DPRI Award 2023

for Outstanding Contributions
in Research and Education

研究教育貢献賞

Dr.Víctor Manuel CRUZ ATIENZA

Universidad Nacional Autónoma de México

選考経緯・業績紹介・講演資料

Jan.10, 2024

Disaster Prevention Research Institute
Kyoto University, Uji, Kyoto, Japan

京都大学　防災研究所

目　次

Victor M. Cruz Atienza先生へのお祝いの言葉

京都大学防災研究所 准教授
伊藤喜宏

Cruz Atienza 先生、このたびはDPRI AWARD のご受賞おめでとうございます。心よりお祝いを申し上げます。こうしたお祝いの機会をもてましたことを、これまでのメキシコとの国際共同研究の共同研究者として、また幾度かの先生の日本滞在時のホスト役をつとめてきた友人として大変うれしく思っています。

先生との出会いは、2013年12月でのメキシコシティで、メキシコと新たな国際共同研究を立ち上げるための事前調査とメキシコ側研究者への提案が目的でした。メキシコ国立自治大学地球物理学研究所の会議室で、メキシコ太平洋沿岸部の地震津波災害軽減に向けた共同研究を立ち上げたいと申し出た際の先生の言葉が今でも忘れられません。その時の言葉は、国際共同研究に取り組む際の私の根本的な姿勢となっています。先生は、「本当の意味での国際共同研究を約束してほしい」とおっしゃいました。これは、それまで先生がメキシコ国内で経験された海外との国際共同研究において海外の研究者がプロジェクト全ての面で主導権を握り、とても対等な立場での共同研究とではなかったという屈辱を感じてきたことからの言葉でした。私はその気持ちを真摯に受け止め、その後立ちあげるプロジェクトを、「真の意味での国際共同研究」とすべく、先生と一緒に奔走させていただきました。結果として、2014年晩夏に科学技術振興機構に提出した我々のプロポーザル「メキシコ沿岸部の巨大地震・津波災害の軽減に向けた総合的研究」は、地球規模対応国際科学技術協力プログラムとして無事採択されました。そして2015年から開始したプロジェクトは、2022年3月に日本・メキシコ両国から高い評価の下で無事終了しました。

このプロジェクト期間中、先生にはメキシコにおける現地調査や研究の取りまとめにおいて、私たち日本側研究者も含めてリードいただき、また多大なるサポートをいただきました。特に、新型コロナウィルスによる影響下におけるメキシコ研究船舶の運航に向けた献身的なご協力には感謝の念に堪えません。結果、コロナ期間を含むプロジェクト期間に予定していた研究項目の全てを達成することが出来ました。

また、日本側の若手研究者や学生の教育などにもご尽力いただいた点についても心からお礼を申し上げます。先生のご協力のもと、我々のプロジェクトから多くの博士号取得者を輩出しました。またそのうちの幾人かは、現在防災研究所やメキシコ国立自治大学の教員となり、今走り始めようとしているメキシコ・エルサルバドルとの新たな国際共同研究で活躍し始めています。今後の新たなプロジェクトでも、我々防災研究所のメンバーと引き続き深く交流いただきますようお願い申し上げます。

最後になりましたが、Víctor先生の今後のご健勝とご発展を心から祈念いたします。

2024 年 1 月 10 日

Congratulatory Message to Dr. Victor M. Cruz Atienza

Associate Professor, Disaster Prevention Research Institute, Kyoto University
Yoshihiro Ito

Dear Dr. Cruz Atienza, I extend my warmest congratulations to you on receiving the DPRI Award. It brings me great joy to take this opportunity to celebrate your remarkable achievement as a collaborator in international joint research with Mexico and as a friend who has supported you during your stay in Japan.

Our journey together commenced in Mexico City in December 2013, where we met to conduct preliminary research and propose collaborative ventures to Mexican researchers, laying the groundwork for a new international collaboration with Mexico. I vividly recall our meeting at the Institute of Geophysics of the National Autonomous University of Mexico, where I proposed launching a joint research project on earthquake and tsunami disaster mitigation along the Pacific coast of Mexico. Your words in that conference room have remained etched in my memory as a guiding principle for our collaborative endeavors. You emphasized the importance of ensuring that our international joint research is genuinely collaborative, a sentiment from past experiences where the projects lacked equality and foreign researchers dominated all aspects. Taking your words to heart, we worked diligently to make our project a shining example of "international joint research in the true sense of the word."

The proposal we submitted to the Japan Science and Technology Agency in the late summer of 2014, titled "Hazard Assessment of Large Earthquakes and Tsunamis in the Mexican Pacific Coast for Disaster Mitigation," was successfully accepted as a Science and Technology Research Partnership for Sustainable Development (SATREPS) Program. The project commenced in 2015 and ended with great success in March 2022, earning high praise from Japan and Mexico.

Throughout the project, your leadership was instrumental in guiding researchers, including those from Japan, in conducting field surveys and compiling research in Mexico. Your unwavering support, particularly during the challenges posed by the new coronavirus, was invaluable. Thanks to your dedication, we successfully accomplished all planned research items, even during the pandemic.

I also express my deepest gratitude for your efforts in educating young researchers and students on the Japanese side. With your invaluable assistance, we have nurtured numerous Ph.D. candidates, some of whom have become faculty members at the Disaster Prevention Research Institute and the National Autonomous University of Mexico. They are now actively

contributing to the new international joint research project with Mexico-El Salvador, which is set to commence. I eagerly anticipate your continued engagement with us at the Disaster Prevention Research Institute in future projects.
I sincerely wish for your continued good health and further progress, Víctor.

January 10, 2024

DPRI Award 設立の趣旨および

第 9 回 DPRI Award 受賞者決定の経緯

研究教育担当副所長　松島　信一

防災研究所は、国内外で発生する自然災害を研究対象とすることから、国際交流協定の締結、国際共同研究、海外災害調査や留学生・海外共同研究者の受け入れなどの国際的な活動にも積極的に取り組んで参りました。平成２２年度に認定され開始した共同利用・共同研究拠点は、令和 4 年度から 3 期目に入っています。また、防災研究所が事務局を務める世界防災研究所連合（GADRI）は令和５年３月に第６回世界防災研究所サミットを開催いたしました。このように防災研究所は頻発する国内外での自然災害に備えるための国際防災研究拠点として、その地位を確立するために、様々な新しい取り組みを推進しています。

これらの一環として平成２３年３月に「京都大学防災研究所国際表彰規程」が制定され、DPRI Award が設立されました。その表彰の要件は

１）　防災研において、客員教員や共同研究者などとして滞在し、セミナーや共同研究などを実施し、防災研の研究教育に成果を上げた方

２）　防災研が主催する研究集会等において、基調講演、招待講演等を務め、又は企画運営に携わり、防災研の活動に貢献した方

３）　防災研が実施する国際共同研究及び現地調査等において貢献した方

となっております。

平成２５年度には第１回の防災研究所国際表彰 DPRI Award をカリフォルニア工科大学名誉教授の金森博雄博士に授与いたしました。続いて、平成２６年度に第２回 DPRI Award をメキシコ自治大学教授のフランシスコ・サンチェズセスマ博士に、平成２７年度に第３回 DPRI Award をウォータールー大学教授のキース・ハイペル博士に授与しました。平成２８年度の第４回 DPRI Award で

は、ローザンヌ大学教授のミシェル・ジャボイエドフ博士と国際応用システム分析研究所のリスク・レジリエンスプログラムに授与しました。平成３０年度の第５回 DPRI Award はネバダ大学リノ校教授のジョン・グレッグ・アンダーソン博士に、令和元年度の第６回 DPRI Award はノーサンブリア大学教授のアンドリュー・コリンズ博士に、令和２年度の第７回 DPRI Award は台湾国立防災救助技術センター（NCDR）の元センター長の陳亮全（チェン・リアン チュン Liang-Chun CHEN）博士に、令和４年度の第８回 DPRI Award はコロラド大学ボルダー校・行動科学研究所・自然災害センターの Researcher in Residence のジェームズ・デニス・ゴルツ博士に授与しました。

今回、令和４年度の国際表彰について、令和５年１月に防災研究所の伊藤喜宏准教授から推薦があり、表彰選考委員会で慎重に審議しました。その結果、メキシコ国立自治大学（UNAM：Univesidad Nacional Autónoma de México (National Autonomous University of Mexico)）の地球物理学研究所（Instituto de Geofísica）・地震研究部門（Departamento de Sismología）教授の Víctor Manuel CRUZ-ATIENZA（ビクトール・マヌエル・クルス・アティエンツア）博士に対し、第９回の防災研究所国際表彰 DPRI Award の「研究教育貢献賞」の受賞者として所長に推薦することを決定いたしました。その後、所長の承認を得、これを教授会に諮り承認されました。

Víctor Manuel CRUZ-ATIENZA 博士は、2000 年にメキシコ国立自治大学を卒業後、2001 年にメキシコ国立自治大学地球物理学研究所で理学修士を取得、2006 年にニース・ソフィア-アンティポリス大学（UNSA）で博士号を取得されました。学位取得後は、ニース・ソフィア-アンティポリス大学、サンディエゴ州立大学でポスドク研究員を経たのち、2008 年からメキシコ国立自治大学地球物理学研究所に准教授として着任し、2021 年より現職を務められています。この間、2013-2017 年に同研究所の地震研究部門長を務められました。

CRUZ-ATIENZA 博士は、世界が注目する数値計算に基づく破壊力学及び地震波動場の研究の第一人者です。特に、メキシコ盆地の地震時応答に着目した研究により、2017 年の科学分野で世界にインパクトを与えた人物として Nature 誌により“Nature’s10”として選出されています。

防災研究所においては、2016 年と 2022 年の防災研共同利用研究集会として

開催されたスロー地震関係の研究集会に参加され、2016 年には招待講演として“Tectonic Tremor Modulation by Intraslab Fluid Diffusion During Slow Earthquakes”という演目で登壇されました。2017 年には防災研が主催した SATREPS 研究集会「メキシコ沿岸部の巨大地震・津波被害の軽減に向けた総合的研究」においてメキシコ側世話人の代表として研究集会の企画運営に携わり、メキシコおよび日本国内におけるプロジェクトの周知に大きく貢献されました。また、地震津波連携研究ユニットが 2022 年 9 月 5 日に主催した津波連携研究ワークショップでは“From earthquake physics to risk mitigation: an interdisciplinary research backbone in Guerrero, Mexico”として招待講演者として登壇されました。

防災研究所での三度の滞在（2016 年に 16 日間、2017 年に 14 日間および 2022 年に 16 日間）の間に、学生及び若手研究者らを含む多くの研究者らと議論を重ねられました。滞在中に主に議論された、メキシコ太平洋沿岸部の海陸域における地震・地殻変動観測網のデザインは、伊藤喜宏准教授、西村卓也教授らとの防災研究所における共同研究の成果として結実しました。また、CRUZ-ATIENZA 博士と彼の指導学生であった J. TAGO PACHECO 博士が主導し、西村卓也教授及び伊藤喜宏准教授との共同研究として開発された地殻変動データを用いた新たなプレート間すべりの逆解析手法 ELADIN は、防災研究所での滞在から生まれた成果であり、後述するスロースリップと大地震の相互作用の解明のために利用されました。

2016 年度から 2022 年度まで防災研究所が主体的に実施した SATREPS（地球規模課題対応国際科学技術協力プログラム）防災プロジェクト「メキシコ沿岸部の巨大地震・津波災害の軽減に向けた総合的研究」では、メキシコ側研究代表者としてプロジェクト運営に献身的に従事し、プロジェクト期間中に重要な研究成果を防災研究所との共同研究として発表されました。特に Nature Communications に掲載された 2 編の論文では、メキシコ太平洋沿岸部の広い範囲におけるスロースリップと大地震の相互作用や、またゲレロ地震空白域における浅部テクトニック微動活動など、国内外の研究者に大きなインパクトを与えました。これらの成果を含む本 SATREPS 防災プロジェクトの成果は Science を含むメキシコ・日本国内外の主要メディアでも大きく取り上げられました。これらの業績を含め、SATREPS 防災分野初のプロジェクト終了時の評価「S」に大きく貢献され、プロジェクトはメキシコ政府及び地方自治体からも

高く評価されており、京都大学及び防災研究所の国際的なプレゼンスの向上にも大きく貢献されました。さらに、防災研究所に所属する若手研究者および大学院生との共著論文も公表し、院生らのその後のキャリア形成など、防災研究所における研究教育活動に重要な役割を果たし、特に SATREPS プロジェクトに関連した３名の学生は、現在防災研究所の助教（中野元太、宮下卓也、西川友章）に着任しています。さらに、CRUZ-ATIENZA 博士の貢献もあり、防災研究所の若手３人（中野元太助教、西野智研准教授、西川友章助教）が中心となり提案した新たな SATREPS プロジェクト（日本ーメキシコーエルサルバドルの３カ国の共同研究）の応募にもつながるなど、防災研究所の将来の発展にも大いに貢献されることが期待されます。

これらの CRUZ-ATIENZA 博士との継続的な共同研究の実績は、防災研究所の国際的な学際研究、異分野融合研究、アウトリーチ活動を牽引し、国際プレゼンスの向上に大いに貢献されてきました。CRUZ-ATIENZA 博士には、これまでのご貢献に深く感謝するとともに、今後も受賞者に授与される終身称号の DPRI Fellow として、防災研究所の研究・教育に大所高所からご指導・ご助言いただければ大変ありがたく存じます。

CRUZ-ATIENZA博士の御略歴

氏名： Víctor Manuel CRUZ-ATIENZA

称号： Full Professor（教授）

国籍： メキシコ、フランス、スペイン

所属機関： Universidad Nacional Autónoma de México（メキシコ国立自治大学）

部局： Instituto de Geofísica（地球物理学研究所）, Departamento de Sismología（地震研究部門）

専門分野： 地震学（地震破壊力学、スロー地震学、波動伝播理論、地殻構造解析）

CURRICULUM VITAE IN XTENSO
January 2023

CURRENT POSITION :

Full Professor and Senior Researcher, Department of Seismology, Institute of Geophysics, National Autonomous University of Mexico.

DISTINCTIONS AND AWARDS :

2021 Full Professor, Class C – Highest appointment, National Autonomous University of Mexico.
2019 Class 3 of the Mexican System of Researchers (SNI, highest distinction).
2017 Recognition by Nature Magazine as one of **"The 10 most relevant scientists in the world in 2017"**.
http: www.nature.com/immersive/d41586-017-07763-y/index.html
2017 Level D, Program of Performance for Full-Time Academic Staff (PRIDE), National Autonomous University of Mexico (highest distinction).
2011 Chair by the European Commission in the "Centre for Post-Graduate Training and Research Engineering and Engineering Seismology" (MEEES), Grenoble, Francia.
2006 Honorable Mention and Jury Congratulations, PhD dissertation.
2001 Honorable Mention, Master degree dissertation.
2000 Honorable Mention, Bachelor degree dissertation.
Gabino Barreda Medal, National Autonomous University of Mexico.
1997 Best Student Award of Geophysical Engineering, Mexican Association of Exploration Geophysicists (AMGE).

ACADEMIC QUALIFICATIONS :

Academic Degrees

2006 PhD in Geophysics and Universe Sciences, UMR Géosciences Azur, University of Nice – Sophia Antipolis (UNSA), France.
Tesis: "*Dynamic rupture of non-planar faults in finite differences*". Advisor: Dr. Jean VIRIEUX.
Date of dissertation: May 5, 2006.

2001 Master of Science: Seismology, Institute of Geophysics, National Autonomous University of Mexico (UNAM), Mexico.
Thesis: "Quantitative waveforms analysis of the Popocatépetl volcano".
Advisor: Dr. Javier PACHECO ALVARADO.
Date of dissertation: July 20, 2001.
Distinction: Honorable Mention.

2000 Geophysical Engineering, Faculty of Engineering, National Autonomous University of Mexico (UNAM), Mexico.
Thesis: "Global inversion with Genetic Algorithms and Simulated Annealing applied to receiver functions: crustal velocity models in Mexico".
Advisor: Dr. José Luís RODRIGUEZ ZUÑIGA.
Date of dissertation: March 20, 2000.
Distinction: Gabino Barreda Medal for university merit and Honourable Mention awarded for the defence of the degree.

Postdoctoral Training

2007 Postdoctoral appointment, Department of Geological Sciences, San Diego State University (SDSU), USA.
Project: "Estimation of mechanical properties of the seismic source from seismograms, and massive simulation of earthquake scenarios with numerical models for the dynamic rupture with Finite Differences and Finite Volumes methods".
Supervisors: Dr. Kim Bak OLSEN and Dr. Steven DAY.

