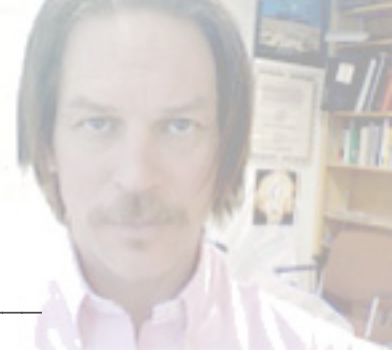


# Rory Lewis, PhD, JD



Assistant Professor  
Department of Computer Science  
University of Colorado at Colorado Springs

## Education

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PhD. Computer Science: Information Technology  
*University North Carolina at Charlotte. '08*

Jurist Doctor in Law: With LT&M (MBA)  
*Syracuse University College of Law. '96*

Bachelor of Science: Computer & Electrical Engineering  
*Syracuse University. '93*

## Biography

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- *Employed:* [Computer Science Department at the University of Colorado at Colorado Springs](#).
- *Research:* Knowledge Discovery in Databases (KDD), Music Information Retrieval (MIR), Neuroendocrinology.
- *Lecturer:* Computer & Electrical Engineering, Computer Science and MBA Schools. Currently teaching C#, C++, ASP.Net, iPhone Apps (COCOA) and SQL to Engineering/Computer Science students while also teaching eCommerce, Networks, Security and .NET to MBA classes.
- *2003 - 2008:* Worked under the guidance of [Dr. Zbigniew Raś](#) in Knowledge Discovery in Databases Algorithms, Ontologies Computational Mathematics and Music Information Retrieval (MIR).
- *1996 - 2003:* Worked as an Associate VLSI legal litigation analyst on the *AMD vs. Intel* case at both [Fullbright & Jaworski](#) in Austin and [Skjervan Morrill](#) in San Francisco where he also worked in Venture Capital Teams performing due-diligence analysis for boot strapping, IPOs and secondary markets.
- *1996:* Graduated with [Jurist Doctorate](#) in Law and an LT&M ([Law Technology and Management](#)) in high Tech Business Management from Syracuse University.
- *1993:* Graduated with a Bachelor of Science in [Computer and Electrical Engineering](#) from Syracuse University.

## Research

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Blind Signal Separation, Bayesian Networks, Intelligent Information Systems, Knowledge Discovery and Data Mining, Fourier Transforms, Action Rules, Granular Computing, Theoretical Artificial Intelligence, Neuro Endocrinology & VLSI. Creating a VLSI, synthetic – artificial hypothalamus to which we design the system upon and test the system against. The focus of these tests will be to create an Intelligent Agent that uses Knowledge Discovery to learn rules to manipulate and control the hormones released from the hypothalamus.

## Editorial Activity

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- Reviewer for ISMIS - International Symposium on Methodologies for Intelligent Systems, IIS - Intelligent Information Systems, MCD - Mining Complex Data.
- Reviewer for The Journal of Intelligent Systems Conferences and the Fundamental Information Journal.
- Reviewer for The 2nd Asian Conference on Intelligent Information and Database Systems 24 - 26 March 2010, Hue City, Vietnam

## Published Work

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### Conferences

“[Knowledge Discovery Associations in Hypothalamic Clustering](#)”, Rory Lewis, The First International Workshop on Interesting Knowledge Mining (IKM 09) Seoul, South Korea, August 25~27, 2009 (will Appear)

“[Blind Music Timbre Source Isolation by Multi-resolution Comparison of Spectrum Signatures](#)”, Xin Zhang , Wenxin Jiang, Rory Lewis, The First International Workshop on Interesting Knowledge Mining (IKM 09) Seoul, South Korea, August 25~27, 2009 (will Appear)

“[Music Industry Scalar Analysis Using Unsupervised Fourier Feature Selection](#)”,Rory Lewis<sup>1</sup>, Jugal Kalita<sup>1</sup>, Sauravjyoti Sarmah, and Dhruva Bhattacharyya, Joint venture of the 17th International Conference Intelligent Information Systems (IIS) and the 24th International Conference on Artificial Intelligence (AI) Kraków, Poland, June 15-18, 2009, will appear.

“[Mining Chordal Semantics in a Non-Tagged Music Industry Database](#)”, Rory Lewis, Amanda Cohen, Wenxin Jiang, and Zbigniew Ras, A. Cohen, W. Jiang, Z.W. Ras, Joint venture of the 17th International Conference Intelligent Information Systems (IIS) and the 24th International Conference on Artificial Intelligence (AI) Kraków, Poland, June 15-18, 2009, will appear.

