

RORY A. LEWIS

Assistant Professor, University of Colorado at Colorado Springs
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PROFESSIONAL PREPARATION

<u>College/University</u>	<u>Major</u>	<u>Degree</u>	<u>Year</u>
Syracuse University	Computer & Electrical Engineering	B.S.	1993
Syracuse University College of Law	Law	J.D.	1996
University North Carolina at Charlotte	Computer Science	Ph.D.	2008

B. ACADEMIC/PROFESSIONAL APPOINTMENTS

2009 -present	Adjunct Professor, UC Denver, Anschutz Medical Campus, CO.
2008 -present	Assistant Professor, University of Colorado at Colorado Springs, CO.
2007 - 2008	Lecturer, Catawba College, NC.
2006 - 2008	Lecturer, University of North Carolina at Charlotte, Business School, NC.
2003 - 2008	Lecturer, University of North Carolina at Charlotte, Engineering School, NC.
2001 - 2002	High School Math Teacher, Providence High School, NC.

C. PEER-REVIEW PUBLICATIONS

25. R. Lewis and A. Waziri. MinedICE: A Knowledge Discovery Platform For Neurophysiological Artificial Intelligence. In Proceedings of the 19th International Symposium on Methodologies for Intelligent Systems, ISMIS, will appear, 2011. [PDF](#)
24. R. Lewis, B. Parks, D. Shmueli, and A. M. White. Detecting Epileptogenesis in Power Variant Domains. M. Klopotek. *Journal of Control and Cybernetics*, Eds. M. Klopotek, Alexander Ioffe, Kazimierz Malanowski and Fredi Troeltzsch, will appear, 2011. [PDF](#)
23. R. Lewis and A. M. White. [Multimodal Spectral Analysis and Discrete Finite Automata for Detecting Seizures](#). *Intelligent Agent Technology*, in Proceedings of the IEEE/WIC/ACM International Joint Conference on Web Intelligence (WI10) and Intelligent Agent Technology (IAT10, Toronto, Canada): will appear, August 31 - Sept 3 2010. [PDF](#)
22. R. Lewis, B. Parks, and A. M. White. [Determination of Epileptic Seizure Onset From EEG Data Using Spectral Analysis and Discrete Finite Automata](#). in *Proceedings of the 2010 IEEE International Conference on Granular Computing, Silicon Valley, 277-282*, August 14–16 2010. [PDF](#)
21. R. Lewis, B. Parks, D. Shmueli, and A. M. White. [Deterministic Finite Automata in the Detection of Epileptogenesis in a Noisy Domain](#). *International Conference Intelligent Information Systems (IIS)*, in Proceedings of the Joint venture of the 18th International Conference Intelligent Information Systems (IIS) and the 25th International Conference on Matricidal Intelligence, Siedlce, Poland: 207–218, June 8-10 2010. [PDF](#)
20. X. Zhang, W. Jiang, Z. Ras, and R. Lewis. [Blind Music Timbre Source Isolation by Multi-Resolution Comparison of Spectrum Signatures](#). *Rough Sets and Current Trends in Computing (RSCTC) 2010*, in Proceedings of the Seventh International Conference on RSCTC, Warsaw, Poland, M. Szezula et al. (EDs) RSCTC 2010, LNAI 6068, Springer: 610–619, 2010. [PDF](#)
19. R. Lewis and A. M. White. [Seizure Detection Using Sequential and Coincident Power Spectra with Deterministic Finite Automata](#). *International Conference on Bioinformatics and Computational Biology*, in Proceedings of Bioinformatics and Computational Biology (BIOCOMP) 2010, Las Vegas Nevada, Volume II: 481–488, July 12-15 200. [PDF](#)
18. R. Lewis, D. Shmueli, and A. M. White. [Deterministic Finite Automata in the Detection of Eeg Spikes and Seizures](#). in *Proceedings of The Joint Venture of the The Ninth International Symposium on Intelligent Data Analysis (IDA), Tuscon, Arizona: 103–113*, May, 9-21 2010. [PDF](#)
17. T. E. Boulton, A. T. Chamillard, R. Lewis, N. Polok, G. Stock, D. Wortman "Innovations in University Education in Innovation: Moving Beyond the B.S." *Journal of Innovation Science*, Vol 1, Num. 4, pp 167-178, Feb. 2010. [PDF](#)