2006 Postdoctoral appointment, National Centre for Scientific Research (CNRS), Sophia - Antipolis, France.
Project: "Propagation of seismic waves in complex media and kinematic simulation of seismic sources with Finite Differences in the Nice region, France".
Supervisor: Dr. Stephane GAFFET.

Academic Appointments

2008 Associate Professor, Institute of Geophysics, National Autonomous University of Mexico (UNAM), Mexico.

2013 Professor Class A, Institute of Geophysics, National Autonomous University of Mexico (UNAM), Mexico.

2016 Professor Class B, Institute of Geophysics, National Autonomous University of Mexico (UNAM), Mexico.

2021 Full Professor and Senior Researcher, Institute of Geophysics, National Autonomous University of Mexico (UNAM), Mexico.

PROFESSIONAL EXPERIENCE :

Research Projects

2021 – present

Co-Principal Investigator of the project "Slow Aseismic Events (SSE) in the subduction zone of Mexico and La Venta-Chacalapa fault system as the constituent of the seismic cycle".
Funded by UNAM
Support Program for Research and Technological Innovation Projects (PAPIIT).
Target completion date: 2023.

2021 – present

Participant in the project "Systematized generation of displacement maps using differential Synthetic Aperture Radar Interferometry (InSAR) for geodetic observations of seismo-tectonic events in southern Mexico".
Funded by UNAM
Support Program for Research and Technological Innovation Projects (PAPIIT).
Target completion date: 2022.

2016 – 2022

Mexican Principal Investigator of the Japan-Mexico bilateral project “Hazard Assessment of Large Earthquakes and Tsunamis in the Mexican Pacific Coast for Disaster Mitigation”.
Funded by the Japan International Cooperation Agency (JICA), the Japan Science and Techology Agency (JST) and the National Autonomous University of Mexico (UNAM).
SATREPS Program (Science and Technologie Research for Sustainable Development), Japan.Completion date: May 2022.

2018 – 2021

Principal Investigator of the project "Estimation of Seismic and Tsunamigenic Hazard in the Seismic Gap of Guerrero for Disaster Prevention".
Funded by CONACyT. Call: National Problems.
Completion date: December 2021.

2017 – 2019

Co-Principal Investigator of the project "Study of the seismic and tsunamigenic

potential of the seismic gap of Guerrero".
Funded by UNAM
Support Program for Research and Technological Innovation Projects (PAPIIT).

2016 Principal Investigator of the project "Study of Seismic and Tsunami Hazard in the Seismic Gap of Guerrero".
Funded by
CONACYT. DADC
Program.

2014 – 2016
Principal Investigator of the project "Location and Analysis of Tectonic Tremors in the Central-South Region of Mexico and Poroelastic Modeling of Associated Slow Earthquakes".
Funded by UNAM
Support Program for Research and Technological Innovation Projects (PAPIIT).

2012 – 2015
Principal Investigator of the project "Deterministic modeling of strong movements for large earthquakes in the central Himalayas and Central-Southern Mexico".
Cooperación bilateral México (CONACYT) –India (*Department of Geophysics, Kurukshetra University*).

2012 – 2015
Mexican Principal Investigator of the international project "*High Performance Computing for Geophysical Applications*" (HPC – GA).
Funded by the European Union.
Program: *Marie Curie Actions—International Research Staff Exchange Scheme (IRSES)*
Countries involved: France, Spain, Brazil and Mexico.

2012 – 2014
Participant in the project "*Subduction Standard & Slow Seismology (S4)*". Main researcher: Dr. Jean Virieux
Funded by the *Agence National de la Recherche* (ANR) of France.

2009 – 2012
Principal Investigator of the project "Towards the integration of a regional velocity model for the numerical simulation of strong movements in the Valley of Mexico".
Funded by ONACyT.
Call: Basic Science.

2009 – 2011
Principal Investigator of the project "Inverse Modeling of the Dynamics of

Mexican Earthquakes".
Funded by UNAM
Support Program for Research and Technological Innovation Projects (PAPIIT).

2008 – 2010
Participant in the project "Non-volcanic tremors in Mexico".
Main researcher: Dr. Vladimir Kostoglodov.
Funded by UNAM.
Support Program for Research and Technological Innovation Projects (PAPIIT).

2009 – 2011
Participant in the project *"New perspectives on seismic hazard in subduction zones: episodic tremors and slip, passive monitoring, tectonics and strong motion scenarios (G– Gap)".*
Main researcher: Dr. Michel Campillo
Funded by the Agence National de la Recherche" (ANR) of France.

2006 – 2009
Participation in the project "*TeraShak*e"
Funded by the *National Science Fundation* y The SCEC Community Modeling Environment (SCEC/CME).
Main researcher: Dr. Steven Day and Dr. Kim Bak Olsen.
Program: An Information Infrastructure for System-Level Earthquake Research.

Oceanorgraphic Campaigns

2022 Co-Scientific Officer of the MGL2204 Campaign.
Project: "Quantifying incoming plate hydration and role of fluids on megathrust properties in and around the Guerrero Gap, offshore Mexico".
Research vessel: Marcus G. Langseth, Lamont Doehrty Earth Observatory, Columbia University & National Science Foundation.
Dates: May 14 to July 1, 2022.

2022 Scientific Chief and Head of the GGAP-2022 campaign.
Project: "Network of underwater Geophysical Instruments on the continental margin of the Guerrero seismic gap, Operational Component of the SATREPS Project of Cooperation with Japan".
Research vessel: El Puma, Coordination of Scientific Research, National Autonomous University of Mexico.
Dates: March 25 to April 5, 2022.

2019 Scientific Chief and Head of the GGAP-2019 campaign.
Project: "Red of underwater Geophysical Instruments in the continental margin of the seismic gap of Guerrero, Operational Component of the SATREPS Project of Cooperation with Japan".
Research vessel: El Puma, Coordination of Scientific Research, National Autonomous

University of Mexico.
Dates: November 11 to 23, 2019.

2018 Scientific Chief and head of the GGAP-2018-2 campaign.
Project: "Red of underwater Geophysical Instruments in the continental margin of the seismic gap of Guerrero, Operational Component of the SATREPS Project of Cooperation with Japan".
Research vessel: El Puma, Coordination of Scientific Research, National Autonomous University of Mexico.
Dates: November 11 to 22, 2018.
Scientific Chief and head of the GGAP-2018-1 campaign.
Project: "Red of underwater Geophysical Instruments in the continental margin of the seismic gap of Guerrero, Operational Component of the SATREPS Project of Cooperation with Japan".
Research vessel: El Puma, Coordination of Scientific Research, National Autonomous University of Mexico.
Dates: May 28 to June 9, 2018.

2017 Scientific Chief and participant in the oceanographic campaign GGAP-2017-2.
Project: "Installation of a Red of underwater Geophysical Instruments on the continental margin of the seismic gap of Guerrero, Operational Component of the SATREPS Project of Cooperation with Japan".
Research vessel: El Puma, Coordination of Scientific Research, National Autonomous University of Mexico.
Dates: 9 to 22 November 2017.

Research Internships

2022 Visiting researcher at the *Disaster Prevention Research Institute* of Kyoto University, Japan, in collaboration with Dr. Yoshihiro ITO, September 5-9, 2022.

2020 Visiting researcher at the *Lamont-Doherty Earth Observatory* of Columbia University, USA, in collaboration with Dr. Anne B ÉCEL, on October 16, 2020.

2016 Visiting researcher at the *Disaster Prevention Research Institute* of Kyoto University, Japan, in collaboration with Dr. Yoshihiro ITO, from September 10 to 25, 2016.
Visiting researcher at the *School of Earth, Energy & Environmental Sciences*, Stanford University, USA, in collaboration with Dr. Zack SPICA and Prof. Greg BEROZA, from November 30 to December 2, 2016.

2015 Visiting researcher at the *Institut de Physique du Globe de Paris* (IPGP), France, in collaboration with Dr. Harsha BHAT, from June 29 to July 17, 2015.

2014 Invited researcher at the *Institut des Sciences de la Tèrre (ISTèrre),* France, in collaboration with Dr. E. CHALJUB and Prof. J. VIRIEUX, from June 8 to July 10, 2014.
Visiting researcher at the *Industrial University of Santander* (UIS), Colombia. In collaboration with Dr. José D. SANABRIA, from November 17 to 23, 2014.

2013 Visiting researcher at the *Institut des Sciences de la Tèrre* (ISTèrre) France, in collaboration with Dr. E. CHALJUB and Prof. J. VIRIEUX, from June 1 to July 1, 2013.

2012 Visiting researcher at the *Institut des Sciences de la Tèrre* (ISTèrre), France, in collaboration with Prof. J. VIRIEUX, Prof M. CMAPILLO and Dr. E. CHALJUB, from May 21 to August 18, 2012.

2011 Invited researcher at the *Ecole Normale Supérieur de Paris* (ENS) by Prof. Raúl MADARIAGA, from 14 to 31 October 2011.

2010 Visiting researcher at the *UMR Géoazur Sophia-Antipolis*, Nice, France, by Dr. Stéphane GAFFET, November 22-30, 2010.

Visiting researcher at the *National Research Institute for Earth Science and Disaster Prevention* (NIED), Tsukuba, Japan, by Profs. Yoshimitsu OKADA and Eiichi FUKUYAMA, October 11-15, 2010.

Guest researcher at the *Ecole Normale Supérieur* de Paris (ENS) by Prof. Raúl MADARIAGA, from July 2 – July 9, 2010.

2009 Visiting researcher at the *Laboratoire de Geophysique Interne et Tectonophysique* of the Joseph Fourier University, Grenoble, France by Profs. Jean VIRIEUX, Michel CAMPILLO, Michel BOUCHON and David AMITRANO. From July 1 to November 15, 2009.

Visiting researcher at the *Ecole Normale Supérieur de Paris*, ENS by Prof. R. MADARIAGA from July 15 – August 15, 2009.

2008 Visiting researcher at the *Laboratoire de Geophysique Interne et Tectonophysique*

of the Joseph Fourier University, Grenoble, France. by J. VIRIEUX, M. CAMPILLO and F. COTTON, from June 14 – July 4, 2008.

2007 Visiting researcher at the *Department of Geological Sciences*, San Diego State University (SDSU), California, USA, by Prof. K. OLSEN and Prof. S. DAY, December 3 – December 9, 2007.

Journal Refereeing

Seismological Research Letters
Since December 2019.

Nature Geoscience
Since September 2018.

Mexican Journal of Geological Sciences
Since September 2015.

Journal of Geophysical Research
Since April 2013.

Cambridge University Press, "Earth & Planetary Science"
Since September 2011.

Geophysical Research Letters
Since August 2010.

Geophysics
Since January 2010.

Bulletin of the Seismological Society of America
Since February 2008.

Geophysical Journal International
Since September 2006.

Editorial Boards

2020 – present

Permanent Editor in the *Geophysical Journal International,* of the *Royal Astronomical Society of London* and the *Oxford University Press*.

Institutional Development and University Management

2019 – present

Member of the Earthquake Advisory Committee of the Mexico City Government. Ministry of Education, Science, Technology and Innovation (SECTEI).
Since February 2018.

2018 – present

Member of the Opinion Commission of the College of Physical Geography. Faculty of Philosophy and Letters.
National Autonomous University of Mexico.
Since February 2018.

2013 – 2017

Head of the Department of Seismology.
Institute of Geophysics.
National Autonomous University of Mexico.
August 2013 to March 2017.

2010 – 2012

Representative of the Department of Seismology in the Internal Council (board of directors).
Institute of Geophysics.
National Autonomous University of Mexico.

2009 Member of the scrutiny commission for the election of Representative Councillor of the Institute of Geophysics.
Technical Council for Scientific Research.
National Autonomous University of Mexico.

TRAINING OF HUMAN RESOURCES

Courses

2011 – to date (one course per year)
Professor of the Postgraduate School of Earth Sciences.
Institute of Geophysics, National Autonomous University of Mexico.
Level: Master's and Doctorate.
Course: "Advanced Seismology".

2011 European Commission Professor (*Erasmus Mundus Scholar Scholarship*) in the "*Centre for Post – Graduate Training and Research Engineering and Engineering Seismology*" (MEEES), Grenoble, Francia.
Level: Master's and Doctorate
Course: "Selected Topics in Seismology".

2010, 2011 and 2013
Professor of the Postgraduate School in Earth Sciences.
Institute of Geophysics, National Autonomous University of Mexico.
Level: Master's and Doctorate.
Course: "Introduction to Seismology".

2008 – 2009
Professor of the Faculty of Engineering.
National Autonomous University of Mexico.
Level: Bachelor's degree
Course: "Complex Variable Applied to Geophysics".

2003 – 2004
Assistant of Initial Training Program.
University of Nice – Sophia Antipolis, France.
Licence and maitrisse (equivalent to Bachelor's degree). Curso: *"Scientific programming language".*

Supervised Theses

2021 PhD Thesis
Defended by: Carlos Villafuerte.
Postgraduate School in Earth Sciences, UNAM.
Institute of Geophysics, Institute of Geology, Institute of Geography and Institute of Marine Sciences and Limnology.
Título de la tesis: “Slow Slip Events and Tectonic Tremor in the Mexican Subduction Zone: Implications for Seismic Hazard”.
Date of defense: 23 June 20 21.

2018 Master's Thesis
Defended by: Aron Mirwald.
Postgraduate School in Earth Sciences, UNAM.
Institute of Geophysics, Institute of Geology, Institute of Geography and Institute of Marine Sciences and Limnology.
Título de la tesis: “Dynamic Source Inversion of the 2017 Mw7.1 Puebla-Morelos Earthquake”.
Date of defense: September 17, 2018.

2017 Master's Thesis
Defended by: Emmanuel Caballero Leyva.
Postgraduate School in Earth Sciences, UNAM.
Institute of Geophysics, Institute of Geology, Institute of Geography and Institute of Marine Sciences and Limnology.
Thesis title: "Inversion of the seismic moment tensor of tectonic tremors in the state of Guerrero".
Date of defense: June 12, 2017.

2016 Master's Thesis
Defended by: Carlos Villafuerte Urbina
Postgraduate School in Earth Sciences
(UNAM)
Institute of Geophysics, Institute of Geology, Institute of Geography and Institute of Marine Sciences and Limnology.
National Autonomous University of Mexico.
Thesis title: "Evolution of Pore Pressure Associated with Silent Earthquakes: Implications in the Generation of Tectonic Tremors in Guerrero, Mexico".
Date of defense: August 5, 2016.

2015 Bachelor Thesis
Defended by: Emmanuel Caballero Leyva.
Faculty of Engineering, UNAM.
Thesis title: "Polarization of the Particle Motion of Tectonic Tremors and its Location in the State of Guerrero".
Date of defense: June 23, 2015.

Bachelor's Thesis
Defended by: Graciela Rojo Limón.
School of Sciences, University of the Americas, Puebla.
Thesis title: "Study of the crustal structure in Guerrero, Mexico, through the inversion of receiver functions".
Date of defense: May 20, 2015.

2014 Bachelor Thesis
Defended by: Carlos David Villafuerte
Urbina Faculty of Engineering. UNAM
Thesis title: "Poroelastic modeling of silent earthquakes in Guerrero, Mexico".
Date of Defense: July 31, 2014

2012 PhD Thesis
Defended by: Joshua Tago Pacheco
Postgraduate School in Earth Sciences, UNAM
Thesis title: "Computational modeling of visco-elasticity and dynamic rupture of earthquakes with 3D Discontinuous Galerkin".
Date of defense: November 30, 2012.

Master's Thesis
Defended by: John Jairo Díaz
Postgraduate School in Earth Sciences, UNAM.
Thesis title: "Inversion of the dynamics of Mexican earthquakes".
Date of defense: June 22, 2012.

Bachelor's Thesis
Defended by: Ana Rocher Maliachi.
Faculty of Engineering, UNAM.
Thesis title: "Integration and evaluation of a cortical velocity model for the modeling of strong movements in the central part of Mexico".
Date of defense: February 2, 2012.

Supervised Theses in Progress

PhD Thesis
Student: John Jairo Díaz
Postgraduate in Earth Sciences (UNAM)
Topic: "Evaluation of seismic hazard in Mexico City from dynamic models of seismic source".

