ABBES, M., F. KHOMH, F., GUEHENEUC, Y.C. and ANTONIOL, G. An Empirical Study of the Impact of Two AntiPatterns Blob and Spaghetti Code on Program Comprehension. In Proc. of the 15th European Conf. on Soft. Maintenance and Reengineering, pp. 181-190, 2011.

ANDRÉ, P., ARDOUREL, G., ANQUETIL, N. and ROYER, J. C. **Automatically-Mapping Component Architecture to Java Source Code**. In Proc. of the 14th European Conf. on Software Maint. and Reliability, 2010.

ALEGRÍA, J.A., LAGOS, A., BERGEL, A. and BASTARRICA, M.C. **Process Model Blueprints.** In Proc. of 4th ICSP, Springer Verlag, pp. 273-284, 2010.

ALLEN, E.B., KHOSHGOFTAAR, T.M. and CHEN, Y. **Measuring Coupling and Cohesion of Software Modules: An Information-Theory Approach**. In Proceedings of the 7th International Software Metrics Symposium, pp. 124-134, London, 2001.

ARCOVERDE, R., MACIA, I., GARCIA, A. and STAA, A. A. **Automatically Detecting Architecturally-Relevant Code Anomalies.** In Proc. of the 3rd RSSE at ICSE'12, Zurich, Switzerland, June 2011.

ARCOVERDE, A. GUIMARÃES, E., MACIA, I., GARCIA, A. and CAI, Y. **Prioritization of Code Anomalies based on Architecture Sensitiveness.** In Proc. of the 27th Brazilian Symposium on Software Engineering, Brasilia, Brazil, 2013.

ARAYA, V.A. Test Blueprint: An Effective Visual Support to Test Coverage. In Proc. of 33rd ICSE, pp. 1140-1145, 2011.

BALTES, S. and DIEHL, S. **Sketches and Diagrams in Practice.** In Proceedings of Foundations of Software Engineering – FSE 2014 Symposium, November 2014.

BANKER, R. D., DATAR S. M. and ZWEIG, D. Software Complexity and Maintainability. In Proceeding of 10th ICIS, pp. 247-255, New York, 1989.

BASILI, V.R.; CALDIERA, G.; ROMBACH, H.D. **The Goal Question Metric Approach**. In Encyclopedia of Soft. Engineering. Wiley, 1994.

BASS, L., CLEMENTS, P.; and KAZMAN, R. **Software Architecture in Practice** (Second Edition). Addison-Wesley, 2003.

BIEGEL, A., SOETENS, Q. D., HORNIG, W. DIEHL, S. and DEMEYER, S. **Comparison of Similarity Metrics for Refactoring Detection.** In Proceedings of 8th Working Conference on Mining Software Repositories, pp. 53-62, 2011.

BROWN, W. J., MALVEAU, R. C., MCCORMICK, H. W. and MOWBRAY, T. J. AntiPatterns: Refactoring Software, Architectures, and Projects in Crisis. John Wiley and Sons, March, 1998.

CAFEO, B., DANTAS, F., GURGEL, A., GUIMARAES, E., CIRILO, E., GARCIA, A. and LUCENA, C. Analyzing the Impact of Feature Dependency Implementation on Product Line Stability: An Exploratory Study. In Proceedings of the ACM SIGSoft XXVI Brazilian Symposium on Software Engineering (SBES'12), Natal, Brazil, September 2012.

CIRILO, E., NUNES, I., GARCIA, A. and LUCENA, C. **GenArch+: An Extensible Infrastructure for Building Framework-based Software Product Lines**. In Proceedings of the 10th International Conference on Aspect-Oriented Software Development, Tools Session, Porto de Galinhas, March 2011.

CHIDAMBER, S.R. and KEMERER, C. F. **A Metrics Suite for Object-oriented Design**. IEEE Transactions of Soft. Engineering, pp. 476-493, 1994.