16. R. Lewis, J. Kalita, S. Sarmah, and D. Bhattacharyya. [Music Industry Scalar Analysis Using Unsupervised Fourier Feature Selection](#). Recent Advances in Intelligent Information Systems, Academic Publishing House EXIT, in Proceedings of IIS'09. Krakow, Poland, 562–571, June 15-18 2009. [PDF](#)
15. R. Lewis, A. Cohen, W. Jiang, and Z. Ras. [Mining Chordal Semantics in a Non-Tagged Music Industry Database](#). Recent Advances in Intelligent Information Systems, Academic Publishing House EXIT, in Proceedings of IIS'09. Krakow, Poland: 473–483, June 15-18 2009. [PDF](#)
14. R. Lewis, A. Cohen, W. Jiang, and Z. Ras. [Hierarchical Tree for Dissemination of Polyphonic Noise](#). *Rough Sets and Current Trends in Computing*, in Proceedings of the 6th International Conference on RSCTC '08, Akron, OH, Springer-Verlag, Berlin, Heidelberg: 448–456, 2008. [PDF](#)
13. Rory A. Lewis, Alicja Wierzchowska. [Parameter-Based Categorization for Musical Instrument Retrieval](#). In Marzena Kryszkiewicz, James F. Peters, Henryk Rybinski, Andrzej Skowron, editors, *Rough Sets and Intelligent Systems Paradigms*, International Conference, RSEISP 2007, Warsaw, Poland, June 28-30, 2007, Proceedings. Volume 4585 of Lecture Notes in Computer Science, pages 784-792, Springer, 2007. [PDF](#)
12. R. Lewis, W. Jiang, and Z. Ras. [Mining Scalar Representations in a Non-Tagged Music Database](#). *Foundations of Intelligent Systems*, in Proceedings of ISMIS'08 Symposium, Toronto, Canada, LNAI, Springer: 819–824, 2007. [PDF](#)
11. R. A. Lewis and A. Wierzchowska. [Categorization of Musical Instrument Sounds Based on Numerical Parameters](#). *Conceptual Structures: Knowledge Architectures for Smart Applications*, in Proceedings of RSEISP LNAI, 15th International Conference on Conceptual Structures, ICCS 2007, Section 3, 87-93, 2007. [PDF](#)
10. R. Lewis, X. Zhang, and Z. Ras. [Mirai: Multi-hierarchical FS-Tree Based Music Information Retrieval System](#). (*Invited Paper*) *LNAI Springer*, in Proceedings of RSEISP 2007, in Warsaw Poland:28–30, June 2007. [PDF](#)
9. R. Lewis and Z. Ras. [Rules for Processing and Manipulating Scalar Music Theory](#). *IEEE Computer Society April 26-28 MUE 2007 in Seoul Korea*, in Proceedings of the International Conference on Multimedia and Ubiquitous Engineering: 819–824, 2007. [PDF](#)
8. R. Lewis R., Z. Ras: [Facial recognition](#), Idea Group, Inc, 2008, John Wang (Ed.): Encyclopedia of Data Warehousing and Mining - 2nd Edition, Vol. II, pp. 857-862, 2008. [PDF](#)
7. A. Wierzchowska, Z. Ras, X. Zhang, and R. Lewis. [Multi-Way Hierarchic Classification of Musical Instrument Sounds](#). *Multimedia and Ubiquitous Engineering (MUE 2007) in Seoul, Korea*, in Proceedings of the IEEE CS International Conference on Multimedia and Ubiquitous Engineering: 897–902, April 26-28 2007. [PDF](#)
6. R. Lewis, X. Zhang, and Z. Ras. [Blind Signal Separation of Similar Pitches and Instruments in a Noisy Polyphonic Domain](#). *Foundations of Intelligent Systems*, Proceedings of ISMIS'06 F. Esposito et al. (Eds.)Bari Italy, LNAI, Springer, No. 4203: 228–237, 2006. [PDF](#)
5. R. Lewis, X. Zhang, and Z. Ras. [Knowledge Discovery Based Identification of Musical Pitches and Instruments in Polyphonic Sounds](#). *International Journal of Engineering Applications of Matricidal Intelligence*, Elsevier ISSN:0952-1976, Volume 20 Issue 5: 637–645, August 2007. [PDF](#)
4. A. Wierzchowska, P. Synak, R. Lewis, and Z. Ras. [Creating Reliable Database for Experiments on Extracting Emotions from Music](#). *Intelligent Information Processing and Web Mining, Advances in Soft Computing*, in Proceedings of the IIS'2005 Symposium, Springer, Gdansk, Poland: 395–404, 2005. [PDF](#)
3. A. Wierzchowska, P. Synak, R. Lewis, and Z. Ras. [Extracting Emotions from Music Data](#). *International Symposium on Methodologies for Intelligent Systems (ISMIS) '05*, in Foundations of Intelligent Systems, M. S. Hacid et al. (Eds.), Saratoga Springs, New York, LNAI, Springer, No. 3488: 456–465, 2005. [PDF](#)
2. R. Lewis and Z. Ras. [New Methodology of Facial Recognition, Part II](#). *Intelligent Information Processing and Web Mining, Advances in Soft Computing, Springer-Verlag*, In Proceedings of the IIS '2005 Symposium, Gdansk, Poland: 625–632, 2005. [PDF](#)
1. R. Lewis and Z. Ras. [New Methodology of Facial Recognition, Part I](#). *Intelligent Information Processing and Web Mining, Advances in Soft Computing, Springer-Verlag*, In Proceedings of the IIS '2005 Symposium, Gdansk, Poland:615–624, 2005. [PDF](#)

