latent class growth analysis approach.

PROFESSIONAL CONFERENCE PRESENTATIONS

Cho, S. (2018). Victims of road rage: A view from opportunity theory. Paper-discussion at the 2018 Annual Meeting of Korean Criminological Association, Seoul, Republic of Korea, Dec 19 (Invited).

Cho, S. (2018). Time-invariant low self-control and time-varying risky cyber-lifestyles during early adolescence on initiation and developmental pathways of cyberbullying during adolescence: Discrete-time survival mixture analysis. Paper to be presented at the 2018 Annual Meeting of American Society of Criminology (ASC), Atlanta, GA, November 14-17.

Earl, K., Lee, J., & Cho, S. (2018). Diagnosis of cyber and non-physical bullying victimization: A routine activities approach to constructing effective preventative measures Paper to be

presented at the 2018 Annual Meeting of American Society of Criminology (ASC), Atlanta, GA, November 14-17.

Cho, S., & Glassner, S (2018). Impacts of low self-control and cyber risky lifestyles on cyberbullying developmental trajectories: Estimating parallel latent growth curve and growth mixture modeling approaches. Paper to be presented at the 2018 Annual Meeting of American Society of Criminology (ASC), Atlanta, GA, November 14-17.

Cho, S., & Choi, M., (2018). The mediating effect of negative emotions between bullying victimization and cyber delinquency: Assessing longitudinal mediation and autoregressive cross-lagged models. Paper to be presented at the 2018 Annual Meeting of American Society of Criminology (ASC), Atlanta, GA, November 14-17.

Cho, S., & Lee, H. (2018). Cyberbullying and cyber-victimization experienced by African American adolescents: Applying the Social-Ecological framework. Paper to be presented at the 2018 Annual Meeting of American Society of Criminology (ASC), Atlanta, GA, November 14-17.

Cho, S., & Norman, L. (2018). The mediating effect of social controls on marijuana use among adolescent bullies, victims, and bully-victims. Paper to be presented at the 2018 Annual Meeting of Society for the Study of Social Problems (SSSP), Philadelphia, PA, August 10-12.

Cho, S. (2018). Gender differences in self-control and strain on delinquency: Conditioning influences of delinquent peer association trajectories in growth mixture modeling. Dongguk University, Korean Criminological Association, Seoul, Republic of Korea, June 8 (Invited).

Cho, S. (2018). College women victimization. Mokwon University, Daejeon, Republic of Korea, May 31 (Invited).

Cho, S. (2018). Gender Differences in the social context of juvenile delinquency: A study of developmental trajectories of risky lifestyles in latent class growth analysis and growth mixture modeling. Pusan National University, Korean Statistical Society, Pusan, Republic of Korea, May 26 (Invited).

Cho, S. (2017). The mediating effect of social controls on delinquency among adolescent victims of bullying: Mediation, cross-lagged, and latent growth analyses in panel designs of longitudinal data. Paper to be presented at the 2017 Annual Meeting of American Society of Criminology (ASC), Philadelphia, PA, November 15-18.

Cho, S., & Kim, H. (2017). A mediating effect of negative affective states on the link between negative life experiences and suicidal ideation: Longitudinal mediation models calculating the product of coefficients in comparison with the causal steps approach.

Paper to be presented at the 2017 Annual Meeting of American Society of Criminology (ASC), Philadelphia, PA, November 15-18.

Cho, S. (2017). Stability and change in developmental trajectories of bullying victimization: Latent growth curve modeling/latent class analysis. Dongguk University, School of Police Administration, Seoul, Republic of Korea, June (Invited).

Cho, S. (2017). College women victimization. Chung-nam National University, Dae-jeon, Republic of Korea, June (Invited).

Cho, S. (2017). Cyberbullying perpetration and victimization among African American adolescents: An examination of the individual and contextual level correlates. Paper to be presented at the World 2017 Anti-bullying Forum, Stockholm, Sweden, May 7-9.