CLARKE, S. and BANIASSAD, E. Aspect-Oriented Analysis and Design The Theme Approach. Addison-Wesley, Upper Saddle River, March 2005.

CLEMENTS, P., BACHMANN, F., BASS, L., GARLAN, D., IVERS, J., LITTLE, R., NORD, R. and STADORD, J. **Documenting Software Architectures: Views and Beyond**. Addison-Wesley, 2002.

DELIGIANNIS, I., STAMELOS, I., ANGELIS, L., ROUMELIOTIS, M. and SHEPPERD, M. A Controlled Experiment Investigation of an objectoriented Design Heuristic for Maintainability. Journal of Systems and Software, Volume 72 Issue 2, pp. 129-143, 2004.

DHAMBRI, K., SAHROUI, H. and POULIN, P. **Visual Detection of Design Anomalies**. In Proceedings of 12th European Conference on Software Maintenance and Reengineering (CSMR'08), pp. 279-283, IEEE Computer Society Washington, DC, USA 2008.

EICK, S. G., GRAVES, T. L., KARR, A. F., MARRON, J. S. and MOCKUS, A. **Does code decay? Assessing the Evidence from Change Management Data**. IEEE Trans. on Soft. Engineering, Vol. 27, pp 1–12, 2001.

EMDEM, E. and MOONEM, L. Java Quality Assurance by Detecting Code Smells. In Proc. 9th Working Conference on Reverse Engineering (WCRE'02), pp. 97, 2002.

ELRAD, T., ALDAWUD, O. and BADER, A. **Expressing Aspects Using UML Behavioral and Structural Diagrams.** In Proceedings of the Aspect-Oriented Software Development, pp. 459–478. Addison- Wesley, Boston, 2005.

FARIAS, K., GARCIA, A. and WHITTLE, J. **Assessing the Impact of Aspects on Model Composition Effort.** In: 9th International Conference on Aspect-Oriented Software Development, Rennes and Saint Malo. Vol. 9. pp. 1-12, 2010.

FARIAS, K., GARCIA, A., and LUCENA, C. **Evaluating the Impact of Aspects on Inconsistency Detection Effort: A Controlled Experiment.** In Proceedings of the 15th Int'l Conf. on Model-Driven Engineering Languages and Systems, Austria, September 30 - October 5, 2012.

FIGUEIREDO, E., CACHO, N., SANT'ANNA, C., MONTEIRO, M., KULESZA, U., GARCIA, A., SOARES, S., FERRARI, F., KHAN, S., CASTOR, F. and DANTAS, F. **Evolving software product lines with aspects: An Empirical Study on Design Stability**. In Proceedings of the 30th International Conf. on Software engineering (ICSE), pp. 261-270, 2008.

FILMAN, R. and FRIEDMAN. **Aspect-Oriented Programming is Quantification and Obliviousness.** RIACS Technical Report 01.112, 2001.

FILMAN, R., ELRAD, T., CLARKE, S. and AKSIT, M. Aspect-Oriented Software Development. Boston, Addison Wesley, 2005.

FOWLER, M., BECK, K., BRANT, J., OPDYKE, W. and ROBERTS, D. **Refactoring: Improving the Design of Existing Code**. Object Technology Series. Addison-Wesley, June 1999.

FLEUREY, F., BAUDRY, B., FRANCE. R. and GHOSH, S. **A Generic Approach for Automatic Model Composition**. In Proceedings of Models in Software Engineering, Spring-Verlag, pp. 7 – 15, 2008.

FRANCE, R., RAY, I., GEORG, G. and GOHSH, S. **An Aspect-Oriented Approach for Early Design Modeling**. In Proceedings of IEEE Software, Vol. 151, Issue 4, pp. 173-185, 2004.

FRANCE, R., RAY, I., GEORG, G. and GHOSH, S. **Aspect-oriented Approach to Early Design Modeling.** IEE Proceedings Software, Vol. 151, Issue 4, pp. 173–185, August 2004.