PhD Thesis (suspended)
Student: Gabriel Reyes Alfaro
Postgraduate School in Earth Sciences (UNAM)
Topic: "Fine structure under the Colima Volcano by means of receiver functions".

Master's Thesis
Estudiante: Ana Rocher Maliachi
Postgraduate in Earth Sciences (UNAM)
Topic: "Seismicity rate analysis from template matching detections".

Postdoctoral Supervision

2013 – 2014
Dr. José David Sanabria Gómez, Institute of Geophysics (UNAM). Topic: "Modeling of the propagation of seismic waves in the Valley of Mexico" (currently Dean of the Faculty of Sciences of the Industrial University of Santander, Colombia).

Social Service Supervision

2013: Student Emmanuel Caballero Leyva, Faculty of Engineering (UNAM) Theme: "Polarization of the Tectonic Tremors Particle Movement" (concluded on June 14, 2013).

2009: Student Leticia Itzel Flores Sánchez, Faculty of Engineering (UNAM) Theme: "Implementation of free boundary conditions for the propagation of elastic waves in finite differences and analysis of the signals emitted by non-volcanic tremors" (concluded on February 24, 2010).

SCIENTIFIC PUBLICATIONS（出版物）：

Articles published in peer-reviewed international journals

46. Dominguez L. A., T. Taira, V.M. Cruz-Atienza, A. Iglesias, C. Villafuerte, D. Legrand, X. Pérez-Campos and M. Raggi. Interplate slip rate variation between closely spaced earthquakes in southern Mexico: The 2012 Ometepec and 2018 Pinotepa Nacional thrust events. *Journal of Geophysical Research, 127, doi: 10.1029／2022JB024292,* 2022.

45. Cruz-Atienza, V.M., J. Tago, C. Villafuerte et al. Short-term interaction between silent and devastating earthquakes in Mexico. Nature Communications, 12, 2171, https://doi.org/10.1038/s41467-021-22326-6, 2021.

44. Plata-Martínez R., S. Ide, M. Shinohara, E. Garcia, N. Mizuno, L. A. Dominguez, T. Taira, Y. Yamashita, A. Toh, T. Yamada, J. Real, A. Husker, V. M. Cruz-Atienza and Y. Ito. Shallow slow earthquakes to decipher future catastrophic earthquakes in the Guerrero gap. Nature Communications, 12, 3876, https://doi.org/10.1038/s41467-021-24210-9, 2021.

43. Tago, J., V. M. Cruz-Atienza, C. Villafuerte, T. Nishimura, V. Kostoglodov, J. Real and Y. Ito. Adjoint Slip Inversion under a Constrained Optimization Framework: Revisiting the 2006 Guerrero Slow Slip Event. Geophysical Journal International, 226, 2, https://doi.org/10.1093/gji/ggab165, 2021.

42. Legrand D., A. Iglesias, S. K. Singh, V. M. Cruz-Atienza, C. Yoon, L. A. Dominguez, R. W Valenzuela, G. Suárez, O. Castro-Artola. The influence of fluids in the unusually high-rate seismicity in the Ometepec segment of the Mexican subduction zone. Geophysical Journal International, 226, 1, https://doi.org/10.1093/gji/ggab106, 2021.

41. Singh, S. K., L. Quintanar, D. Arroyo, V. M. Cruz-Atienza, V. H. Espíndola, D. Bello-Segura and M. Odaz. Lessons from a Small Local Earthquake (Mw

3.2) which Produced the Highest Acceleration Ever Recorded in Mexico City. Seismological Research Letters, doi: 10.1785/0220200123, 2020.

40. *Mirwald, A., V. M. Cruz-Atienza, J. Díaz-Mojica, A. Iglesias, S. K. Singh, C. Villafuerte and J. Tago. The September 19, 2017 (Mw7.1), intermediate-depth Mexican earthquake: a slow and energetically inefficient deadly shock. Geophysical Research Letters, 46, https://doi.org/10.1029/2018GL080904, 2019.

39. Suárez G., M. A. Santoyo, V. Hjorleifsdottir, A. Iglesias, C. Villafuerte and V. M. Cruz-Atienza. Large Scale Lithospheric Detachment of the Downgoing Cocos Plate: The 8 September 2017 Earthquake (Mw 8.2). Earth and Planetary Science Letters, 509, https://doi.org/10.1016/j.epsl.2018.12.018, 2019.

38. Singh, S. K., E. Reinoso, D. Arroyo, M. Ordaz, V. M. Cruz-Atienza, X. Pérez-Campos, A. Iglesias and V. Hjörleifsdóttir. Deadly Intraslab Mexico Earthquake of 19 September 2017 (Mw7.1): Ground Motion and Damage Pattern in Mexico City. Seismological Research Letters, https://doi.org/10.1785/0220180159, 2018.

37. Cruz-Atienza, V. M., C. D. Villafuerte and H. S. Bhat. Rapid tremor migration and pore-pressure waves in subduction zones. Nature Communications, doi:10.1038/s41467-018-05150-3, 2018.

36. Cruz-Atienza, V. M. and Yoshihiro Ito et al. A Seismo-Geodetic Amphibious Network in the Guerrero Seismic Gap, Mexico. Seismological Research Letters, 89, 4, doi: 10.1785/0220170173, 2018.

35. Sánchez-Reyes, H. S., J. Tago, L. Métivier, V. M. Cruz-Atienza and J. Virieux. An evolutive linear kinematic source inversion. Journal of Geophysical Research, 123, https://doi.org/10.1029/2017JB015388 2018.

34. Harris, R.A., et al. A Suite of Exercises for Verifying Dynamic Earthquake Rupture Codes. Seismological Research Letters, https://doi.org/10.1029/2017JB015388, 2018.

33. Maury J., S. Ide, V. M. Cruz-Atienza and V. Kostoglodov. Spatio-temporal variations in slow earthquakes along the Mexican subduction zone. Journal of Geophysical Research, doi:10.1002/2017JB014690, 2018.

32. *Villafuerte, C. and V. M. Cruz-Atienza. Insights into the Causal Relationship between Slow Slip and Tectonic Tremor in Guerrero, Mexico. Journal of Geophysical Research, 122, doi:10.1002/2017JB014037, 2017.

31. Cruz-Atienza, V. M., J. Tago, J. D. Sanabria-Gómez, E. Chaljub, V. Etienne, J. Virieux and L. Quintanar. Long Duration of Ground Motion in the aradigmatic Valley of Mexico. Nature - Scientific Reports, 6, 38807; doi: 10.1038/srep38807, 2016.

30. Maury, J., S. Ide, V. M. Cruz-Atienza, V. Kostoglodov, G. González-Molina and X. Pérez-Campos. Comparative study of non-volcanic tremor locations: characterization of slow earthquakes in Guerrero, Mexico. Journal of Geophysical Research, 121, doi:10.1002/2016JB013027, 2016.

29. UNAM Seismology Group. Papanoa, Mexico earthquake of 18 April 2014 (Mw7.2). Geofísica Internacional, 54-4, 363-386, 2015.

28. Dominguez, L. A., B. Yildirim, A. L. Husker, E. Cochran, C. Christensen, V. M. Cruz-Atienza, J. F. Lawrence. The Red Atrapa Sismos (Quake Catcher 1 Network in Mexico): Assessing Performance during Large and Damaging Earthquakes. Seismological Research Letters, 86, doi: 10.1785/0220140171, 2015.

27. Cruz-Atienza, V. M., A. Husker, D. Legrand, E. Caballero and V. Kostoglodov. Non-Volcanic Tremor Locations and Mechanisms in Guerrero, Mexico, from Energy-based and Particle-Motion Polarization Analysis. Journal of Geophysical Research, 120, doi: 10.1002/2014JB011389, 2015.

26. +Spica, Z., V. M. Cruz-Atienza, G. Reyes-Alfaro, D. Legrand and A. Iglesias. Crustal Imaging of Western-Michoacan and the Jalisco Block, Mexico, from Ambient Seismic Noise. Journal of Volcanology and Geothermal Research, 289, 193-201, doi: 10.1016/j.jvolgeores.2014.11.005, 2014.

25. +Maufroy, E., V. M. Cruz-Atienza, F. Cotton and S. Gaffet. Frequency-scaled curvature as a proxy for topographic site-effect amplification and ground-motion variability. Bulletin of the Seismological Society of America, 105, doi: 10.1785/0120140089, 2014.

24. *Díaz-Mojica, J., V. M. Cruz-Atienza, R. Madariaga, S. K. Singh, J. Tago and A. Iglesias. Dynamic Source Inversion of the M6.5 Intermediate-Depth Zumpango Earthquake in central Mexico: a Parallel Genetic Algorithm. Journal of Geophysical Research, 119, 7768-7785, doi: 10.1002/2013JB010854, 2014.

23. Singh, S.K., X. Pérez-Campos, V.H. Espíndola, V. M. Cruz-Atienza, and A. Iglesias. Intraslab Earthquake of 16 June 2013 (Mw5.9), One of the Closest Such Events to Mexico City. Seismological Research Letters, Vol. 85, No. 2, doi: 10.1785/0220130179, 2014.

22. Rivet, D., M. Campillo, M. Radiguet, D. Zigone, V. M. Cruz-Atienza, N. M. Shapiro, V. Kostoglodov, N. Cotte, G. Cougoulat, A. Walpersdorf and E. Daub. Seismic velocity changes, strain rate and non-volcanic tremors during the 2009-2010 slow slip event in Guerrero, Mexico. Geophysical Journal International, Vol. 195, No. 2, doi:10.1093/gji/ggt374, 2013.

21. Pérez-Campos, X., D. Melgar, S. K. Singh, Víctor M. Cruz-Atienza, A. Iglesias, V. Hjörleifsdóttir. Rapid estimation of fault parameters for tsunami warning along the Mexican subduction zone: A scenario earthquake in the Guerrero seismic gap. Seismol. Res. Lett., Vol. 84, No. 3, doi: 10.1785/0220120156, 2013.

20. UNAM Seismology Group. Ometepec-Pinotepa Nacional, Mexico Earthquake of 20 March 2012 (Mw7.5): A Preliminary Report. Geofísica Internacional. Vol 52, No. 2, p.p. 173-196, 2013.

19. *Tago, Josué, Víctor M. Cruz-Atienza, Jean Virieux, Vincent Etienne and Francisco J. Sánchez-Sesma. 3D hp-Adaptive Discontinuous Galerkin Method for Modeling Earthquake Dynamics. Journal of Geophysical Research, Vol. 117, B09312,

doi:10.1029/2012JB009313, 2012.

18. +Maufroy E., Víctor M. Cruz-Atienza and S. Gaffet. A robust method for assessing 3D topographic site effects: A case study at the LSBB Underground Laboratory, France. Earthquake Spectra, Vol. 28, No. 3, doi:10.1193/1.4000050, 2012.

17. Husker A. L., V. Kostoglodov, Víctor M. Cruz-Atienza, D. Legrand, N. Shapiro, J.S. Payero and M. Campillo. Temporal variations of non-volcanic tremor (NVT) locations in the Mexican subduction zone: finding the NVT sweet spot. Geochemistry, Geophysics, Geosystems, doi:10.1029/2011GC003916, 2012.

16. Virieux, Jean et al., Vincent Etienne et al. and Víctor M. Cruz-Atienza et al. Modelling seismic wave propagation for geophysical imaging. Chapter in the book "Seismic Waves, Research and Analysis", p. 52, IntechOpen, ISBN 978-953-307-944-8, 2011.

15. Roten D., K. B. Olsen, J. C. Pechmann, Víctor M. Cruz-Atienza and H. Magistrale. 3-D ground motion estimates for M7 earthquake scenarios on the Wasatch fault, Utah, using dynamic source descriptions, Part I: Long-period (0-1 Hz) results. Bull. Seismol. Soc. Am. 101-5, doi:10.1785/0120110031. 2011.

14. Rivet Diane, Michel Campillo, Nikolai M. Shapiro, Víctor M. Cruz-Atienza, Mathilde Radiguet, Nathalie Cotte, Vladimir Kostoglodov. Probing deformation at depth using passive seismology: evidence of nonlinear elastic crustal response to the Mexico 2006 slow slip event. Geophys. Res. Lett., doi:10.1029/2011GL047151, 2011.

13. Cruz-Atienza Víctor M., A. Iglesias, J. F. Pacheco, N. M. Shapiro and S. K. Singh. Crustal structure below the Valley of Mexico estimated from receiver functions. Bull. Seismol. Soc. Am., 100, 3304–3311, doi:10.1785/0120100051, 2010.

12. Cruz-Atienza Víctor M. and K. B. Olsen. Supershear mach-waves expose the fault breakdown slip. Special issue on 'Supershear Earthquakes', Tectonophysics, Elsevier, 493, 285–296, ed. S. Das and M. Bouchon.,

doi:10.1016/j.tecto.2010.05.012, 2010.

11. Cruz-Atienza Víctor M., Kim B. Olsen and Luis A. Dalguer. Estimation of the breakdown slip from strong motion seismograms: Insights from numerical experiments. Bull. Seismol. Soc. Am., 99, 3454-3469, doi: 10.1785/0120080330, 2009.

10. Benjemaa M., N. Glinsky-Olivier, Víctor M. Cruz-Atienza, J. Virieux. 3D Dynamic rupture simulations by a finite volume method. Geophysical Journal International, doi: 10.1111/ j.1365-246X.2009.04088.x, 2009.

9. Olsen, K.B., S.M. Day, L.A. Dalguer, J. Mayhew, Y. Cui, J. Zhu, Víctor M. Cruz-Atienza, D. Roten, P. Maechling, T.H. Jordan, D. Okaya, and A. Chourasia. ShakeOut-D: Ground Motion Estimates Using an Ensemble of Large Earthquakes on the Southern San Andreas Fault With Spontaneous Rupture Propagation, Geophysical Research Letters, 36, L04303, doi:10.1029/ 2008GL036832, 2009.

8. Harris R.A., M. Barall, R. Archuleta, E. Dunham, B. Aagaard, J.P. Ampuero, H. Bhat, Víctor M. Cruz-Atienza, L. Dalguer, P. Dawson, S. Day, B. Duan, G. Ely, Y. Kaneko, Y. Kase, N. Lapusta, Y. Liu, S. Ma, D. Oglesby, K. Olsen, A. Pitarka, S. Song, E. Templeton. The SCEC/USGS Dynamic Earthquake-Rupture Code Verification Exercise. Seismological Research Letters, 80, 119-126, doi:10.1785/gssrl.80.1.119, 2009.

7. Cruz-Atienza Víctor M., J. Virieux & H. Aochi. 3D Finite-Difference dynamic- rupture modelling along non-planar faults. Geophysics, 72, doi: 10.1190/1.2766756, 2007.

6. Benjemaa M., N. Glinsky, Cruz-Atienza Víctor M., J. Virieux & S. Piperno. Dynamic non-planar crack rupture by a finite-volume method. Geophysical Journal International, doi: 10.1111/ j.1365-246X.2006.03500.x, 2007.

5. Cruz-Atienza Víctor M. & J. Virieux. Dynamic rupture simulation of nonplanar faults with a finite difference approach. Geophysical Journal International, 158, 939-954, 2004.

4. Cruz-Atienza Víctor M., J.F. Pacheco, S.K. Singh, N.M. Shapiro, C. Valdés & A. Iglesias. Size of Popocatépetl volcano explosions (1997-2001) from waveform inversion. Geophysical Research Letters, 28, 4027-4030, 2001.

3. Hernandez, B., N.M. Shapiro, S.K. Singh, J.F. Pacheco, F. Cotton, M. Campillo, A. Iglesias, Víctor M. Cruz-Atienza, J.M. Gómez & L. Alcántara. Rupture History of September 30, 1999 Intraplate Earthquake of Oaxaca, Mexico (Mw=7.5) from Inversion of Strong-Motion Data. Geophysical Research Letters, 28, 363-366, 2001.

2. Iglesias A., Víctor M. Cruz-Atienza, N.M Shapiro, S.K. Singh & J.F. Pacheco. Crustal structure of south-central Mexico estimated from the inversion of surface waves dispersion curves using genetic and simulated annealing algorithms. Geofísica Internacional, 40, 181-190, 2001.

1. Shapiro N.M., S.K. Singh, A. Iglesias-Mendoza, Víctor M. Cruz-Atienza & J.F. Pacheco. Evidence of low Q value below Popocatépetl volcano, and its implication to seismic hazard in Mexico City. Geophysical Research Letters, 27, 2753-2756, 2000.