“[Hierarchical Tree for Dissemination of Polyphonic Noise](#)”, R. Lewis, A. Cohen, W. Jiang, Z.W. Ras, in “Conference on Rough Sets and Current Trends in Computing”, Proceedings the Sixth International Conference on Rough Sets and Current Trends in Computing (RSCTC 2008) Akron, Ohio, USA,

“[Mining Scalar Representations in a Non-Tagged Music Database](#)”, R. Lewis, W. Jiang, Z.W. Ras, in “Foundations of Intelligent Systems”, Proceedings of ISMIS’08, An et al. (Eds.), Toronto, Canada, LNAI, Vol. 4994, Springer, 2008, 445-454

“[Categorization of Musical Instrument Sounds Based on Numerical Parameters.](#)” Lewis, R., Wierzchowska, A, in “Conceptual Structures: Knowledge Architectures for Smart Applications”, 15th International Conference on Conceptual Structures, ICCS 2007, Sheffield, UK. , July 22-27, Springer Berlin / Heidelberg, Vol. 4604, 4585 784-792. 2007.

“[MIRAI: Multi-hierarchical, FS-tree based Music Information Retrieval System.](#)” Z.W. Raś, X. Zhang, Lewis, R., in “Proceedings of RSEISP 2007”, June 28-30, in Warsaw, Poland, LNAI, Springer. 2007.

“[Rules for Processing and Manipulating Scalar Music Theory.](#)” Lewis, R., Z.W. Raś, in “Proceedings of the IEEE CS International Conference on Multimedia and Ubiquitous Engineering (MUE 2007)”, in Seoul, Korea, April 26-28, 2007.

“[Multi-way Hierarchic Classification of Musical Instrument Sounds.](#)” A. Wierzchowska, Z.W. Raś, X. Zhang, Lewis, R.,in “Proceedings of the IEEE CS International Conference on Multimedia and Ubiquitous Engineering (MUE 2007)”, in Seoul, Korea, April 26-28, 2007.

“[Blind Signal Separation of Similar Pitches and Instruments in a Noisy Polyphonic Domain.](#)” R. Lewis, X. Zhang, Z.W. Raś, in “Foundations of Intelligent Systems”, Proceedings of ISMIS’06, F. Esposito et al. (Eds.), 228-237 Bari, Italy, LNAI, No. 4203, Springer, 2006.

“[Knowledge Discovery Based Identification of Musical Pitches and Instruments in Polyphonic Sounds.](#)” Lewis, R., Zhang, X., Raś, Z.W., International Journal of Engineering Applications of Artificial Intelligence, Elsevier, 2006.

“Creating Reliable Database for Experiments on Extracting Emotions from Music.” A. Wiczorkowska, P. Synak, R.A. Lewis, Z.W. Raś, in Intelligent Information Processing and Web Mining, Advances in Soft Computing, Proceedings of the IIS’2005 Symposium, 395-404, Gdansk, Poland, Springer, 2005.

“Extracting Emotions from Music Data.” A. Wiczorkowska, P. Synak, R. Lewis, Z.W. Raś, in “Foundations of Intelligent Systems”, Proceedings of ISMIS’05, M. S. Hacid et al. (Eds.), Saratoga Springs, New York, LNAI, No. 3488, 456-465, Springer, 2005.

“New Methodology of Facial Recognition, Part II.” R. A. Lewis , Z. W. Raś, in Intelligent Information Processing and Web Mining, Advances in Soft Computing, Proceedings of the IIS’2005 Symposium, Gdansk, Poland, Springer-Verlag, 2005.

“New Methodology of Facial Recognition, Part I.” R. A. Lewis , Z. W. Raś, in Intelligent Information Processing and Web Mining, Advances in Soft Computing, Proceedings of the IIS’2005 Symposium, Gdansk, Poland, Springer-Verlag, 2005.

### Journals

“Knowledge Discovery Based Identification of Musical Pitches and Instruments in Polyphonic Sounds.” Lewis, R., Zhang, X., Raś, Z. W., International Journal of Engineering Applications of Artificial Intelligence, Elsevier, 2006.

### Encyclopedias

“Facial recognition”, R. Lewis, Z.W. Ras, in “Encyclopedia of Data Warehousing and Mining - 2nd Edition”, John Wang (Ed.), Idea Group, Inc, 2008, will appear

### Program Committee Memberships

IEEE ICDM International Workshop on mining complex data (MCD 2008) in Pisa, Italy 15th - 19th Dec. 2008

18th International Symposium on Methodologies for Intelligent Systems (ISMIS 2009) in Prague, Czech Republic, Sept. 2009

The Journal of Intelligent Systems Conferences and the Fundamental Information Journal.

2nd Asian Conference on Intelligent Information and Database Systems 24 - 26 March 2010, Hue City, Vietnam

### Presentations

Proceedings of 17th International Conference Intelligent Information Systems (IIS) and the 24th International Conference on Artificial Intelligence (AI) Kraków, Poland, June 15-18, 2009. “Music Industry Scalar Analysis Using Unsupervised Fourier Feature Selection”

Proceedings of 17th International Conference Intelligent Information Systems (IIS) and the 24th International Conference on Artificial Intelligence (AI) Kraków, Poland, June 15-18, 2009. “Mining Chordal Semantics in a Non-Tagged Music Industry Database

Proceedings of ISMIS’08 Symposium, Toronto, Canada, LNAI, Foundations of Intelligent Systems 2008 “Mining Scalar Representations in a Non-Tagged Music Database.”