FRANCE, R. and RUMPE, B. **Model-Driven Development of Complex Software: A Research Roadmap**. In Proc. of 29th International Conference on Software Engineering (ICSE'07), pp. 37–54, 2007.

GARCIA, J., POPESCU, D., EDWARDS, G. and MEDVIDOVIC, N. **Identifying Architectural Bad Smells**. In Proc. 13th European Conf. on Software Maintenance and Reengineering, March 2009.

GARCIA, J., POPESCU, D., EDWARDS, G and MEDVIDOVIC, N. **Towards a Catalogue of Architectural Bad Smells**. In Proc. 5th ACM SIGSoft Conference on the Quality of Software Architecture, Spring-Verlag, Berlin, Heidelberg 2009.

GARCIA, J., Krka, I., Medvidovic, N. and Douglas, C. **A Framework for Obtaining the Ground-Truth in Architectural Recovery**. In Proceedings of 9th IEEE/IFIP Working International Conference on Software Architecture, Finland 2012.

GODFREY, M. and LEE, E. Secrets from the Monster: Extracting Mozilla's Software Architecture. In Proceedings of the 2nd International Symposium on Constructing Software Engineering Tools, 2000.

GORTON, I. Essential Software Architecture. Springer-Verlag, 2006.

GREENWOOD, P., BARTOLOMEI, T., and FIGUEIREDO, E. **On the impact of aspectual decompositions on design stability: An empirical study**. In Proceedings of the 21st European conference on object oriented Programming (ECOOP), 2007.

GUIMARÃES, E., GARCIA, A., and FARIAS, K. **Analyzing the Effects of Aspect Properties on Model Composition Effort: A Replicated Study**. In Proceedings of 6th Workshop on Aspect-Oriented Modeling @ MODELS 2010, 2010, Oslo, 2010.

GUIMARAES, E., GARCIA, A. and CAI, Y. **Exploring Blueprints on the Prioritization of Architecturally-Relevant Code Anomalies – A Controlled Experiment.** In Proc. of 38th IEEE COMPSAC, Vasteras, Sweden 2014.

GURGEL, A., MACIA, A., GARCIA, A. STAA, A., MEZINI, M. and EICHBERG, M. **Blending and Reusing Rules for Architectural Degradation Prevention.** In Proceedings of the 13rd International Conference on Modularity, Lugano, Switzerland, April 2014.

HENDERSON, B. **Object-oriented Metrics: Measures of Complexity.** Prentice-Hall, Inc., Upper Saddle River, NJ, USA, 1996.

HOCHSTEIN, L. and LINDVALL, M. **Combating architectural degeneration: A survey**. Info. & Soft. Technology, July 2005.

JEANNERET, C., GLINZ, M. and BAUDRY, B. **Estimating Footprints of Model Operations.** In Proc. of 33rd International Conference on Software Engineering, pp. 601-610, 2011.

JANSEN, A. and BOSCH, J. **Software Architecture as a Set of Architectural Design Decisions**. In Proceedings of the 5th Working IEEE/IFIP Conference on Software Architecture (WICSA), pp. 109-120, 2005.

KAZMAN, R. and CARRIERE, S. J. **View Extraction and View Fusion in Architectural Understanding**. In Proc. of 5th International Conference on Software Reuse (ICRS'98), pp. 290–299, 1998.

KAZMAN, R and BASS, L. Making Architecture Reviews Work in the Real World. In Proceedings of IEEE Software, Vol. 19, no. 1, pp. 67–73, 2002.

KERIEVSKY, J. **Refactoring to Patterns**. Addison-Wesley Signature Series. Addison-Wesley Professional, August 2004

KICZALES, G., LAMPING, J. MENDHEKAR, A. LOPES, C., LOINFTIER, J and IRWIN, J. **Aspect-Oriented Programming.** In Proc. of 11th ECOOP, pp. 220-242, 1997.