Cho, S., Glassner, S. & Kim, S. (2017). Understanding the effects of lifestyles and routine activities on high risk and zero-inflation in physical and non-physical peer victimization: Zero-inflated negative binomial analysis of national crime victimization. Paper to be presented at the 2017 Annual Meeting of Academy of Criminal Justice Sciences (ACJS), Kansas City, MO, March 21-25.

Cho, S., & Kim, S. (2017). Self-control and risky lifestyles in context: Cross-level integration between opportunity and collective efficacy in the study of peer victimization among South Korean youths. Paper to be presented at the 2017 Annual Meeting of Academy of Criminal Justice Sciences (ACJS), Kansas City, MO, March 21-25.

Cho, S. (2016). Situational crime prevention: Environmental Criminology. Presentation at the 2016 the Society for Forensic and Investigative Science, Kyung-buk University, Dae-gu, Republic of Korea, (Invited).

Cho, S., & Kim, S. (2016). The link between juvenile offending and victimization: Sources of change over time in bullying victimization risk among South Korean adolescents. Paper to be presented at the 2016 Annual Meeting of American Society of Criminology (ASC), New Orleans, LA, November 16-19.

Cho, S. (2016). Longitudinal Studies-Latent Growth Curve Model. Sungkyunkwan University, Department of Social Welfare, Seoul, Republic of Korea (Invited).

Cho, S. (2016). The relationship between offending and victimization: causal effect, reciprocal effect, or developmental change? Paper to be presented at the 2016 Annual Meeting of European Society of Criminology, Muenster, Germany, September 21-24.

Cho, S. (2016). The impact of low self-control and delinquent peer associations on bullying perpetration and victimization among South Korean adolescents. Paper to be presented at the 2016 Annual Conference of Academy of Criminal Justice Sciences (ACJS), Denver, CO, March 29-April 2.

Cho, S. (2015). A Multi-level of juvenile delinquency and victimization: Integration between individual trait and opportunity theories. Paper to be presented at the 2015 Annual Meeting of American Society of Criminology (ASC), Washington, DC, November 18-21.

Cho, S. (2014). Direct and indirect effect of low self-control on school victimization in South Korea. Paper to be presented at the 2014 Annual Meeting of American Society of Criminology (ASC), San Francisco, CA, November 19-22.

Cho, S. (2013). Direct and indirect effect of low self-control on school victimization in South Korea. Paper to be presented at the 2013 Annual Meeting of American Society of Criminology (ASC), Atlanta, GA, November 20-23.

Cho, S. (2012). Lifestyle-routine activities on cyber victimization (online fraud, online harassment, sexual solicitation, cyberstalking): A divergence in time and space?. Paper to be presented at the 2012 the Society for Forensic and Investigative Science, Gunsan, Republic of Korea, (Invited).

Cho, S. (2012). Routine Activities and Violent Victimization among Juveniles in South Korea. Paper to be presented at the 2012 Annual Meeting of American Society of Criminology (ASC), Chicago, IL, November 14-17.

Park, S. M., & **Cho, S.** (2011). Zero-Inflated Effect on Crime Concentration. Paper to be presented at the 2011 Annual Meeting of Academy of Criminal Justice Sciences (ACJS), Toronto, Ontario Canada, March 21-25.

TEACHING EXPERIENCE
Assistant Professor

Southern Illinois University Carbondale
Courses Taught:

Juvenile Delinquency (Undergraduate level)
Victims of Crime (Undergraduate level)
White-collar Crime (Undergraduate level)
Advanced Statistics Multivariate Regression (Graduate level)

Delta State University
Courses Taught:

Criminology (Undergraduate & Graduate level)
Intro Criminal Justice Policy and Practice (Undergraduate level)
Cyber Crime (Undergraduate & Graduate level)
Victimology (Undergraduate & Graduate level)
Juvenile Delinquency (Undergraduate level)
Applied Crime Prevention (Undergraduate & Graduate level)