Articles under review (indexed scientific journals)

2. *Villafuerte, C., V. M. Cruz-Atienza, J. Tago, D. Solano-Rojas, R. Garza-Girón, S. I. Franco, L. A. Dominguez and V. Kostoglodov. Slow slip events and megathrust coupling changes reveal the earthquake potential before the 2020 Mw 7.4 Huatulco, Mexico event. Under Review in Earth and Planetary Science Letters (also posted on Earth and Space Science Open Archive, https://doi.org/10.1002/essoar.10504796.4), November 2020.

* The first author was/is a student under the direction of Víctor M. Cruz Atienza.
+ The first author was/is a student under the close supervision of Víctor M. Cruz Atienza.

Articles published in peer-reviewed conference proceedings

7. Maufroy, E., P. Lacroix, E. Chaljub, C. Sira, G. Grelle, L. Bonito, M. Causse, V. M. Cruz-Atienza, F. Hollender, F. Cotton and P.-Y. Bard. Towards Rapid Prediction of Topographic Amplification at Small Scales: Contribution of the FSC Proxy and Pleiades Terrain Models for the 2016 Amatrice Earthquake (Italy, Mw 6.0). 16th European Conference on Earthquake Engineering, Thessaloniki, Grece, 2018.

6. Sánchez-Sesma F. J., M. Rodríguez, U. Iturrarán-Viveros, A. Rodríguez-Castellanos, M. Suárez, V.M. Cruz-Atienza and D. Rivet. Estimation of site effects using environmental vibration. XVII Congreso Nacional de Ingeniería Sísmica, 11-14 November, Puebla, Mexico, 2009.

5. Maufroy E., V. M. Cruz-Atienza, S. Operto, O. Sardou, G. Sénéchal, M. Dietrich, and S. Gaffet. Modelisation of Topographic site effect 3D at the Low Noise Underground Laboratory (LSBB), Rustrel, France. 14e World Conference on Earthquake Engineering, 12-17 Octuber, Beijing, China, 2008.

4. Dalguer L.A., S.M. Day, K. Olsen and V. M. Cruz-Atienza. Rupture models and ground motion for Shakeout and other southern San Andreas fault scenarios. 14e World Conference on Earthquake Engineering, 12-17 Octuber, Beijing, China, 2008.

3. Mellors R, V. M. Cruz-Atienza, A. Aulia and Z. Kalmetyeva. Modeling the 2006 Kochkor, Kyrgyzstan earthquake and waverform propagation in the northern Tien Shan, Fourth International Symposium "Geodynamics of Intracontinental Orogens and Geoecological Problems", Bishkek, Kyrgzystan, 15-23 June, 2008.

2. Cruz-Atienza V. M., J. Virieux, Carine Khors-Sansorny, O. Sardou, S. Gaffet and M. Vallée, Quantitative estimation of PGA on the Côte d'Azur. 7th National Conference, French Association of Earthquake Engineering (AFPS), Ecole Centrale Paris, France, 2007.

1. Cruz-Atienza V. M., J. Virieux & H. Aochi, Modeling dynamic fracture by a finite difference method for non-planar faults. 7th National Conference, French Association of Earthquake Engineering (AFPS), Ecole Centrale Paris, France, 2007.

CITATIONS

2000 – Upto September 8, 2021

Reported by the Web of Science and Scopus.

Total citations: 1,315
Class A: 841
Class B: 337
Others: 137

H-index: 21 (Scopus)

Reported by Google Scholar.

Total citations: 2,081
H-index: 25
i10-Index: 40

PRESENTATIONS

Seminars and Lectures

2022 "Effective Mitigation of Earthquake and Tsunami Disasters: An Interdisciplinary Strategy", Conference, Civil Protection of the State of Guerrero, Acapulco de Juárez, Mexico, August 5, 2022.

2021 "*Interaction between Slow and Devastating Earthquakes in Mexico: The Extraordinary Case of the Seismic Sequence of 2017-2019".* Institutional seminar, cycle "Cuéntame un Nature", Institute of Geophysics, UNAM.

November 23, 2021.

"Some Observations Prior to the Devastating Seismic Sequence of 2017-2018 in Mexico",
Seminar "Free Seismations", Institute of Geophysics, UNAM. 28 October 20 21.

"*Seismic response in the Valley of Mexico: a physical perspective from recent models and observations".* Webinar for the Mexican Mathematical Society. Joint Colloquium on Applied Mathematics. Mexico, May 26, 2021.

2020 *"How Stable is Unstable? Chatting between Silent and Devastating Earthquakes".* Webinario en el Lamont-Doherty Earth Observatory, Columbia University, New York, USA, October 16, 2020.

"Short-Term Interaction between Silent and Devastating Earthquakes, and the Role of Interplate Velocity Changes in the Mexican Megathrust". Webinario Internacional, Subduction Zones 4D – National Science Foundation Initiative, October 9, 2020.

2019 "*Short-term Interactions between Silent and Devastating Earthquakes in Mexico*", SZ4D– National Science Fundation, Megathrust Modeling Initiative, Oregon University, USA, October 7, 2019.

"*Evaluation of the Danger Associated with Large Earthquakes and Tsunamis in Guerrero for Risk Mitigation*", event "The day of Geophysics", Faculty of Engineering, UNAM, Mexico, March 1, 2019 (plenary conference).

2018 *"Insights into the physics of the September 19th, 2017 (Mw7.1) Earthquake: from the source to the damaging ground motion in Mexico City",* Seminar, Institute of Geophysics, UNAM, Mexico, February 13, 2018.

"Rapid Tremor Migration and Pore Pressure Waves in Subduction Zones" Cycle of seminars of Mathematical and Computational Modeling, Institute of Geophysics, UNAM, Mexico, March 25, 2018.

"A Look at the Physics of the Earthquake 19-S-2017: From the Seismic Source, to the Devastating Strong Movements in Mexico City", Keynote Lecture, Faculty of

Engineering, UNAM, Mexico, March 2, 2018.

2017 *"The M7.1 Earthquake of 2017 in Mexico City: A Model of the Observed Seismic Response"*, Seminar "Sandoval Vallarta", Institute of Physics, UNAM, September 27, 2017.

"What happened on September 19, 2017 in Mexico and where should we move to avoid new disasters?", Seminar, Center for Genomic Sciences, UNAM, Mexico, December 5, 2017.

"What happened on September 19, 2017 in Mexico and where should we move to avoid new disasters?", Universidad Iberoamericana, Mexico, November 29, 2017.

2016 *"Seismic Hazard and Long Duration of Ground Motion in the Valley of Mexico",* Seminario, Department of Geophysics, Stanford University, USA, December 1, 2016.

"*Seismic Danger and Long Duration of Soil Movement in the Valley of Mexico*", XXVIII National Meeting of Geotechnical Engineering in Mérida, Yucatán, Conferendia Magistral, November 24, 2016.

2015 *"Tectonic Tremor Modulation by Intraslab Fluid Diffusion During Silent Earthquakes in Guerrero, Mexico",* Seminario, Institut de Physique du Globe de Paris, France, July, 2 2015.

2014 *"Physics of Intermediate-Depth Earthquakes. Dynamic Source Inversion of an Intraslab Rupture"*, Seminario, Instituto Colombiano del Petróleo, Bucaramanga, Colombia, November 20, 2014.

2013 *"Toward physics-based earthquake modelling for hazard assessment"* Cycle of seminars of Mathematical and Computational Modeling, Seminar, Institute of Geophysics, UNAM, Mexico, April 5, 2013.

2012 *"Causal relationships between silent earthquakes and tectonic tremors in central Mexico",* Seminario, Bureau de Recherches Géologiques et Minières (BRGM), Orléans, France, July 19, 2012.

"DGCrack: a 3D hp-Adaptive Discontinuous Galerkin Method for Modeling Earthquake Dynamics", Seminario, Bureau de Recherches Géologiques et Minières (BRGM), Orléans, France, July 18, 2012.

"Causal relationships between silent earthquakes and tectonic tremors in central Mexico", Seminario, Institut des Sciences de la Tèrre (ISTèrre), Grenoble, France. July 5, 2012.

"Dynamic Source Inversion of Mexican Subduction Earthquakes: a New Parallel Genetic Algorithm", Seminario, Institut des Sciences de la Tèrre (ISTèrre), Grenoble, France. June 29, 2012.

"*DGCrack: a 3D hp-Adaptive Discontinuous Galerkin Method for Modeling Earthquake Dynamics",* Seminario, University of Southern California, Los Angeles, USA. February 6, 2012.

"Causal relationships between silent earthquakes and tectonic tremors in central Mexico" Seminario, Institute of Geophysics and Planetary Physics – SCPRIPPS Institution of Oceanography, La Jolla, USA. June 30, 2012.

2011 *"Toward a Unified Theory of Silent Seismicity in Mexico*" Instituto de Ingeniería, UNAM, Mexico. Seminars "Sismociones Libres", June 9, 2011.

2010 "*Constraining Dynamic Rupture Scenarios from Strong Motion Records: Subshear vs. Supershear Source Propagation*", Seminar, UMR Géoazur, Sophia-Antipolis, France, November 25, 2010.

"Seismic Velocity Dependence on Crustal Effective Stresses and its Correlation with NVT Activity During the 2006 Slow Slip Event, Mexico", Seminar, National Research Institute for Earth Science and Disaster Prevention (NIED), Tsukuba, Japan, October 12, 2010.

"The shock waves produced by transonic ruptures reveal the friction law",

Seminar, Laboratorio de Geología del Ecole Normale Supérieur de Paris, France, July 8, 2010.

"*Conic Waves Reveal the Friction of Supersonic Earthquakes*", Seminar, Faculty of Sciences, UNAM, Mexico, March 12, 2010.

2008 "*Numerical Modeling of the Dynamics of Seismic Ruptures*", Seminar, Institute of Geophysics, UNAM. Cycle of Seminars of "Mathematical and Computational Modeling", November 28, 2008.

"*Observing the Mechanics of an Earthquake*", Seminar, Institute of Geophysics, UNAM. Cycle of Seminars of the Institute of Geophysics, September 5, 2008.

"Can we observe the critical slip of a seismic rupture from seismograms?", Seminario, Institut de Radioprotection et Sûreté Nucléaire (IRSN), Paris, France. Invitación por colaboración académica, June 30, 2008.

"Can we observe the critical slip of a seismic rupture from seismograms?", Seminario, Joseph Fourier University, Grenoble, France. Laboratory of Internal Geophysics and Tectonophysics (LGIT), June 26, 2008.

"*Critical slip of the seismic source from actual seismograms?*", Seminar, Institute of Engineering, UNAM, Mexico. Cycle "Free Seismations", June 6, 2008.

2007 *"A Finite Volume Approach for Modeling Rupture Dynamics",* Seminar, University of Southern California, Los Angeles, California, USA, February 12, 2007.

"Dynamic rupture along non-planar faults and wave propagation effects on ground accelerations", Seminar, San Diego State University, San Diego, California, USA. Seminar at "Department of Geological Sciences", Januaty 24, 2007.

Conference and Workshops Talks as First Author

1. Cruz-Atienza V. M., Josué Tago, Sara Franco, Jorge Real, Luis A. Domínguez, Ana Rocher, Carlos Villafuerte, Vladimir Kostoglodov, Yoshihiro Ito, Darío Solano, Ekaterina Kazachkina, Arturo Ronquillo, Anne Becel, Oral: Seismogenesis in the Guerrero Seismic Gap: A Slow and Fast Swaying Slip. American Geophysical Union, Chicago, USA, December 16, 2022 (invited).
2. Cruz-Atienza, V. M., Josué Tago, Sara Franco, Jorge Real, Luis A. Domínguez, Ana Rocher, Carlos Villafuerte, Vladimir Kostoglodov, Yoshihiro Ito, Darío Solano, Ekaterina Kazachkina, Arturo Ronquillo, Anne Becel. Seismogenesis in the Guerrero Seismic Gap: A Slow and Fast Swaying Slip. Annual Meeting of the Mexican Geophysical Union, Puerto Vallarta, Mexico, November 2, 2022.
3. Cruz-Atienza, V. M., Josué Tago, Sara Franco, Jorge Real, Carlos Villafuerte, Vladimir Kostoglodov, Yoshihiro Ito, Darío Solano, Ekaterina Kazachkina, Arturo Ronquillo, Anne Becel, Takuya Nishimura, Luis A. Domínguez and Ana Rocher. Seismogenesis in the Guerrero Seismic Gap: A Slow and Fast Swaying Slip. International Joint Workshop on Slow-to-Fast Earthquakes, Nara, Japan, September 14, 2022.
4. Cruz-Atienza, V. M. and Yoshihiro Ito. From earthquake physics to risk mitigation: an interdisciplinary research backbone in Guerrero, Mexico. Workshop on Joint Research for Tsunami Hazard, Kyoto University, Japan, September 5, 2022 (invited).
5. Cruz-Atienza, V. M., Josué Tago, Vladimir Kostoglodov, Sara I. Franco, Darío Solano, Carlos Villafuerte, Jorge Real and Ekaterina Kazachkina. Rapid and Slow Slip at the Plate Interface Imaged from GPS and InSAR data: the 2020 Huatulco and 2021 Acapulco earthquakes. Coloquio del 70th Anniversary of the "Servicio Mareográfico Nacional", Instituto de Geofísica, UNAM, México, August 16, 2022.
6. Cruz-Atienza, V. M., C. Villafuerte, J. Tago, M. Wei, R. Garza-Girón, L.A. Dominguez, D. Solano, V. Kostoglodov, T. Nishimura, S.I. Franco, J. Real, M.A. Santoyo, Y. Ito and E. Kazachkina. Cascading interaction between silent and devastating earthquakes in Mexico. International Joint (online) Workshop on Slow Earthquakes 2021, "Science of Slow Earthquakes" Japan project, September 14, 2021.
7. Cruz-Atienza, V. M., C. Villafuerte, J. Tago, M. Wei, R. Garza-Girón, L.A. Dominguez, D. Solano, V. Kostoglodov, T. Nishimura, S.I. Franco, J. Real, M.A. Santoyo, Y. Ito and E. Kazachkina. Short-Term Interaction between

Silent and Devastating Earthquakes. International (online) Workshop, Mexico-Japan, SATREPS-UNAM project. February 25, 2021.

8. Cruz-Atienza, V. M., J. Tago, C. Villafuerte, V. Kostoglodov, J. Real, R. , Y. Ito, M. Wei, S. I. Franco, T. Nishimura, Y. Kaneko, Y. Liu, B. Shibazaki, E. Kazachkina and M. A. Santoyo. Short-Term Crosstalk Between Silent and Devastating Earthquakes in Mexico. Annual Meeting of the Mexican Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.
9. Cruz-Atienza, V.M., C. Villafuerte, J. Tago and E. Chaljub. Insights on the physics of the September 19, 2017 (Mw7.1) damaging ground motion in the Valley of Mexico. Numerical Modeling of Earthquake Motions: Waves and Ruptures, Workshop, Smolenice Castle, Slovak Republic, June 30 – July 4, 2019.
10. Cruz-Atienza, V. M., Villafuerte, C., Bhat, H. Rapid Tremor Migration and Pore- Pressure Waves in Subduction Zones. Megathrust Modeling Workshop, SZ4D National Science Foundation Initiative, University of Oregon, 2019 (Invited).
11. Cruz-Atienza, V. M., J. Tago, C. Villafuerte, M. Wei, V. Kostoglodov, J. Real, Y. Ito, S. I. Franco, T. Nishimura, Y. Kaneko, Y. Liu, E. Kazachkina, M. A. Santoyo and B. Shibazaki. Short-term Interactions between Silent and Devastating Earthquakes in Mexico. Megathrust Modeling Workshop, SZ4D National Science Foundation Initiative, University of Oregon, 2019 (Invited).
12. Cruz-Atienza, V. M., Villafuerte, C., Bhat, H. Rapid Tremor Migration and Pore- Pressure Waves in Subduction Zones. Annual Meeting Seismological Society of America, Seattle, Washington, 2019.
13. Cruz-Atienza, V. M., Tago, J., Villafuerte, C., Kostoglodov, V., Real, J., Ito, Y., Franco, S. I., Nishimura, T., Kazachkina, E., Santoyo, M. A., Zavala-Hidalgo, J. Short-Term Bidirectional Interaction between Slow Slip Events and Three Devastating Earthquakes in Mexico. Annual Meeting Seismological Society of America, Seattle, Washington, 2019.
14. Cruz-Atienza V. M., Carlos Villafuerte, Josué Tago, Emmanuel Chaljub and José D. Sanabria-Gómez. A computational model of the seismic response in the Valley of Mexico after the damaging M7.1 earthquake of September 19, 2017. Annual Meeting Seismological Society of America, Miami, Florida, 2018.
15. Cruz-Atienza V. M., Josue Tago, Carlos David Villafuerte, Emmanuel Chaljub, José David Sanabria-Gómez, Oral: A physical model of the Mexico City seismic response

after the damaging M7.1 earthquake of September 19, 2017. American Geophysical Union, New Orleans, USA, December, 2017.