KNODEL, J.; MUTHIG, D.; HAURY, U.; MEIER, G. Architecture Compliance Checking - Experiences from Successful Technology Transfer to Industry. In Proceedings of the 12th European Conf. on Software Maintenance and Reengineering (CSMR), pp. 43 52. 2008.

KRUCHTEN, P. B. Architecture blueprint: The "4+1" View Model of Architecture. IEEE Software, Vol. 12, Issue 6, pp. 42-50, 1995.

LANGE, L. and CHAUDRON, M. An Empirical Assessment of Completeness in UML Designs. In Proc. of 8th Int'l Conf. on Empirical

Assessment in Software Engineering, United Kingdom, 2010.

LANGHAMMER, M. Co-evolution of Component-Based Architecture-Model and Object-Oriented Source Code. In Proceedings of the 18th Int'l Doctoral Symposium on Components and Architecture, pp. 37-42.

LANZA, M. and MARINESCU, R. and DUCASS, S. **Object-Oriented Metrics in Practice**. Springer-Verlag, New York, USA 2006.

LI, W. and SHATNAWI, R. An Empirical Study of the Bad Smells and Class Error Probability in the Post-Release Object-Oriented System Evolution. Journal of Systems and Software, Vol. 80, Issue 7, pp. 1120-1128, 2007.

LIU, H. Schedule of Bad Smell Detection and Resolution: A New Way to Save Effort. IEEE Transactions on Software Engineering (TSE), volume 8, issue 1, pp. 220-235 2011.

LUNG, CH. Software Architecture Recovery and Restructuring through Clustering Techniques. In Proc. of the 3rd International Workshop on Software Architecture, ACM Press, pp. 101–104, Orlando, USA 1998.

MACCORMAK, A. RUSNAK, J. and BALDWIN, C. Y. **Exploring the Structure of Complex Software Designs – An Empirical Study of Open Source and Proprietary Code**. Management Science, Vol. 52, Issue 7, 2006.

MACIA, I., GARCIA, A. and STAA, A. **An Exploratory Study of Code Smells in Evolving Aspect-Oriented Systems**. In Proc. 10th International Conf. on Aspect-Oriented Software Development (AOSD'11), pp. 203-214, 2011.

MACIA, I., GARCIA, J., POPESCU, D., GARCIA, A., MEDVIDOVIC, N. and STAA, A. Are Automatically Detected Code Anomalies Relevant to Architectural Modularity? In Proc. of 11th Annual Int'l Conf. on Aspect-Oriented Software Development, pp. 167-178, USA 2012.

MACIA, I., ARCOVERDE, R., GARCIA, A., CHAVEZ, C. and STAA, A. **On the Relevance of Code Anomalies for Identifying Architecture Degradation Symptoms**. In Proc. of the 16th European Conference on Software Maintenance and Reengineering (CSMR), Szeged, Hungry 2012.

MACIA, I. **On the Detection of Architecturally-Relevant Code Anomalies**. PhD Thesis. Informatics Department – Pontifical Catholic University of Rio de Janeiro. 2013.

MACIA, I., DANTAS, F. and GACIA, A. Are Code Anomaly Patterns relevant to Architectural Problems? IEEE Transactions on Software Engineering, 2014

MANTYLA, M., VANHANEN, J. and LASSENIUS, C. **Taxonomy and an Initial Empirical Study of bad Smells in Code**. In Proc. of 19th ICSM, Amsterdam, Netherland, September 2003.

MAQBOOL, O. and BABRI, H. Hierarchical Clustering for Software

Architecture Recovery. IEEE Transactions on Software Engineering (TSE), Volume 33 Issue 11, pp. 759–780, 2007.

MARINESCU, R. Detection Strategies: Metrics-Based Rules for Detecting **Design Flaws**. In Proc. IEEE International Conference on Software Maintenance, 2004.

MARINESCU, R.; GANEA, G.; VEREDI, I. InCode: Continuous Quality Assessment and Improvement. In Proceedings of the 14th European Conference on Software Maintenance and Reengineering (CSMR), pp. 274-275, 2010.