Race, Crime, and the Law (Undergraduate & Graduate level)
Historical Analysis of American Criminal Justice System in the U.S. (Graduate level)
Professional and Institutional Ethics (Graduate level)
Organization and Philosophy of Criminal Justice (Graduate level)

SERVICE TO DEPARTMENT/UNIVERSITY

2018-present	Graduate Committee in the Department of Criminology and Criminal Justice. Southern Illinois University Carbondale.
2017-2018	Undergraduate Committee in the Department of Criminology and Criminal Justice. Southern Illinois University Carbondale.
2015-2016	Graduate Program Coordinator, Master of Science in Social Justice and Criminology, Delta State University.
2015-2016	Chair, Academic Map, Social Justice and Criminology, Delta State University.
2015-2016	Comprehensive Exam Committee Chair, Master of Science in Social Justice and Criminology, Delta State University.
2015-2016	Thesis Committee Member, Master of Science in Social Justice and Criminology, Delta State University.
2016	Department Chair Search Committee Member, Division of Social Sciences and History, Delta State University.
2016	Search Committee Member, Social Justice and Criminology, Division of Social Sciences and History, Delta State University.
2015	Search Committee Member, History, Division of Social Sciences and History, Delta State University.
2015	Gender Studies Group Member, Delta State University.

RESEARCH FUNDING

Internal (University)

2016	Kent/Janice Wyatt Faculty Development Fund, Delta State University.
2016	Faculty Research & Grant Writing Fund, Delta State University.
2016	Dulce Faculty Development Research Fund, Delta State University.
2016	Bryce Griffis President's Endowment Fund, Delta State University.

2015   Kent/Janice Wyatt Faculty Development Fund, Delta State University.

2015   Dulce Faculty Development Research Fund, Delta State University.

ACADEMIC HONORS & AWARDS

2010-2014   Graduate School Scholarship, University of Cincinnati.

2014   Department of Criminal Justice, Grant to attend the Inter-University Consortium for Political Social Research Summer Program and Social Research Summer Program in Quantitative Methods for Social Research, Structural Equation Modeling with Stata, University of Cincinnati.

2012   Department of Criminal Justice, Grant to attend the Statistical Research Summer Program in Quantitative Methods for Social Research, Structural Equation Modeling with Amos/ M-plus, University of Cincinnati.

PROFESSIONAL AWARDS & HONORS

2007   Superintendent General Citation, Presidential Police Security Corps.

2007   Chief Superintendent General Citation, Seoul Metropolitan Police Agency.

2007   Superintendent General Citation, Presidential Police Security Corps.

2006   Victory Medal, Asia-Pacific Economic Cooperation (APEC).

2005   Victory Medal, Korean National Police Agency.

2004   Commissioner General Citation, Korean National Police Agency.

2003   Chief Superintendent General Citation, Seoul Metropolitan Police Agency.

2003   Superintendent General Citation, Presidential Police Security Corps.

2000   Victory Medal, Asia-Europe Meeting (ASEM).

2000   Superintendent General Citation, National Central Police Academy.

PROFESSIONAL CERTIFICATES

2018   Certificate of Survival Analysis with SAS.

2018   Certificate of Survival Analysis and Event History Models with M-plus.

2018   Certificate of External Grant Research Proposal Writing and Designing.

2017   Certificate of Applied Latent Class Modeling with M-plus.

2016   Certificate of External Grant Research Proposal Writing and Designing.

2015   Certificate of Latent Growth Curve Modeling with Amos and M-plus.

2014	Certificate of Structural Equation Modeling with Stata.
2012	Certificate of Structural Equation Modeling with Amos and M-plus.
2005	Certificate of Police Arrest Tactics.
2003	Korean Drug and Criminal Counselor.
2000	Hapkido, Second-Degree Black Belt.
2000	Teacher's license in German language and literature.