16. Cruz-Atienza V. M., Josué Tago, José D. Sanabria, Emmanuel Chaljub and Jean Virieux. Long Duration of Ground Motion in the Paradigmatic Valley of Mexico. 5o Congreso Metropolitano de Modelado y Simulación Numérica, Facultad de Ciencias, UNAM, mayo de 2017. (Invited)
17. Cruz-Atienza V. M., Carlos Villafuerte, Harsha Bhat. Tectonic Tremor Migration Induced by Pore Pressure Solitons In Guerrero, Mexico. Mexican Geophysical Union (UGM), Puerto Vallarta, México, Geos, Vol. 36, 2016.
18. Cruz-Atienza V. M., Carlos Villafuerte, Harsha Bhat. Tectonic Tremor Modulation by Intraslab Fluid Diffusion During Slow Earthquakes. Joint Workshop on Slow Earthquakes – Earthquake Research Institute, Tokyo, 2016. (Invited)
19. Cruz-Atienza Víctor M., Carlos David Villafuerte, Harsha S Bhat, Guillermo Gonzalez, Allen L Husker, Vladimir Kostoglodov and Michel Campillo. Tectonic Tremor Modulation by Intraslab Fluid Diffusion During Slow Earthquakes. American Geophysical Union, Chapman Conference in Slow Slip Phenomena, Ixtapa, México, 2016.
20. Cruz-Atienza Víctor M., Carlos Villafuerte, Emmanuel Caballero, Vladimir Kostoglodov and Allen Husker. Tectonic Tremor Modulation by Intraslab Fluid Diffusion During Silent Earthquakes. International Workshop on Tectonic Tremors and Silent Seismicity. UNAM, Mexico City, February 25-27, 2015.
21. Cruz-Atienza, Victor M., Sanabria-Gomez, Jose D., Tago, Josue, Chaljub, Emmanuel, Virieux, jean. Surface-wave propagation modes in the Valley of Mexico: insights from realistic 3D earthquake simulations. Numerical Modeling of Earthquake Motion, Workshop, Smolenice Castle, Slovak Republic, July 5 – 9, 2015.
22. Cruz-Atienza, Víctor M., Carlos Villafuerte, Harsha Bhat, Guillermo González, Emmanuel Caballero, Allen Husker, Vladimir Kostoglodov and Michel Campillo. Tectonic Tremor Modulation by Intraslab Fluid Diffusion During Silent Earthquakes, Mexican Geophysical Union (UGM); Geos, Vol. 35, 2015.
23. Cruz-Atienza, Víctor M., Carlos Villafuerte, Emmanuel Caballero, Vladimir Kostoglodov and Allen Husker. Tectonic Tremor Modulation by Intraslab Fluid Diffusion During Silent Earthquakes. Annual Meeting Seismological Society of

America, Pasadena, California, 2015.
24. Cruz-Atienza, Víctor M., José D. Sanabria, Josué Tago, Emmanuel Chaljub and Jean Virieux Surface-Wave Propagation Modes in the Valley of Mexico: Insights from Realistic 3D Earthquake Simulations. Annual Meeting Seismological Society of America, Pasadena, California, 2015.
25. Cruz-Atienza V. M., Allen Husker, Carlos Villafuerte, Emmanuel Caballero, Denis Legrand and Vladimir Kostoglodov. Nonvolcanic Tremors and Intraslab Fluid Migration in Guerrero, Mexico, During Slow Slip Transients, Abstract S53C-4522, American Geophysical Union, San Francisco, Calif., 15-19 Dec, 2014.
26. Cruz-Atienza, V. M., Allen Husker, Carlos Villafuerte, Emmanuel Caballero, Denis Legrand and Vladimir Kostoglodov. Nonvolcanic Tremors and Intraslab Fluid Migration in Guerrero, Mexico, During Slow Slip Transients, Mexican Geophysical Union (UGM); Geos, Vol. 34, Resumen 0274, 2014.
27. Cruz-Atienza, V. M., J. D. Sanabria, J. Tago, E. Chaljub and J. Virieux. Surface-Wave Propagation Modes in the Valley of Mexico: Insights from Realistic 3D Earthquake Simulations, 30th IUGG Conference on Mathematical Geophysics; Mérida, Yucatán, 2014 (invited).
28. Cruz-Atienza, V. M., A. Husker, D. Legrand, V. Kostoglodov, Energy-based location and wavefield polarization analysis of tectonic tremors and LFEs in central Mexico, Mexican Geophysical Union (UGM); Geos, Vol. 33, No. 1, p. 252; 2013.
29. Cruz-Atienza, V. M., A. Husker, D. Legrand, V. Kostoglodov, Energy-based Location and Wavefield Polarization Analysis of Tectonic Tremors in Central Mexico, American Geophysical Union, Meeting of the Americas, Cancun, S22A-05, 2013.
30. Cruz-Atienza, V. M., J. D. Sanabria, J. Tago, V. Etienne, V. Hjörleifsdóttir, J. Virieux and E. Chaljub. Toward Physics-Based Earthquake Modelling for Hazard Assessment. HPC-GA Project Workshop, Bilbao, Spain. March, 2013.
31. Cruz-Atienza Víctor M., Rivet Diane, Husker Allen, Campillo Michel, Legrand Denis y Kostoglodov Vladimir. Middle Crust Tectonic Tremor Driven by Silent- Earthquakes Water Pumping and Nonlinear Strain Causal Relationships In Silent Seismicity Of Central Mexico. Mexican Geophysical Union (UGM), Geos, Vol. 32, No. 1, p. 178, Noviembre, 2012.
32. Cruz-Atienza Víctor M.; Diane N. Rivet; Vladimir Kostoglodov; Allen L.

Husker; Denis Legrand; Michel Campillo. Toward a Unified Theory of Silent Seismicity in Central Mexico. American Geophysical Union, Eos Trans. AGU, 92, Fall Meet. Suppl., Abstract S23B-2264, 2011.

33. Cruz-Atienza Víctor M., Rivet Diane, Kostoglodov Vladimir, Husker Allen, Legrand Denis y Campillo Michel. Causal Relationships In Silent Seismicity Of Central Mexico. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 178, Noviembre, 2011.
34. Cruz-Atienza Víctor M., Legrand Denis, Kostoglodov Vladimir y Husker Allen. A New Location Technique For Non Volcanic Tremors And Low Frequency Earthquakes. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 180, Noviembre, 2011.
35. Cruz-Atienza Víctor M., Hjorleifsdottir Vala and Rocher Ana. Simulating an M8.2 in the Guerrero gap. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 150, November, 2011.
36. Cruz-Atienza V.M. and K.B. Olsen. Supershear mach-waves expose the fault breakdown slip. American Geophysical Union, Eos Trans. AGU, 91, Fall Meet. Suppl., Abstract S43A-2053, San Francisco, EUA, 2010.
37. Cruz-Atienza V. M., Rivet D., Kostoglodov V., Campillo M. and Shapiro Nikolai. Seismic Velocity Dependence On Crustal Effective Stresses During The 2006 Slow Slip Event, Mexico. Mexican Geophysical Union (UGM), Geos, Vol. 30, No. 1, p. 89, Puerto Vallarta, México, 2010.
38. Cruz-Atienza V. M. and K. B. Olsen. Supershear mach-waves expose the fault breakdown slip. Mexican Geophysical Union (UGM), Geos, Vol. 30, No. 1, p. 89, Puerto Vallarta, México, 2010.
39. Cruz-Atienza V. M. and K. B. Olsen. Supershear Mach-Waves Expose the Fault Breakdown Slip. 7th ACES International Workshop, Otaru, Japan, October 3-8, 2010.
40. Cruz-Atienza V. M. and K. B. Olsen. Supershear mach-waves expose the fault breakdown slip. Earthquake Source Dynamics: Data and Data-constrained Numerical Modeling Workshop, Smolenice Castle, Slovak Republic, June 27 – July 1, 2010.
41. Cruz-Atienza V.M. and K.B. Olsen, Conic Waves Reveal the Friction of Supersonic Earthquakes. Numerical Simulation Workshop, Faculty of Sciences, UNAM, May 11-12, 2010 (invited).

42. Cruz-Atienza V.M., K.B. Olsen and L.A. Dalguer. Estimation of the Breakdown Slip Directly from Near-Fault Strong Motion Seismograms? Insights from Numerical Experiments. Seismological Society of America Annual Meeting, Monterey, California, USA, April 8-10, 2009. (Invited)
43. Cruz-Atienza V.M. and J. Virieux. Modelling Some Effects of Fault Geometry on Rupture Dynamics. Geos, V.28, Mexican Geophysical Union (UGM) , Puerto Vallarta, Mexico, 2008.
44. Cruz-Atienza V.M., Kim B. Olsen and Luís A. Dalguer. Direct measurement of the breakdown slip from near-fault strong motion data, American Geophysical Union, 88, Fall Meet. Suppl., Abstract S21B-0575, 2007.
45. Cruz-Atienza V.M. and J. Virieux, Effects of fault geometry on rupture dynamics, CIG/SPICE/ IRIS/USAF Computational Seismology Workshop, Jackson, NH, USA, 2007. (Invited)
46. Cruz-Atienza V.M., Kim B. Olsen and Luís A. Dalguer, Direct measurement of Dc from near-fault strong motion, Southern California Earthquake Center Annual Meeting, Palm Spring, California, USA, 2007.
47. Cruz-Atienza V.M., J. Virieux, Carine Khors-Sansorny, O. Sardou, S. Gaffet and M. Vallée, Quantitative estimation of PGA on the Côte d'Azur. 7th National Conference, French Association of Paraseismic Engineering (AFPS), Ecole Centrale Paris, France, 2007. (Extended Abstract)
48. Cruz-Atienza V.M., J. Virieux & H. Aochi, Modeling dynamic fracture by a finite difference method for non-planar faults. 7th National Conference, French Association of Paraseismic Engineering (AFPS), Ecole Centrale Paris, France, 2007. (Extended Abstract)
49. Cruz-Atienza V.M., J. Virieux, O. Sardou, S. Gaffet and M. Vallée, Topographic and Bathymetric Effects on the Seismic Response of the Nice Bay Region, France. EOS Trans. American Geophysical Union, 87 (52), Fall Meet. Suppl., Abstract S41C- 1349, 2006.
50. Cruz-Atienza V.M., J. Virieux & H. Aochi, 3D nonplanar dynamic rupture in a heterogeneous medium: the pre-stress effect. Geophys. Res. Abs., V.8 (CDRom), 09594, European Geosciences Union , Vienna, Austria, 2006.
51. Cruz-Atienza V.M., J. Virieux, H. Aochi & S. Peyrat, 3D non-planar Finite Difference Dynamic Rupture: Application to the Landers Earthquake. EOS Trans. American Geophysical Union , 85(47), Fall Meet. Suppl., Abstract S32B-

06, 2004. (Invited)
52. Cruz-Atienza V.M., J. Virieux, S. Peyrat & S. Operto, Nonplanar dynamic rupture in a 3D finite difference approach , Geophys. Res. Abs., V.6 (CDRom), 03948, European Geosciences Union , Nice, France , 2004.
53. Cruz-Atienza V.M., & J. Virieux, Nonplanar dynamic rupture in finite difference modeling, Workshop on Numerical Modeling of Earthquake Source Dynamics – NMESD , Smolenice, République Slovaque, 2003.
54. Cruz-Atienza V.M. , J. Virieux & S. Operto, Dynamic Rupture Simulation of Bent Faults with a New Finite Difference Approach, Geophys. Res. Abs., V.5 (CDRom), 10614, European Geophysical Society – American Geophysical Union – European Union of Geosciences , Nice, France, 2003.
55. Cruz-Atienza V.M., J. Virieux & S. Operto, Dynamic Rupture Simulation of Bending Faults with a Finite Difference Approach, American Geophysical Union , Fall Meeting, San Francisco, USA, 2002.
56. Cruz-Atienza V.M., J.F. Pacheco, S.K. Singh & A. Iglesias-Mendoza. Velocity structure below the Popocatepetl volcano, Mexico, and near real time determination of its explosions size. Geophys. Res. Abs., V.3 (CDRom), European Geophysical Society, Nice, France, 2001.
57. Cruz-Atienza V.M., J.F. Pacheco, S.K. Singh, N.M. Shapiro, A. Iglesias-Mendoza & C. Valdés. Size of Popocatepetl volcano explosions from waveform inversion. Eos, Transactions, V.81, p. F903, American Geophysical Union, Fall Meeting, San Francisco, USA, 2000.
58. Cruz-Atienza V.M., J.F. Pacheco, S.K. Singh, N.M. Shapiro, C. Valdés & A. Iglesias- Mendoza. Quantitative analysis of waveforms in the Popocatépetl volcano. Geos, V.20, p. 347. Mexican Geophysical Union (UGM), Puerto Vallarta, Mexico, 2000.
59. Cruz-Atienza V.M., A. Iglesias-Mendoza, J.F. Pacheco & N.M. Shapiro. South-central Mexican crustal structure from receiver functions and surface wave dispersion using genetic and simulated annealing algorithms. Eos, Transactions, V.80, p. F720, American Geophysical Union, Fall Meeting, San Francisco, USA, 1999.
60. Cruz-Atienza V.M., J.F. Pacheco, N.M. Shapiro, S.K. Singh & A. Iglesias-Mendoza. The topography and constitution of mold under Mexico City: a problem within reach of receiver functions. Geos, V.19, p. 280. Mexican Geophysical Union

(UGM), Puerto Vallarta, Mexico, 1999.

61. Cruz-Atienza V.M., J.F. Pacheco & D. Escobedo Z. Analysis of receiver functions in the south-central part of the Mexican Republic. Inverse modeling of observations with Genetic Algorithms and Simulated Annealing: estimation of cortical structure. Geos, V.18, p. 282. Mexican Geophysical Union (UGM), Puerto Vallarta, Jalisco, Mexico, 1998.
62. Cruz-Atienza V.M., J.L. Rodríguez-Zúñiga & A. Iglesias-Mendoza. One-dimensional inverse modeling of teleseismic waveforms with Genetic Algorithms: optimization of the direct problem for receiver functions. Geos, V.17, p. 264. Mexican Geophysical Union (UGM), Puerto Vallarta, Jalisco, Mexico, 1997.

Conferences and Workshops Talks as co-Author

1. Anne Bécel, Brandon Shuck, Víctor Manuel Cruz-Atienza, Brian Boston, Donna Shillington, Shuoshuo Han, Jorge Arturo Real-Pérez, Joshua Burstein, Tanner Acquisto, Yoshihiro Ito, Davis Hagemeier. Exploring the habitat of slow and fast earthquakes in and around the Guerrero Seismic Gap off the Pacific coast of Mexico using new active source seismic data. American Geophysical Union Annuel Meeting, Chicago, EUA, 2022.
2. Kostoglodov V., And. Kazachkina, V.M. Cruz-Atienza and A. Husker. Slow Slip Events on Active La Venta-Chacalapa Fault System (Southern Mexico). Annual Meeting of the Mexican Geophysical Union, Puerto Vallarta, Mexico, November, 20 22.
3. Tago J. and V.M. Cruz-Atienza. ELADIN: a free software to study the kinematics of tectonic plates. Annual Meeting of the Mexican Geophysical Union, Puerto Vallarta, Mexico, November, 20 22.
4. Villafuerte, C, V. M. Cruz-Atienza, J. Tago, D. Solano-Rojas, R. Garza-Girón, S. I. Franco, L. A. Dominguez and V. Kostoglodov. Slow slip events and megathrust coupling changes reveal the earthquake potential before the 2020 Mw 7.4 Huatulco event. International Virtual Workshop, Mexico-Japan, SATREPS-UNAM project. February 25, 2021.
5. Tago, J., V. M. Cruz-Atienza, C. Villafuerte, T. Nishimura, V. Kostoglodov, J. Real and Y. Ito. ELADIN: A new tool to study the kinematics of plate

tectonics. International Virtual Workshop, Mexico-Japan, SATREPS-UNAM project. February 25, 2021.