MARTIN, R. Agile Software Development: Principles, Patterns, and Practices. Prentice Hall, 2003.

MENS, T. and TOURWE, T. **A Survey of Software Refactoring.** In Proceedings of IEEE Transactions on Software Engineering, Volume 30, Number 2, pp. 126-139, February 2004.

MEHTA, N.R.; MEDVIDOVIC, N.; PHADKE, S. **Towards a Taxonomy of Software Connectors**. In Proceedings of the 22nd International Conference on Software Engineering (ICSE), 2000.

MEYER, B. **Object-Oriented Software Construction.** Prentice-Hall, April 1997.

MOHA, N., GUENEHEUC, Y. and LEDUC, P. Automatic Generation of **Detection Algorithms for Design Defects**. In Proc. EEE/ACM International Conf. on Automated Software Engineering, page 297-300, 2006.

MOHA, N., DUCHIEN, L and MEUR, A. F. **DECOR: a Method for the Specification and Detection of Code and Design Smells.** In Proc. of IEEE Trans. on Software Engineering, Vol. 36, pp. 20-36, January, 2010.

MULLER, H.A., ORGUN, M.A., TILLEY, S.R. and UHL, J.S. **A Reverse Engineering Approach to Subsystem Structure Identification**. Journal Software Maintenance, Vol. 5, Issue 4, pp. 181–204, 1993.

MUNRO, M. J. Product Metrics for Automatic Identification of "Bad Smell" Design Problems in Java Source-Code. In Proceedings of the 11th International Symposium on Software Metrics (METRICS), page 15, 2005

MURPHY-HILL, E., PARNIN, C., and BLACK A. **How We Refactor, and How We Know It**. In Proceedings of 31st International Conference on Software Engineering (ICSE), pp. 287-297, 2009.

NAVASA, A., PÉREZ, M.A., MURILLO, J.M. and HERNÁNDES, J. **Aspect Oriented Software Architecture: a Structural Perspective.** In Proceedings of 2th International Conference on Aspect-Oriented Software Development, 2002.

NUNES, C., GARCIA, A., LUCENA, C. and LEE, J. **History-Sensitive Heuristics for Recovery of Features inCode of Evolving Program Families.** In Proceedings of 16th International Software Product Line Conference, Salvador, Brazil, September 2012.

OIZUMI, W., GARCIA, A., FERREIRA, M., STAA, A. and COLANZI, E. When

Code-Anomaly Agglomerations Represent Architectural Problems? - An Exploratory Study. In Proc. of the 28th Brazilian Symposium on Software Engineering, Brazil, September 2014

OLBRICH, S. M., CRUZES, D. S. and D. SJØBERG, D. Are all Code Smells Harmful? A Study of God Classes and Brain Classes in the Evolution of three Open Source Systems. In Proc. of 26th IEEE International Conference on Software Maintenance (ICSM'10), Timisoara, Romania 2010.

OMG-UML, 2013. Semantics of a Foundational Subset for Executable UML Models. Available at: <u>http://www.omg.org/spec/FUML/1.1/</u>. Accessed at: September, 2014

PERRY, D.E. and WOLF, A.L.D. **Foundations for the Study of Software Architecture**". ACM SIGSOFT Software Engineering Notes, Vol. 17, pp. 40-52, October 1992.

PIVETA, E. K., HECHT, M., PIMENTA, M. S. and PRICE, R. **Detecting Bad Smells in AspectJ.** Journal of Univ. Computer Science, 2006.

RAEMAEKERS, S., VAN DEURSEN, A. and VISSER, J. **Measuring Software Library Stability Through Historical Version Analysis.** In Proc. of the 28th IEEE International Conference on Software Maintenance, pp. 378-387, September, Trento 2012.

RATIU, D., DUCASSE, S., GÎRBA, T., and MARINESCU, R. **Using History Information to Improve Design Flaws Detection**. In Proceedings of the 8th European Conf. on Software Maintenance and Reengineering, pp. 223, 2004.