PROFESSIONAL ACTIVITIES

2018	Statistical Methods Seminar for Survival Analysis with SAS, Philadelphia, PA.
2018	Statistical Methods Seminar for Survival Analysis and Event History models in Mplus, Atlanta, GA.
2018	Professional Grant Development Workshop, Southern Illinois University, Carbondale, IL.
2017	Statistical Methods Seminar for Applied Latent Class Analysis, Atlanta, GA.
2016	External Grant Research Proposal Workshop, Tufts University, Boston, MA.
2015	Statistical Research Winter Program in Quantitative Methods for Social Research, Latent Growth Curve Modeling with Amos/ M-plus, Seoul, Republic of Korea.
2014	ICPSR Summer Program in Quantitative Methods for Social Research, Structural Equation Modeling with Stata, University of Michigan, Ann arbor, MI.
2012	Statistical Research Summer Program in Quantitative Methods for Social Research, Structural Equation Modeling with Amos/ M-plus, Seoul, Republic of Korea.
2007	0.38" gun shooting match, Seoul Metropolitan Police Agency, Republic of Korea.
2005	Security service for the President and First Lady of the Republic of Korea during the 2nd APEC, Republic of Korea.
2005	Produce and distribute a movie "An introduction and operation of a metal detector and an X-ray detector" to universities in the Republic of Korea.
2002	Security service for the President and First Lady of the Republic of Korea during 2002 FIFA Korea-Japan World Cup, Republic of Korea.
2001	Security screening and counterterrorism special course, Korea Aviation Security Academy in the Incheon international airport, Republic of Korea.

2000   Security service for the President and First Lady of the Republic of Korea during the 3rd ASEM, Republic of Korea.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

2018-present   Editorial board member, Journal of Criminology and Forensic Studies.

2018-present Program Committee Chair, Korean Society of Criminology in America.

2014-2017   Treasurer, Korean Society of Criminology in America.

2010-present American Society of Criminology (ASC), U.S.A.

2010-present   Academy of Criminal Justice Sciences (ACJS), U.S.A.

2015-present   European Society of Criminology (ESC), Europe.

2015-present   Asian Criminology Society (ACS), Asia.

2010-present   Korean Society of Criminology in America (KSCA), U.S.A.

2010-present   Korean Criminological Association (KCA), Republic of Korea.

PEER REVIEW ACTIVITIES

Journal Reviewer
2018-present   *International Journal of Offender Therapy and Comparative Criminology*
                        International Journal of Law Crime and Justice
                        Journal of Adolescence
                        Violence and Victims
2016-present   *Injury Epidemiology*
2015-present   *Journal of School Violence*

Book Reviewer
2018-present   *Routledge*
                        Sage

SKILLS

Statistical Skills:
Bayesian Analysis (Monte Carlo/ Markov Chain Monte Carlo)
Growth Mixture Modeling (GMM)
Latent Class Growth Analysis (LCGA)
Latent Growth Curve Modeling (LGCM)
Latent Class Analysis (LCA)

Survival Analysis (Cox and Kaplan-Meier)
General Linear Model (GLM)
Hierarchical Linear Model (HLM)
Structural Equation Modeling (SEM)
Mixture Modeling with Cross-Sectional Data/Longitudinal Data
Multilevel Modeling with Complex Survey Data
Multilevel Mixture Modeling
Missing Data Modeling and Bayesian Analysis
Monte Carlo Simulation Studies

<u>Design and Analysis</u>:
Experiments with Blocking Factors
Factorial Experiments
Two-Level Factorial Designs
Blocking and Confounding Systems for Two-Level Factorials
Two-Level Fractional Factorial Designs
Response Surface Methodology
Robust Design
Experiments with Nested Factors and Hard-to-Change Factors.

<u>GIS and Spatial Analysis (GISSA)</u>:
GIS Modeling and Environmental Applications
GIS Urban-Economic Applications
Internet Mapping & Web GIS
Computer Analytical Cartography

<u>Computer Skills</u>
Quantitative Research Programs: M-Plus, SAS, SPSS, STATA, AMOS, HLM, R, and
WinBUGS

Spatial Analysis Program: ArcGIS.