Proceedings of ISMIS’06, F. Esposito et al. (Eds.), 228-237 Bari, Italy, LNAI, 2006. “Blind Signal Separation of Similar Pitches and Instruments in a Noisy Polyphonic Domain.”

Proceedings of ISMIS’05, M. S. Hacid et al. (Eds.), Saratoga Springs, New York, LNAI, No. 3488, 456-465, Springer, 2005. “Extracting Emotions from Music Data.”

Proceedings of the IIS’2005 Symposium, Gdansk, Poland, Springer-Verlag, 2005. “New Methodology

of Facial Recognition, Part II.”

Proceedings of the IIS'2005 Symposium, Gdansk, Poland, Springer-Verlag, 2005. “New Methodology of Facial Recognition, Part I.”

## Courses Recently Taught

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### **Computer Science Courses:**

Objective C, iPhone Applications in COCOA. Java Programming, .NET Programming, SQL Server. Database Concepts, C++ Object-Orientated Programming, Internet-Oriented Programming, Database Apps in eCommerce, Decision Support / Expert Systems, Networking Concepts & Apps, Database Security / SEO, Logic and Design (Java & C# in .NET), Computer Logic Laboratory

### **MBA Courses**

Statistics for Decision Making, Managerial Mathematics, Business & Technology, eCommerce SQL and .ASP in .NET, Database Essentials For Decision Making, Business Law, Managing Information Technology, Principles of Information Security & Privacy, Information Security Law, Systems Analysis Planning & Control, Strategic Management of Technology, Business Ethics

## Professional Experience

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**Pulte Fortune 500:** Senior Executive Consultant: Developed, negotiated and implemented nationwide C++, java, .ASP application to interact accounts payables servers with scheduling, field personnel and field servers. *Charlotte, NC 2000- 2001*

**Global Crossings Fortune 500:** Senior Government Liaison: Conducted, prepared and scheduled meetings interacting VI Gov. officials with SAP, SAS, Cisco and IBM/Apache Server Executives. Drafted contracts and amendments. Prepped Government on the technology and set financial transfer protocol. *St. Thomas, VI, 1999 - 2000*

**Baikowski.** Private Executive Contractor: Worked with CEO, Floyd McClung: Technical advisor in litigation with France-based affiliate. Slurry technology for VLSI fabrication post litigation options / \$; and present value of IP. Secured contract for Venture Capital in a secondary market as part of settlement procedures. *Charlotte, NC 1998 - 1998*

**Dougherty & Dremann LLP** Associate: Law Firm: Set up eCommerce s-corps, off-shore enterprises, SAS and SAP eCommerce ERPs. Worked with programmers patenting and copyrighting eProms, VLSI, Java, C/C++ programs into patentable mathematical algorithms. Advised clients on emerging technologies. *Charlotte, NC 1996 - 1998*

**Skjervan Morrill MacPherson Friel LLP** Law School: Legal Counsel: Continuation of AMD v. Intel Litigation: Microprocessor electrical circuit analysis for senior partners in microprocessor litigation. Member of Venture Capital team: Duties included financial modelling for high tech computer intellectual property. Evaluation of investment opportunities. Financial analysis reports and identification of high tech of risks and opportunities. *San Francisco, CA 1995 - 1995*

**Fulbright & Jaworski LLP** Law School: Legal Counsel: AMD vs Intel: High Tech Litigation. Patent rejections involving microprocessor electrical circuits and electronics. email security. Domain Squating and Black Hat seo litigation. Devised deposition strategy to prove Intel engineers stole mi-

croprocessor electrical engineering Intellectual Property. *Austin, TX 1994 - 1994*

## Teaching Experience

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### University of Colorado at Colorado Springs

Department of Computer Science  
*Colorado Springs, CO 2008 - Present*

### Catawba College

Private Liberal Arts College  
*Charlotte, NC 2007 - 2008*

### University North Carolina at Charlotte

School of Electrical & Computer Engineering  
*Charlotte, NC 2003 - 2008*

### University North Carolina at Charlotte

Business School  
*Charlotte, NC 2007 - 2008*

### Keller Graduate School of Management

Executive MBA College  
*Charlotte, NC 2002 - 2008*

### Providence High School

High School Math Teacher  
*Charlotte, NC 2001 - 2002*

## Military

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2<sup>nd</sup> Lt. Paratrooper in South African Army. Special Forces. 14 Combat Missions; Angolan Cuban War 78' - 81'

## Personal

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Married with two adult daughters. Enjoy training & racing as a Cat-2-level Licensed USCF cyclist. I also run two marathons each year - Grandfather Mountain and Kiawah Island. Vegetarian. Love teaching, challenging and expanding the minds of students to embrace new perspectives.

## Contact Information

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## References

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