RATZINGER, J. FISHER, M. and GALL, H. **Improving Evolvability through Refactoring**. In Proc. of the International Workshop on Mining Software Repositories, pp. 1-5, Vol. 30, July 2005.

REEDY, R. and FRANCE, R. **Model Composition** - A Signature-Based Approach. Aspect-Oriented Modeling Workshop, Montego, 2004.

RENTSCH, T. **Object-Oriented Programming**. ACM SIGPLAN Notices, Vol. 17, Issue 9, pp. 51-57, September 1982

RIEL, A. **Object-Oriented Design Heuristics**. Addison-Wesley Longman Publishing Co., Boston, MA, USA 1996.

ROBILLARD, M.P and WARR, F. W. **ConcernMapper: Simple View-Based Separation of Scattered Concerns.** In Proceedings of the OOPSLA Workshop on Eclipse Technology eXchange, pp. 65-69, 2005.

SALEHIE, M. LI, S. and TAHVILDAI, L. **A Metric-based Heuristic Framework to Detect Object-oriented Design Flaws**. In 14th IEEE International Conference on Program Comprehension, 2006.

SOARES, S., LAUREANO, E., and BORBA, P. **Implementing Distribution and Persistence Aspects with AspectJ**. In Proceedings of the 17th ACM SIGPLAN conference on Object-oriented programming, systems, languages, and applications, pp. 174-190, 2002. STARR, D. and ZIMMERMAN, G. **A Blueprint for Success: Implementing an Architectural Review System**, STQE Magazine, July / August, pp. 50–55, 2002.

STEIN, D. HANENBERG, S. and UNLAND, R. **An UML-based Aspect-Oriented Design Notation.** In Proc. of the 1st Int. Conference on Aspect-Oriented Software Development, Enschede, Netherlands, April 2002

SRIVIST, K. and MUENCHAISRI, P. **Bad-smell Metrics for Aspect-Oriented Software**. In Proceedings of the 6th IEEE/ACIS International Conf. on Computer and Information Science (ICIS), pp. 1060 - 1065, Canada, 2007.

TSANTALIS, N., CHAIKALIS, T. and CHATZIGEORGIOU, A. **JDeodorant: Identification and Removal of Type-Checking Bad Smells**. In Proceedings of 12th European Conference on Software Maintenance and Reengineering (CSMR'08), pp. 329–331, April 2008.

TSANTALIS, N. and CHATZIGEORGIOU, A. **Identification of move method refactoring opportunities**. IEEE Transactions on Software Engineering (TSE), 35(3), pp. 347–367, 2009.

VIDAL, A.S. and MARCOS, C.A. **Building an Expert System to Assist System Refactorization.** Journal of Expert Systems with Applications, Vol. 39, pp. 3810-3816, 2012.

WETTEL, R. and LANZA, M. **Visualizing Software Systems as Cities**. In Proceedings of the 4th IEEE International Workshop on Visualizing Software For Understanding and Analysis, pp. 92 - 99, 2007.

WOHLIN, C., RUNESON, P., HOST, M., OHLSSON, M., REGNELL, B. and WESSLEN, A. **Experimentation in Software Engineering - An Introduction**. Kluwer Academic Publishers, illustrated edition, 2000.

WONG, S., CAI, and DALTON, M. **Detecting Design Defects Caused by Design Rule Violations**, In Proc. of 18th ESEC/FSE 2010.

WONG, S.; CAI, Y.; KIM, M.; DALTON, M. **Detecting Software Modularity Violations**. In Proceedings of the 33rd International Conference on Software Engineering (ICSE), pp. 411-420, 2011.

XI, G., DUBOSE, Q.L. and MURPHY-HILL, E. **Reconciling Manual and Automatic Refactoring**. In Proc. of the 34th International Conference on Software Engineering, Switzerland 2012.