D. SYNERGISTIC ACTIVITIES

1. Collaborated since 2008 with 3 neurosurgeons at UC Denver Anschutz Medical. Spend time at Anschutz Campus with grad students data mining signal analysis using tools developed in my PhD thesis that distinguished instruments within noise. This is the basis for that enabled us to 1) predict epilepsy seizures in rats by 6-seconds, and 2) establish identifiers in pigs' brain in neurological states.
2. Worked with Terrance Boulton and 4 undergraduate students on an SBIR wherein we developed an iPhone App that helps addicts cope with their recovery.
3. Recipient of Outstanding Achievement: Inventor of the Year CU. University of Colorado Technology Transfer Office, 2011.
4. Recipient of the "Innovations in Scholarship for Inclusive Excellence" (ISIE) grant. This grant addresses topics of diversity and inclusiveness. UCCS 2009.
5. Published author of an Apress signature series book "*iPhone and iPad Apps for Absolute Beginners*" used in colleges across the US and UK. It is in its 2nd Edition now and available at all the Barnes & Noble's across the US, Canada and UK. Ranked 17th for "Computer Books" on Amazon.

Program Committee Memberships

Journals:

- a. Engr App. of AI, Int. Journal of Intelligent Real-Time Automation (EAAI 2011)
- b. Journal of Convergence IT by the Advanced Institute of Convergence IT Technology (JCIT 2011)
- c. International Journal of Advancements in Computing Technology (IJACT 2010).
- d. The Journal of Intelligent Systems Conferences & Fundamental Information Journal (ISCFI 2009).

Proceedings

- a. IPC/IBR, 2nd Asian Conference on Intelligent Information & Database Systems (ACIIDS 2010).
- b. IEA-AIE, 22nd Intl Conf.e on Industrial, Engineering & Applied Intelligent Sys. (IEA-AIE 2009):
- c. 18th International Symposium on Methodologies for Intelligent Systems (ISMIS 2009).
- d. IEEE ICDM International Workshop on mining complex data (MCD 2008).
- e. 17th International Symposium on Methodologies for Intelligent Systems (ISMIS 2007).
- f. Intelligent Information Systems, MCD - Mining Complex Data (IIS 2006).

Committees

- a. Computer Science Department: Chair: Library Committee.
- b. Computer Science Department: Equipment Purchasing Committee.
- c. Computer Science Department: Graduate Studies Committee.
- d. Conceptualized, presented and started working with EAS Dean to (SEO) Conference to UCCS.

Collaborators And Other Affiliations

Collaborators Over The Last 48 Months:

Allen Waziri	Neurosurgeon / Clinical Researcher, Anschutz
Andrew M. White	Dir. of Pediatric Neurology at Denver's Health Medical Center.
Mark Spitz	Dir. of Adult Epilepsy Div. at U of Colorado School of Medicine.
Zbigniew Raś	Dir. KDD Lab, University of North Carolina.
Andrez Skowron	Mathematics and Computer Science at Warsaw University
J. Kalita	Dept. Computer Science UCCS
S. Sarmah	Jorhat Engineering College, Jorhat, Assam, India.
D. Bhattacharya	Tezpur University, Tezpur, Assam, India.