6. Calo, M., V. M. Cruz-Atienza et al. Seismic velocity structure of the Cocos slab beneath Guerrero. International Virtual Workshop, Mexico-Japan, SATREPS- UNAM project. February 18, 2021.
7. Kostoglodov, V., V. M. Cruz-Atienza et al. Plate Interface and Seismotectonics in the Guerrero Gap. (With an application of the OBS and inland BB seismic data). International Virtual Workshop, Mexico-Japan, SATREPS-UNAM project. February 18, 2021.
8. Villafuerte, C., V. M. Cruz-Atienza, J. Tago and E. Chaljub. Physics of the Damaging Ground Motion in the Valley of Mexico on September 19th, 2017 (Mw 7.1). American Geophysical Union, San Francisco, USA, December, 2019.
9. Villafuerte, Carlos, Víctor M. Cruz-Atienza, Josué Tago, Nelson Pulido, Tomotaka Iwata, John Díaz-Mojica and Shinichi Matsushima. Broadband Strong Ground Motions Associated with Large Subduction Earthquakes in the Guerrero Seismic Gap, Mexico. Numerical Modeling of Earthquake Motions: Waves and Ruptures, Workshop, Smolenice Castle, Slovak Republic, June 30 – July 4, 2019.
10. Díaz-Mojica, J., V. M. Cruz-Atienza, R. Madariaga, S.K. Singh, J. Tago, A. Iglesias. Dynamic source inversion of an intermediate- depth earthquake: a slow and inefficient rupture with large stress drop and radiated energy. Numerical Modeling of Earthquake Motions: Waves and Ruptures, Workshop, Smolenice Castle, Slovak Republic, June 30 – July 4, 2019.
11. Mirwald, A., Cruz-Atienza, V. M., Díaz-Mojica, J., Iglesias, A., Singh, S. K., Villafuerte, C., Tago, J. The September 19, 2017 (Mw 7.1), Intermediate-Depth Mexican Earthquake: A Slow and Energetically Inefficient Deadly Shock. Annual Meeting Seismological Society of America, Seattle, Washington, 2019.
12. Ito, Yoshihiro, Víctor Cruz Atienza, Satoshi Ide, Allen Husker, Shoichi Yoshioka, Nobuhito Mori, Jorge Zavala Hidalgo, Michinori Hatayama, David Novelo Casanova, Katsuya Yamori, Oscar Zepeda Ramos, Genta Nakano, Tomás Sánchez Pérez. Hazards Assessment of Large Earthquakes and Tsunamis for Disaster Mitigation in The Mexican Pacific Coast. Annual Meeting of the Mexican

Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.

13. Real Pérez, Jorge, Vladimir Kostoglodov, Victor M. Cruz-Atienza, Allen Husker, Vala Hjörleifsdóttir, Yoshihiro Ito, Raymundo Omar Plata Martínez, Emmanuel Soliman Garcia, Sara Ivonne Franco Sanchez. Seismo-geodesic stations of the Satreps network in Mexico. Annual Meeting of the Mexican Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.
14. Gómez-Ramos, Octavio, Takuya Miyashita, Nobuhito Mori, Jorge Zavala-Hidalgo, Victor Manuel Cruz-Atienza, Yoshihiro Ito. A comparison between tunami and geoclaw for tsunami modeling in the pacific coast of mexico. Annual Meeting of the Mexican Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.
15. Kostoglodov, Vladimir, Victor Cruz Atienza, Yoshihiro Ito, Ekaterina Kazachkina. Tide Gauge Reveals Large Subduction Slow Slip Events in Guerrero. Annual Meeting of the Mexican Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.
16. Tago, Josué, Víctor M. Cruz-Atienza, Carlos Villafuerte, Takuya Nishimura, Vladimir Kostoglodov. New interplate slip Inversion methodology under a constrained optimization framework. Annual Meeting of the Mexican Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.
17. Plata-Martínez, Raymundo, Satoshi Ide, Naoto Mizuno, Akiko Toh, Masanao Shinohara, Tomoaki Yamada, Allen L. Husker, Victor M. Cruz-Atienza, Jorge Arturo Real, Yusuke Yamashita, Yoshihito Ito. Obs detection of Shallow Tremors at The Guerrero Gap, Mexico. Annual Meeting of the Mexican Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.
18. Dominguez-Ramirez, Luis, Taka'aki Taira, Denis Legrand, Arturo Iglesias, Victor Cruz-Atienza, Yoshihiro Ito. Repeating Earthquakes Distribution Along the Mexican Trench: How Slip Change Around the Ometepec-Pinotepa Nacional and Guerrero Gap Zone. Annual Meeting of the Mexican Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.
19. Villafuerrte, Carlos, Víctor M. Cruz-Atienza, Josué Tago, Nelson Pulido, Tomotaka Iwata, John Díaz-Mojica, Shri K. Singh. Broadband Strong Ground Motions in The Mexican Pacific Coast and In the Valley of Mexico Associated with Large Subduction Earthquakes in The Guerrero Seismic Gap. Reunión Anual de la Unión Geofísica Mexicana, Sesión SE12, Puerto Vallarta, México,

Noviembrer, 2019.
20. Díaz-Mojica, John, Víctor M. Cruz-Atienza, Josué Tago, Carlos Villafuerte, Pierre Lacan, Nelson Pulido. Ground Motions Prediction for Hazard Assessment in The Valley of Mexico Associated with Earthquakes in The Trans-Mexican Volcanic Belt. Reunión Anual de la Unión Geofísica Mexicana, Sesión SE12, Puerto Vallarta, México, Noviembrer, 2019.
21. Zavala-Hidalgo, Jorge, Víctor M. Cruz-Atienza, Yoshihiro Ito, Emmanuel Soliman García, Vala Hjorleifsdottir, Jorge Real, Vladimir Kostoglodov, Ma. Elena Osorio Tai. Recovering Tectonic Signals from Ocean Bottom Pressure Measurements in The Guerrero Seismic Gap. Annual Meeting of the Mexican Geophysical Union, Session SE12, Puerto Vallarta, Mexico, November, 2019.
22. Garcia, Emmanuel Soliman, Yoshihiro Ito, Víctor Cruz-Atienza, Jorge Zavala-Hidalgo, Vala Hjörleifsdóttir, Jorge Real, Vladimir Kostoglodov, Elena Osorio-Tai, Tomohiro Inoue. Time Scales of Ocean Bottom Pressure Variability from Numerical Simulations and Satellite Observations Over a Seafloor Seismogeodetic Array in The Guerrero Seismic Gap. Reunión Anual de la Unión Geofísica Mexicana, Sesión SE12, Puerto Vallarta, México, Noviembrer, 2019.
23. Villafuerte, Carlos, Víctor M. Cruz-Atienza, John Díaz-Mojica, Josué Tago and Nelson Pulido. Towards Ground Motions Prediction for Hazard Assessment Associated with large Subduction Earthquakes in the Guerrero Seismic Gap, Mexico. American Geophysical Union, Washington D.C., EUA, 2018.
24. Mirwald, A., Cruz-Atienza, V. M., Iglesias, A., Diaz-Mojica, J., Hjorleifsdóttir, V., et al. The September 19th, 2017, (M7.1), Intermediate-Depth Mexican Earthquake: An Energetically Inefficient Deadly Shock. Annual Meeting Seismological Society of America, Miami, Florida, 2018.
25. Singh, S. K., Reinoso, E., Arroyo, D., Ordaz, M., Cruz- Atienza, V. M., et al. Intraslab Morelos-Puebla, Mexico, Earthquake of 19 September 2017 (Mw7.1): Ground Motion and Damage Pattern in Mexico City. Annual Meeting Seismological Society of America, Miami, Florida, 2018.
26. Suarez, G., Santoyo, M. A., Hjörleifsdóttir, V., Iglesias, A., Villafuerte, C. D. Aand Cruz-Atienza, V. M. The 8 September 2017 Earthquake: An Example of Large Scale Lithospheric Faulting in the Subducted Cocos Plate. Annual Meeting Seismological Society of America, Miami, Florida, 2018.

27. Hjörleifsdóttir, V., Iglesias, A., Suarez, G., Santoyo, M. A., Villafuerte, C. D., Ji, C., Singh, S. K., Cruz-Atienza, V. M. The 2017/09/08 Mw 8.2 Tehuantepec, Mexico, Earthquake: A Large but Compact Dip-Slip Faulting Event Severing the Slab. Annual Meeting Seismological Society of America, Miami, Florida, 2018.
28. Maury, Julie, Satoshi Ide, Victor M Cruz-Atienza, Vladimir Kostoglodov, Oral: Spatio-temporal Variations in Slow Earthquakes along the Mexican Subduction Zone. American Geophysical Union, New Orleans, USA, December, 2017 (Talk).
29. Maufroy E., Lacroix P., Chaljub E., Sira C., Grelle G., Bonito L., Causse M., Cruz- Atienza V.M., Hollender F., Bard P.-Y, Oral: Towards rapid prediction of topographic amplification at small scales: contribution of the FSC proxy and Pléiades terrain models for the 2016 Amatrice earthquake (Italy, Mw 6.0). American Geophysical Union, New Orleans, USA, December, 2017.
30. Singh, Shri Krishna, Danny Arroyo, Victor M Cruz-Atienza, Mario Ordaz, Vala Hjorleifsdottir, Xyoli Perez-Campos, Arturo Iglesias, Cartel: The deadly Morelos-Puebla, Mexico Intraslab Earthquake of 19 September 2017 (Mw7.1): Was the Earthquake Unexpected and Were the Ground Motions and Damage Pattern in Mexico City Abnormal? American Geophysical Union, New Orleans, USA, December, 2017.
31. Hjorleifsdottir, Vala, Arturo Iglesias, Gerardo Suarez, Miguel Angel Santoyo, Carlos David Villafuerte, Chen Ji, Sara I Franco-Sánchez, Shri K. Singh, Victor M Cruz-Atienza, Ryosuke Ando, Oral: The 2017/09/08 Mw 8.2 Tehuantepec, Mexico Earthquake: A Large but Compact Dip-Slip Faulting Event Severing the Slab. American Geophysical Union, New Orleans, USA, December, 2017 (Talk).
32. Vala Hjörleifsdóttir, Yoshihiro Ito, Víctor M. Cruz-Atienza, et al, Cartel: Towards an Ocean Bottom Geodetic Observatory In Mexico: The First steps, Modalidad: Presencial, The Ocean Bottom Seismograph Instrument Pool Symposium, Portland Maine, USA, September, 2017.
33. Sánchez H., J. Tago, V. M. Cruz-Atienza, L. Metivier, M. Contreras, J. Virieux. An evolutive real-time source inversion based on a linear inverse formulation. American Geophysical Union, San Francisco, California, paper S21B-2710, 12-16 Dec, 2016.
34. Hjorleifsdottir, V., J. Chen, A. Iglesias, V. M. Cruz-Atienza, S. K. Singh. Slip

Distribution of Two Recent Large Earthquakes in the Guerrero Segment of the Mexican Subduction Zone, and Their Relation to Previous Earthquakes, Silent Slip Events and Seismic Gaps. American Geophysical Union, San Francisco, California, paper S21B-2717, 12-16 Dec, 2016.

35. Carlos Villafuerte, Victor Manuel Cruz-Atienza and Harsha Bhat. Modeling Pore Pressure Changes due to Slow Earthquakes: Implications for Tectonic Tremor Generation in Guerrero, Mexico. Annual Meeting of the Seismological Society of America, 2016.
36. Angel Ruiz-Angulo, Nobuhito Mori, Katsuichiro Goda, Tomohiroa Yasuda, Toshitaka Baba, Shunichi Koshimura, Erick Mas, Luisa Urra, Bruno Adriano, Jorge Zavala-Hidalgo, Vala Hjorleifsdottir, Yoshihiro Ito, Victor Cruz-Atienza. Overview Of The Satreps Tsunami Modeling Group: Comprehensive Tsunami Hazard Assessment Of The Mexican Pacific Coast. Mexican Geophysical Union (UGM), Puerto Vallarta, México, Geos, Vol. 36, 2016.
37. Carlos Villafuerte and Victor Manuel Cruz-Atienza. Pore pressure evolution due to slow earthquakes: Implications for Tectonic Tremor generation in Guerrero, Mexico. Mexican Geophysical Union (UGM), Puerto Vallarta, México, Geos, Vol. 36, 2016.
38. Vladimir Kostoglodov, Víctor Manuel Cruz-Atienza, Allen Husker, Yoshihiro Ito. Unveiling The Mystery Of The Guerrero Seismic Gap. Mexican Geophysical Union (UGM), Puerto Vallarta, México, Geos, Vol. 36, 2016.
39. Emmanuel Caballero-Leyva and Víctor M. Cruz-Atienza. Moment Tensor Inversion Of Tectonic Tremors In The Guerrero Subduction Zone. Mexican Geophysical Union (UGM), Puerto Vallarta, México, Geos, Vol. 36, 2016.
40. Julie Maury, Satoshi Ide, Victor M. Cruz-Atienza, Vladimir Kostoglodov, Xyoli Pérez-Campos. Detection Of Very Low Frequency Earthquakes In The Mexican Subduction Zone. Mexican Geophysical Union (UGM), Puerto Vallarta, México, Geos, Vol. 36, 2016.
41. Villafuerte C., Víctor M. Cruz-Atienza and Harsha S. Bhat. Modeling Pore Pressure Changes due to Slow Earthquakes: Implications for Tectonic Tremor Generation in Guerrero, Mexico. American Geophysical Union, Chapman Conference in Slow Slip Phenomena, Ixtapa, México, 2016.
42. Díaz-Mojica, J., V. M. Cruz-Atienza, R. Madariaga, S.K. Singh, J. Tago, A. Iglesias. Dynamic source inversion of an intermediate- depth earthquake: a slow and

inefficient rupture with large stress drop and radiated energy. Numerical Modeling of Earthquake Motion, Workshop, Smolenice Castle, Slovak Republic, July 5–9, 2015.

43. Hjörleifsdóttir Vala, Shri Krishna Singh, Víctor M. Cruz-Atienza, and Chen Ji. Are asperities persistent over time? Observations from the Mexican subduction zone. International Workshop on Tectonic Tremors and Silent Seismicity. Mexico City, February 25-27, 2015.
44. Kostoglodov Vladimir, Allen Husker, Jose A. Santiago, Víctor M. Cruz-Atienza, Nathalie Cotte and Andrea Walpersdorf. Three types of Slow Slip Events in Guerrero, Mexico. International Workshop on Tectonic Tremors and Silent Seismicity. Mexico City, February 25-27, 2015.
45. Villafuerte Carlos and Víctor M. Cruz-Atienza. Modeling of Intraslab Fluid Migration due to Slow Earthquakes in Guerrero, Mexico. International Workshop on Tectonic Tremors and Silent Seismicity. Mexico City, February 25-27, 2015.
46. Husker Allen, G. González, W. Frank, V. Kostoglodov, V. M. Cruz-Atienza and E. Salazar Monroy. Analysis of tectonic tremor during the 2009-2010 SSE in Guerrero, Mexico. International Workshop on Tectonic Tremors and Silent Seismicity. Mexico City, February 25-27, 2015.
47. Maury J., S. Ide, V.M. Cruz-Atienza, V. Kostoglodov and X. Pérez-Campos. Evidence of shear failure at the subduction interface by VLF earthquake characterization in Guerrero, Mexico, Abstract T31C-2899, American Geophysical Union, San Francisco, Calif., 15-19 Dec, 2015.
48. Nakata N., Greg Beroza, and Victor M. Cruz-Atienza. Imaging Low-Frequency Earthquakes with Geometric-Mean Reverse Time Migration, American Geophysical Union, San Francisco, Calif., 15-19 Dec, 2015.
49. Prieto, G. A., Piero Poli, Carlos Herrera, Sergio Ruiz, Victor Cruz-Atienza. Kinematic and dynamic source inversions using elliptical patches constrained by teleseismic source time function and source spectra estimation, American Geophysical Union, San Francisco, Calif., 15-19 Dec, 2015.
50. Vladimir Kostoglodov, Víctor M. Cruz-Atienza, Allen Husker and Yoshihiro Ito The Guerrero Seismic Gap: Seismo-geodetic motivations of the SATREPS Project. Mexican Geophysical Union (UGM); Geos, Vol. 35, 2015.
51. John Díaz-Mojica, Víctor M. Cruz-Atienza, Raúl Madariaga, Shri K. Singh, Josué Tago and Arturo Iglesias. Dynamic Source Inversion of an Intraslab Earthquake: a

Slow and Inefficient Rupture with Large Stress Drop and Radiated Energy. Abstract S53B-4503, American Geophysical Union, San Francisco, Calif., 15-19 Dec, 2014.

52. Villafuerte, C. and V. M. Cruz-Atienza. Intraslab Fluid Migration During Slow Slip Earthquakes and Nonvolcanic Tremors in Guerrero, Mexico. Abstract 25417, American Geophysical Union, San Francisco, Calif., 15-19 Dec, 2014.
53. Maufroy, E., F. Cotton, V. M. Cruz-Atienza, S. Gaffet. Frequency-Scaled Curvature as a Proxy for Topographic Site-Effect Amplification and Ground-Motion Variability. Abstract S12A-05, American Geophysical Union, San Francisco, Calif., 15-19 Dec, 2014.
54. Reyes Alfaro, G., V. M. Cruz-Atienza, X. Perez-Campos and G. Reyes. Receiver Function Imaging of Crustal and Lithospheric Structure Beneath the Jalisco Block and Western Michoacan, Mexico. Abstract S23C-4553, American Geophysical Union, San Francisco, Calif., 15-19 Dec, 2014.
55. Ito, Yoshihiro and V. M. Cruz-Atienza. An Ocean-Bottom Geodetic and Seismic Network for Assessing the Megaearthquake and Tsunami Hazard Potentials Along the Mexican Subduction Zone, Mexican Geophysical Union (UGM); Geos, Vol. 34, Resumen 0251; 2014.
56. Spica, Z. Gabriel, V. M. Cruz-Atienza, Reyes-Alfaro, Denis Legrand, Arturo IglesiasCrustal Imaging Of Western-Michoacan And The Jalisco Block, Mexico, From Ambient Seismic Noise, Mexican Geophysical Union (UGM); Geos, Vol. 34, Resumen 0672; 2014.
57. Hjörleifsdóttir, V., S. K. Singh and V. M. Cruz-Atienza. Slip distribution of the April 18th, 2014, Mw 7.2, Papanoa earthquake and it's relation to those of previous events in the region, Mexican Geophysical Union (UGM); Geos, Vol. 34, Resumen 0806; 2014.
58. UNAM Seismology Group. A Preliminary Study of Papanoa, Guerrero earthquake of 18 April, 2014 (Mw7.2), Mexican Geophysical Union (UGM); Geos, Vol. 34, Resumen 0724; 2014.
59. Husker, A., W. Frank, V. Kostoglodov, G. Gonzalez, N. Shapiro and V. M. Cruz-Atienza. An Overview of Non-Volcanic Tremor and New Findings from Low Frequency Earthquakes in Guerrero, Mexico, Mexican Geophysical Union (UGM); Geos, Vol. 34, Resumen 0737; 2014.
60. Flores Ibarra, K., V. Hjörleifsdóttir and V. M. Cruz-Atienza. Quantitative comparison of existing models for seismic wave propagation in the Mexican

territory, Mexican Geophysical Union (UGM); Geos, Vol. 34, Abstract 0701; 2014.
61. Department of Seismology, UNAM. Seismic Emergency Assistance Network – RAES, Mexican Geophysical Union (UGM); Geos, Vol. 34, Abstract 0717; 2014.
62. Husker, A. L., V. Kostoglodov, V. M. Cruz-Atienza, G. Gonzalez-Molina, Detailed analysis of non-volcanic tremor (NVT) and slow slip events (SSE) in Guerrero, Mexico reveals: (1) Up-dip low energy NVT associated with large (M>7) SSE; (2) Down-dip high energy NVT associated with small SSE; and (3) Continuous low energy NVT in the Mexican Sweet Spot, Abstract S41B-2423, American Geophysical Union, San Francisco, Calif., 9-14 Dec 2013.
63. Perez-Campos, X., S.K. Singh, D. Melgar, V.M. Cruz Atienza, A. Iglesias, A. Hjorleifsdottir, Rapid estimation of fault parameters for tsunami warning along the Mexican subduction zone based on real-time GPS (Invited), Abstract G51B-07, American Geophysical Union, San Francisco, Calif., 9-14, 2013.
64. Sanabria, J. D., V. M. Cruz-Atienza, J. Tago, E. Chaljub, V. Etienne, J. Virieux, Three-dimensional simulation of earthquakes in the Valley of Mexico, Mexican Geophysical Union (UGM); Geos, Vol. 33, No. 1, p. 147; 2013.
65. Rocher, A., V. M. Cruz-Atienza, V. Hjörleifsdóttir, A. Iglesias Mendoza, J. D. Sanabria Gómez, Determination of a velocity model in the central part of Mexico based on the dispersive properties of a laterlamente heterogeneous medium, Mexican Geophysical Union (UGM); Geos, Vol. 33, No. 1, p. 149; 2013.
66. Villafuerte, C. D., V. M. Cruz-Atienza, Diffusion of fluids in the Cocos plate induced by the quasi-static deformation of silent earthquakes in Guerrero, Mexico, Mexican Geophysical Union (UGM); Geos, Vol. 33, No. 1, p. 253; 2013.
67. Singh, S.K., X. Pérez-Campos, V. H. Espíndola Castro, V. M. Cruz-Atienza, A. Iglesias Mendoza, Instraslab earthquake of June 2013 (Mw5.9), one of the closest such events to Mexico City, Mexican Geophysical Union (UGM); Geos, Vol. 33, No. 1, p. 146, 2013.
68. Flores Ibarra, K., V. Hjörleifsdóttir, V. M. Cruz-Atienza, Quantification of the quality of existing models for seismic wave propagation in the Mexican territory, Mexican Geophysical Union (UGM); Geos, Vol. 33, No. 1, p. 149; 2013.
69. Díaz-Mojica, John, Víctor M. Cruz-Atienza, Madariaga Raúl Singh Shri y Iglesias Arturo. Dynamic Source Inversion of a M6.5 Intraslab Earthquake in Mexico: Application of a New Parallel Genetic Algorithm. American Geophysical Union, Meeting of the Americas, Cancun, S31B-07, 2013.
70. Hjörleifsdóttir, V., E. A. Solano, O. de la Vega, V. M. Cruz-Atienza, A.

glesias. Examples of the use of computational seismology in observational seismology. HPC-GA Project Workshop, Bilbao, Spain. March, 2013

71. Tago, J., V. M. Cruz-Atienza, E. Chaljub, V. Etienne, S. Day and J. Virieux. Modeling Earthquake Dynamics in Realistic 3D Media with an hp-Adaptive Discontinuous Galerkin Method. HPC-GA Project Workshop, Bilbao, Spain. March, 2013.
72. Domínguez, Luis A., Allen L Husker, Jesse F Lawrence, Victor M. Cruz-Atienza, Carlos M Valdes-Gonzales, Elizabeth S Cochran. Deployment and Earthquake Scenarios for the QCN in Mexico. American Geophysical Union, Eos Trans. AGU, 93, Fall Meet. Suppl., Abstract S21A-2432, 2012.
73. Díaz Mojica John Jairo, Cruz-Atienza Víctor M., Madariaga Raúl Singh Shri y Iglesias Arturo. Dynamic Source Inversion of a M6.6 Intraslab Earthquake in Mexico: Application of a New Parallel Genetic Algorithm. Mexican Geophysical Union (UGM), Geos, Vol. 32, No. 1, p. 150, Noviembre, 2012.
74. Tago Pacheco Josué, Cruz-Atienza Víctor M., Emmanuel Chaljub, Vincent Etienne, Steven Day, Jean Virieux and Francisco Sánchez-Sesma. Modeling Earthquake Dynamics in Realistic 3D Media with an hp-Adaptive Discontinuous Galerkin Method: Toward Physics Based Seismic Hazard Assessment. Mexican Geophysical Union (UGM), Geos, Vol. 32, No. 1, p. 118, Noviembre, 2012.
75. Rocher Ana, Cruz-Atienza Víctor M. and Hjorleifsdottir Vala. Integration and evaluation of a cortical velocity model for the modeling of strong movements in the central part of Mexico. Mexican Geophysical Union (UGM), Geos, Vol. 32, No. 1,p. 123, November, 2012.
76. Husker, A., L. A. Domínguez Rodríguez, J. Lawrence, V. Cruz-Atienza, C. Valdés González, E. Cochran, El deployment de la red de atrapa sismos y la prueba de terremotos grandes en Mexico, Mexican Geophysical Union (UGM); GEOS, Vol. 32, No. 1, p. 128; 2012.
77. Husker Allen, Kostoglodov Vladimir, Cruz-Atienza, Victor, Legrand Denis, Shapiro Nikolai y Campillo Michel. Analysis Of Two Distinct Groups Of Non-Volcanic Tremor (NVT) In Mexico, Mexican Geophysical Union (UGM), Geos, Vol. 32, No. 1, p. 124, Noviembre, 2012.
78. Singh, S. K., UNAM Seismology Gropu, Universidad Autónoma Metropolitana, Azcapozalco, Seismological Laboratory, Guerrero-Oaxaca, Mexico earthquake of March 20, 2012 (Mw7.4): An overview, Mexican Geophysical Union (UGM);

GEOS, Vol. 32, No. 1, p. 262; 2012.

79. Pérez-Campos, X., S. K. Singh, V. M. Cruz-Atienza, D. Melgar Moctezuma, A. Iglesias Mendoza, V. Hjorleifsdottir, Determination of tsunamigentic potential of a scenario earthquake in the Guerrero seismic gap along the Mexican subduction zone, Seismological Society of America Annual Meeting; San Diego, California; USA, 17-19 de abril de 2012.
80. Tago Josue; Víctor M. Cruz-Atienza; Jean Virieux; Vincent Etienne; Francisco J. Sánchez-Sesma. DGCrack: a 3D hp-Adaptive Discontinuous Galerkin Method for Modeling Earthquake Dynamics. SCEC Code Comparison Workshop, University of Southern California, Los Angeles, USA, 2012 (invitado).
81. Tago Josue; Víctor M. Cruz-Atienza; Jean Virieux; Vincent Etienne; Francisco J. Sánchez-Sesma. A 3D hp-Discontinuous Galerkin Method: Revisiting the M7.3 Landers Earthquake Dynamics. American Geophysical Union, Eos Trans. AGU, 92, Fall Meet. Suppl., Abstract S43C-2263, 2011.
82. Husker Allen L.; Vladimir Kostoglodov; Víctor M. Cruz-Atienza; Denis Legrand; Nikolai M. Shapiro; Juan S. Payero; Michel Campillo; Eduardo Huesca-Perez. Temporal variations of non-volcanic tremor (NVT) locations in the Mexican subduction zone: finding the NVT sweet spot. American Geophysical Union, Eos Trans. AGU, 92, Fall Meet. Suppl., Abstract S23B-2263, 2011.
83. Hjorleifsdottir Vala; Xyoli Perez-Campos; Arturo Iglesias; Víctor Cruz-Atienza; Chen Ji; Denis Legrand; Allen L. Husker; Vladimir Kostoglodov; Carlos Valdes Gonzalez. Recovering the slip history of a scenario earthquake in the Mexican subduction zone. American Geophysical Union, Eos Trans. AGU, 92, Fall Meet. Suppl., Abstract S43C-2250, 2011.
84. Kostoglodov Vladimir; Dimitri Zigone; Allen L. Husker; Michel Campillo; Diane N. Rivet; Nikolai M. Shapiro; Mathilde Radiguet; William Frank; Gregor Hillers; Nathalie Cotte; Glenn Cougoulat; Juan S. Payero; Víctor Cruz-Atienza. New Results of Studies of Slow Slip Events and Nonvolcanic Tremor in the Guerrero Seismic Gap, Mexico (G-GAP project). American Geophysical Union, Eos Trans. AGU, 92, Fall Meet. Suppl., Abstract S31G-08, 2011.
85. Tago Pacheco Josué, Cruz-Atienza Víctor M., Virieux Jean, Etienne Vincent y Sánchez Sesma Francisco José. A 3d Hp-Discontinuous Galerkin Method: Revisiting The M7.3 Landers Earthquake Dynamics. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 118, Noviembre, 2011.
86. Díaz Mojica John Jairo, Cruz-Atienza Víctor M., Madariaga Raúl and Ruiz Sergio.

Reversal of the dynamics of Mexican earthquakes. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 150, November, 2011.

87. Rocher Ana, Cruz-Atienza Victor M., Hjorleifsdottir Vala and Singh Shri Krishna. Integration and evaluation of a cortical velocity model for the modeling of strong movements in the central part of Mexico. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 123, November, 2011.
88. Husker Allen, Kostoglodov Vladimir, Cruz-Atienza Víctor M., Legrand Denis, Shapiro Nikolai, Huesca Pérez Eduardo, Campillo Michel y Payero De Jesús Juan Silvestre. Temporal Variations Of Non-Volcanic Tremor (Nvt) Locations In The Mexican Subduction Zone: Finding The Nvt Sweet Spot. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 178, Noviembre, 2011.
89. 62.Rivet Diane, Zigone Dimitri, Campillo Michel, Cruz-Atienza Víctor M., Radiguet Mathilde, Shapiro Nikolai y Husker Allen. Complex Relations Between Slow Slip Events, Non-Volcanic Tremors, And Seismic Wave Velocity Changes In Guerrero Mexico. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 180, Noviembre, 2011.
90. Hjorleifsdottir Vala, Pérez-Campos Xyoli, Iglesias Mendoza Arturo, Cruz-Atienza Víctor M., Husker Allen and Legrand Denis. Project for the Preparation of the Response to a Major Earthquake in Mexico: Introduction and Invitation. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 150, November, 2011.
91. Hjorleifsdottir Vala, Pérez-Campos Xyoli, Iglesias Mendoza Arturo, Cruz-Atienza Víctor M., Ji Chen, Legrand Denis, Husker Allen, Kostoglodov Vladimir and Valdés González Carlos. Recovery of the landslide history of a stage earthquake in the Mexican subduction zone. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 151, November, 2011.
92. Pérez-Campos Xyoli, Singh Shri Krishna, Iglesias Mendoza Arturo, Melgar Moctezuma Diego, Hjorleifsdottir Vala and Cruz-Atienza Víctor M. determining the tsunamigenic potential of an alleged earthquake off the coast of Guerrero. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 151, November, 2011.
93. Vera Padilla Gabriela Berenice, Iglesias Mendoza Arturo, Legrand Denis, Cruz-Atienza Víctor M. y Singh Shri Krishna. Analysis Of Green Functions Obtained By Cross Correlations For Mase Stations. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 181, Noviembre, 2011.
94. Legrand Denis, Iglesias Mendoza Arturo, Husker Allen, Pérez-Campos Xyoli,

Valenzuela Wong Raúl, Cruz-Atienza Víctor M., Valdés González Carlos, Sánchez Osvaldo, Hjorleifsdottir Vala y Group Student. Creation Of An Aftershock Group In Order To Record And Process Aftershocks Of A Potential Mexican Earthquake. Mexican Geophysical Union (UGM), Geos, Vol. 31, No. 1, p. 152, Noviembre, 2011.