Graduate and Postdoctoral Advisors

Zbigniew Raś	Dir. KDD Lab, University of North Carolina.
Terrance Boulton	El Pomar Endowed Chair, UCCS

Thesis Advisor and Postgraduate Scholar Sponsors over the Last Five Years:

I am the Master's advisor for Devon Bryant and Benjamin Garcia.

E. RESEARCH SUPPORT

Current Submitted Grant Proposal Research Applications

- a. Pending: (This application) NSF: CPS: Large: RUI: Co-PI Vision for Interdisciplinary Science Tele-Actuation (VISTA) \$5,000,000, (1,460,000 to UCCS, rest to subcontractors)
- b. Pending: NSF: ETHICS EDU FOR SCI & ENG PROG: PI, Integration of Sustainable Ethics in Cross

Cultural Graduate. \$279,390.

- c. Pending: BOETTCHER FOUNDATION: WEBB-WARING BIOMEDICAL RESEARCH AWARDS: PI. Epilepsy Prediction Signal Analysis. \$290,000.
- d. Pending: COULTER TRANSLATIONAL RESEARCH AWARD IN BIOMEDICAL ENGINEERING: PI, An Intelligent Automated Intracortical Neuro-Decision Support System. \$150,000.

Completed Research Support

- a. SBIR, PI: \$150,000 Grant to University of Colorado at Colorado Springs: PI “Online Support Network for Users with Dependencies, Syberenity, LLC, and the UCCS.

F. TEACHING

Classes Taught at UCCS:

Fall 2010:	BLAW 2010:	Bus/Intellectual Property Law
	CS 5450:	KDD Apps in Neuroscience
Spring 2009:	INOV 1010:	Bachelor of Innovation Lab
	INOV 2100:	Technical Writing, Proposals and Presentations
	CSCI 4802 5802:	iPhone and iPad Programming (@UCDenver)
Fall 2010:	BLAW 201:	Bus/Intellectual Property Law
	CS 5450:	KDD Apps in Neuroscience
Spring 2009:	INOV 1010:	Bachelor of Innovation Lab
	INOV 2100:	Technical Writing, Proposals and Presentations
Fall 2009:	BLAW 201:	Bus/Intellectual Property Law
	CS2010:	iPhone iOS: Objective C
Spring 2008:	INOV 1010:	Bachelor of Innovation Lab
	INOV 2100:	Technical Writing, Proposals and Presentations
Fall 2008:	BLAW 2010:	Bus/Intellectual Property Law
	CS 5060:	Selected Topics in Biometrics

Computer Science Courses

Objective C	Database Security
Java	SEO
SQL Server	Logic and Design (Java C#)
C#	Computer Logic
C++ Object-Orientated Programming	Statistics for Decision Making
Networking Concepts and App	Managerial Mathematics
Internet-Oriented Programming	Business & eCommerce
Database Apps in Commerce	SQL & ASP in .NET
Decision Support / Expert Systems	Database Concepts

MBA Courses

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

Teaching Experience

University of Colorado at Denver	Department of Computer Science Denver, CO 2011 - Present
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
Bank of America / Keller Grad. School of Mgt	Executive MBA College

Charlotte, NC 2002 - 2008

Providence High School

High School Math Teacher
Charlotte, NC 2001 - 2002

G. PROFESSIONAL EXPERIENCE

- a. Holland & Hart. LLP: Statistical-Legal Analyst: Work with Charles R. Lucy Esq. Formulate algorithms, find patterns where opposing counsel tried to hide evidence and then present my findings to the partners at Holland & Hart. Colorado Springs, CO 2009 - Present
- b. 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 1999- 2000
- c. 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 – 1999
- d. 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 1999 - 1999
- e. 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 1997 - 1999
- f. 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 modeling for high tech intellectual property. Evaluation of investment opportunities. Financial analysis reports & identification of high tech of risks and opportunities. San Francisco, CA 1995 - 1997
- g. Fulbright & Jaworski LLP. Law School: Legal Counsel: AMD vs. Intel: High Tech Litigation. Patent rejections involving microprocessor electrical circuits and electronics. email security. Domain Squatting and Black Hat SEO litigation. Devised deposition strategy to prove Intel engineers stole microprocessor Intellectual Property. Austin, TX 1994 - 1995