95. Tago Pacheco, J., V.M. Cruz-Atienza, V. Etienne, J. Virieux, F.J. Sánchez-Sesma and E. Chaljub "Discontinuous Galerkin method for the propagation of viscoelastic waves", 1st. Metropolitan Congress of Modeling and Numerical Simulation, Faculty of Sciences, UNAM, May 2011.
96. Tago Pacheco, J., V.M. Cruz-Atienza, V. Etienne, J. Virieux, F.J. Sánchez-Sesma and E. Chaljub "Discontinuous Galerkin method for the dynamics of seismic rupture", 1st. Metropolitan Congress of Numerical Modeling and Simulation, Faculty of Sciences, UNAM, May 2011.
97. Rivet Diane, Mathilde Radiguet, Michel Campillo, Nikolai Shapiro, Victor Cruz-Atienza, Nathalie Cotte, Vladimir Kostoglodov and the G-GAP team. “Slow slip, speed change and tremors in the Guerrero gap”. Anual Meeting, Seismological Society of America, Abril de 2011.
98. Tago Pacheco J., V. M. Cruz-Atienza, Etienne V., Virieux J., E. Chaljub, M. Benjemaa and Sánchez Sesma F. J. 3D dynamic rupture with anelastic wave propagation using an hp-adaptive Discontinuous Galerkin method. American Geophysical Union, Eos Trans. AGU, 91, Fall Meet. Suppl., Abstract S51A-1915, San Francisco, EUA, 2010.
99. Rivet D. N., M. Campillo, N. M. Shapiro, V. M. Cruz-Atienza, M. Radiguet, N. Cotteand V. Kostoglodov. Probing deformation at depth using passive seismology: case of the Mexico 2006 slow slip event. American Geophysical Union, Eos Trans. AGU, 91, Fall Meet. Suppl., Abstract S12A-01, San Francisco, EUA, 2010.
100. Harris R.A. et al., The SCEC-USGS Dynamic Earthquake Rupture Code Verification Exercise: Regular and Extreme Ground Motion. American Geophysical Union, Eos Trans. AGU, 91, Fall Meet. Suppl., Abstract S41D-04, San Francisco, EUA, 2010.
101. Tago Pacheco J., Cruz-Atienza V. M., Etienne V., Virieux J. and Sánchez Sesma F. J.. Anelastic Wave Propagation With A Discontinuous Galerkin Method: An Unstructured Multiprocessor Solver. Mexican Geophysical Union (UGM), Geos, Vol. 30, No. 1, p. 92, Puerto Vallarta, México, 2010.
102. Díaz-Mojica John J., Víctor M. Cruz-Atienza, Madariaga Raúl and Ruíz Tapia

Sergio A. Modeling of the dynamics of the seismic source: parameterization of the inverse problem with global optimization methods. Mexican Geophysical Union (UGM), Geos, Vol. 30, No. 1, p. 91, Puerto Vallarta, Mexico, 2010.

103. Rocher Maliachi A., Cruz-Atienza V. M. and Rivet D.. Integration and validation of a cortical velocity model for the propagation of seismic waves in the central part of Mexico. Mexican Geophysical Union (UGM), Geos, Vol. 30, No. 1, p. 98, Puerto Vallarta, Mexico, 2010.
104. Harris R.A., M. Barall, R. Archuleta, B. Aagaard, J.-P. Ampuero, D.J. Andrews, V. Cruz-Atienza, L. Dalguer, S. Day, B. Duan, E. Dunham, G. Ely, A. Gabriel, Y. Kaneko, Y. Kase, N. Lapusta, S. Ma, H. Noda, D. Oglesby, K. Olsen, D. Roten, and
S. Song. The SCEC-USGS Dynamic Earthquake Rupture Code Verification Exercise: Regular and Extreme Ground Motion. Southern California Earthquake Center Annual Meeting, Palm Spring, California, USA, September 11-15, 2010.
105. Maufroy E., V. Cruz-Atienza, V. Etienne, S. Gaffet. Benefits of a statistical spectral ratio approach for 3D topographic site effect assessment. European Seismological Commission, Montpellier, France, September 6-10, 2010.
106. Husker A., E. Huesca, X. Novo, V. Kostoglodov, J. Payero, V. Cruz-Atienza, N. Shapiro. Low Frequency Earthquake (LFE) detection techniques produce false detections within Non-Volcanic Tremors (NVT) confining NVT to the deep LFE zone in Japan, but in Mexico NVT are located in both the upper and lower crust using standard location techniques. European Seismological Commission, Montpellier, France, September 6-10, 2010.
107. Tago J., V.M. Cruz-Atienza, V. Etienne, J. Virieux and F.J. Sánchez-Sesma. Discontinuous Galerkin for viscoelastic wave modeling. Numerical Simulation Workshop, Faculty of Sciences, UNAM, May 11-12, 2010.
108. Harris, R. et al., The SCEC-USGS Rupture Dynamics Code Comparison Exercise. Seismological Society of America Annual Meeting, Portland, Oregon, USA, April 21–23, 2010.
109. Roten, D., Olsen, K.B., Pechmann, J.C., Cruz-Atienza, V.M., And Magistrale, H., Ground Motion Predictions from 0-10 Hz for M7 Earthquakes on the Salt Lake City Segment of the Wasatch Fault, Utah. Seismological Society of America Annual Meeting, Portland, Oregon, USA, April 21–23, 2010.
110. Rivet D. N., M. Campillo, N. M. Shapiro, S. K. Singh, V. M. Cruz-Atienza.

Studying propagation of seismic waves across the Valley of Mexico from correlations of seismic noise. G-Gap project workshop, March 8-12, Beaune, France, 2010.

111. Rivet D. N., M. Campillo, N. M. Shapir, S. K. Singh, V. M. Cruz-Atienza, L. Quintanar, C. Valdés. Studying propagation of seismic waves across the Valley of Mexico from correlations of seismic noise. American Geophysical Union, Eos Trans. AGU, 90, Fall Meet. Suppl., Abstract S41C-1948, San Francisco, EUA, 2009.
112. Roten D., K. B. Olsen, V. M. Cruz-Atienza, J. C. Pechmann, H. W. Magistrale. 3-D ground motion modeling for M7 dynamic rupture earthquake scenarios on the Wasatch fault, Utah. American Geophysical Union, Eos Trans. AGU, 90, Fall Meet. Suppl., Abstract S42B-07, San Francisco, EUA, 2009.
113. Roten, D., K.B. Olsen, H. Magistrale, J.C. Pechmann and V.M. Cruz-Atienza. 3-D Ground Motion Modeling for M7 Dynamic Rupture Earthquake Scenarios on the Wasatch Fault, Utah. Seismological Society of America Annual Meeting, Monterey, California, USA, April 8-10, 2009.
114. A. Harris, M. Barall, R. Archuleta, B. Aagaard, J.-P. Ampuero, D.J. Andrews, V. Cruz-Atienza, L. Dalguer, S. Day, B. Duan, E. Dunham, G. Ely, Y. Kankeo, Y. Kase,
N. Lapusta, Y. Liu, S. Ma, D. Oglesby, K. Olsen, A. Pitarka, S. Song, E. Templeton. The SCEC-USGS Rupture Dynamics Code Comparison Exercise. Seismological Society of America Annual Meeting, Monterey, California, USA, April 8-10, 2009.
115. Roten, D., K.B. Olsen, J.C. Pechmann, V.M. Cruz-Atienza, H. Magistrale. 3-D Ground Motion Modeling for M7 Dynamic Rupture Earthquake Scenarios on the Wasatch Fault, Utah. American Geophysical Union, 89, Fall Meet. Suppl., Abstract 14568, 2008.
116. Maufroy, E., V.M. Cruz-Atienza, S. Operto, O. Sardou, G. Sénéchal, M. Dietrich, and S. Gaffet. Modelisation of Topographic site effect 3D at the Low Noise Underground Laboratory (LSBB), Rustrel, France. 14e World Conference on Earthquake Engineering, 12-17 October, Beijing, China, 2008.
117. L.A. Dalguer, S.M. Day, K. Olsen and V.M. Cruz-Atienza. Rupture models and ground motion for Shakeout and other southern San Andreas fault scenarios. 14e World Conference on Earthquake Engineering, 12-17 October, Beijing,

China, 2008. (Extended Abstract)
118. Olsen, K.B., S.M. Day, L.A. Dalguer, J. Mayhew, Y. Cui, J. Zhu, V.M. Cruz-Atienza, D. Roten, P. Maechling, T.H. Jordan, D. Okaya, and A. Chourasia. ShakeOut-D: Ground Motion 1 Estimates Using an Ensemble of Large Earthquakes on the Southern San Andreas Fault With Spontaneous Rupture Propagation. Southern California Earthquake Center Annual Meeting, Palm Spring, California, USA, September 6-11, 2008.
119. Dalguer L.A., S. M. Day, K. Olsen, V.M. Cruz-Atienza, Y. Cui, J. Zhu, A. Gritz, D. Okaya and P. Maechling. Implications of the ShakeOut Source Description for Rupture Complexity and Near- Source Ground Motion. Southern California Earthquake Center Annual Meeting, Palm Spring, California, USA, September 6- 11, 2008.
120. Harris, M. Barall, R. Archuleta, B. Aagaard, J.-P. Ampuero, D.J. Andrews, V. Cruz- Atienza, L. Dalguer, S. Day, B. Duan, E. Dunham, G. Ely, Y. Kankeo, Y. Kase, N. Lapusta, Y. Liu, S. Ma, D. Oglesby, K. Olsen, A. Pitarka, S. Song, E. Templeton.
The SCEC/USGS 3D Rupture Dynamics Code Comparison Exercise. Southern California Earthquake Center Annual Meeting, Palm Spring, California, USA, September 6-11, 2008.
121. Mellors R, V.M. Cruz-Atienza, A. Aulia and Z. Kalmetyeva. Modeling the 2006 Kochkor, Kyrgyzstan earthquake and waverform propagation in the northern Tien Shan, Fourth International Symposium "Geodynamics of Intracontinental Orogens and Geoecological Problems", Bishkek, Kyrgzystan, 15-23 June, 2008.
122.3D Dynamic Code Validation and Dynamic Faulting Parameters Workshops, Southern California Earthquake Center, 10 - 11 March, Pomona, California, USA, 2008.
123. Benjemaa M, N. Glinsky-Olivier, V.M. Cruz-Atienza, J. Virieux. 3D dynamc crack rupture by a finite volume method, American Geophysical Union, 88, Fall Meet.
Suppl., Abstract, S21B-0576, 2007.
124. Cui Y, Moore R, Olsen K, Zhu J, Dalguer L A, Day S, V.M. Cruz-Atienza, Maechling P, Jordan T. Mapping PetaSHA Applications to TeraGrid Architectures, American Geophysical Union , 88, Fall Meet. Suppl., Abstract IN21B-0483, 2007.
125. Dalguer Luís, Steven Day, Kim B. Olsen, V.M. Cruz-Atienza, Yifeng Cui, Jing Zhu, Otilio Rojas, Andrew Gritz, David Okaya and Philip Maechling.

DynaShake platform and dynamic source models for the southern San Andreas Fault ShakeOut scenario, Southern California Earthquake Center Annual Meeting, Palm Spring, California, USA, 2007.

126. Delouis B., M. Vallée and V.M. Cruz-Atienza, The Mw=6.3 Saintes earthquake (West Indies): source kinematics determination and uncertainties in a poorly known crustal structure, Geophys. Res. Abs., V.9, 10050, European Geosciences Union , Vienna, Austria, 2007.

127. Benjemaa M, N. Glinsky-Olivier, V.M. Cruz-Atienza, J. Virieux, S. Piperno, S. Lanteri, 2D and 3D no-planar dynamic rupture by a finite volume method. EOS Trans. American Geophysical Union , 87 (52), Fall Meet. Suppl., Abstract S41C- 1344, 2006.

128. Iglesias-Mendoza A., S.K. Singh, J.F. Pacheco, N.M. Shapiro, B. Hernández & V.M. Cruz-Atienza. Cinematic source inversion: recent normal-faulting earthquakes in Mexico. Eos, Transactions, V.81, p.p. F866, American Geophysical Union , Fall Meeting, Fall Meeting, San Francisco, USA, 2000.

129. Hernandez B., N.M Shapiro, S.K. Singh, J. Pacheco, F. Cotton, M. Campillo, A. Iglesias, V. Cruz-Atienza, J.M Gomez, L. Alcantara. Rupture history of September 30, 1999 intraplate earthquake of Oaxaca, Mexico (Mw=7.5) from inversion of strong-motion data in the frequency domain. Seismological Society of America, USA, 2000.

130. Aguirre M., J. Montalvo J.C., Lermo J., Contreras M., Briones, Shapiro N., Pacheco J., Singh S.K., Cruz-Atienza V., Iglesias A., A preliminarystudy of the aftershocks of the normal-faulting Oaxca earthquake of sep 30 1999 (MW=7.5). Seismological Society of America, USA, 2000.

131. Iglesias-Mendoza, S.K. Singh, J.F. Pacheco, N.M. Shapiro, B. Hernández & V.M. Cruz-Atienza. Recent intraplate tremors in Mexico: kinematic inversion of the seismic source from local and regional data. Geos, V.20, p. 346. Mexican Geophysical Union (UGM), Puerto Vallarta, Mexico, 2000.

132. Ortiz-Alemán C., A. Iglesias-Mendoza, V.M. Cruz-Atienza , J.F. Pacheco & L.E. Pérez-Rocha. Inversion of site response at Mexico City by using genetic algorithms and simulated annealing. Eos, Transactions, V.80, p. F708, American Geophysical Union , Fall Meeting, San Francisco, USA, 1999.

133. Iglesias-Mendoza A., V.M. Cruz-Atienza & C. Ortiz-Alemán. Hybrid method of global optimization, inspired by the natural evolution of species and the Annealing of inorganic substances: three-dimensional reverse modeling of

magnetic sources. Geos, V.19, p. 265. Mexican Geophysical Union (UGM), Puerto Vallarta, Mexico, 1999.
134. Shapiro N.M., S.K. Singh, A. Iglesias-Mendoza, V.M. Cruz-Atienza & J.F. Pacheco. Popocarépetl, an active volcano, reduces seismic risk in Mexico City. Geos, V.19, p. 328. Mexican Geophysical Union (UGM), Puerto Vallarta, Mexico, 1999.
135. Iglesias-Mendoza A., N.M. Shapiro & V.M. Cruz-Atienza. Inversion of roup velocity dispersion curves, observed in two trajectories for southern Mexico. Geos, V.19, p. 301. Mexican Geophysical Union (UGM), Puerto Vallarta, Mexico, 1999.
136. Iglesias-Mendoza A., V.M. Cruz-Atienza & J.C. Ortiz-Alemán. Global inversion of vertical electrical soundings with exponential variation of resistivity: Genetic Algorithms vs. Simulated Annealing. Geos, V.18, p. 253. Mexican Geophysical Union (UGM), Puerto Vallarta, Jalisco, Mexico, 1998.
137. Iglesias-Mendoza A., V.M. Cruz-Atienza & J.L. Rodríguez-Zúñiga. Inversion of geophysical data with Genetic Algorithms: scattering curves and magnetic anomalies. Geos, V.17, p. 213. Mexican Geophysical Union (UGM), Puerto Vallarta, Jalisco, Mexico, 1997.
138. Rodríguez-Zúñiga J.L., V.M. Cruz-Atienza & A. Iglesias-Mendoza. Estimation of the cortical structure under the basin of Mexico by inversion of receiver functions with Genetic Algorithms. Geos, V.17, p. 254. Mexican Geophysical Union (UGM), Puerto Vallarta, Jalisco, Mexico, 1997.

ORGANIZATION OF SCIENTIFIC MEETINGS

International Colloquia and Congresses

2021 Online Internacional Workshop “Hazard Assessment of Large Earthquakes and Tsunamis in the Mexican Pacific Coast for Disaster Mitigation”.
Conveners: Víctor M. Cruz-Atienza and Yoshihiro Ito.
Participants: 35 scientists (researchers and students from Mexico and Japan).
Place: Zoom telematics platform.
Dates: February 11, 18 and 25, 2021.

2018 Internacional Workshop “Hazard Assessment of Large Earthquakes and Tsunamis in the Mexican Pacific Coast for Disaster Mitigation”.
Conveners: Víctor M. Cruz-Atienza and Yoshihiro Ito.
Participants: 42 scientists (researchers and students from Mexico and Japan).
Place: Seminar Unit, Dr. Ignacio Chávez, Botanical Garden, National Autonomous University of Mexico, Mexico City.
Dates: 5-6 November, 2018.

2017 Internacional Workshop “Hazard Assessment of Large Earthquakes and Tsunamis in the Mexican Pacific Coast for Disaster Mitigation”.
Conveners: Yoshihiro Ito and Víctor M. Cruz-Atienza.
Participants: 58 scientists (researchers and students from Mexico and Japan).
Place: Nara Kasugano International Forum, Nara, Japan.
Dates: 26-28 July, 2017.

2016 Congreso internacional “2016 Chapman Conference on the Slow Slip Phenomena” de la *American Geophysical Union*.
Conveners: Allen Husker, Heidi Houston y Yoshihiro Ito.
Scientific board: Michel Campillo, Víctor M. Cruz-Atienza, Satoshi Ide, Matt Ikari, Vladimir Kostoglodov, Susan Schwartz, David Shelly and Laura Wallace.
Participants: 141 scientists (researchers and international students).
Place: Ixtapa, Guerrero, Mexico.
Dates: 21-25 February, 2016.

2015 Internacional Workshop “Tectonic Tremor and Silent Seismicity”.
Conveners: Víctor M. Cruz-Atienza.
Participants: 45 scientists (researchers and students from Mexico, France, the United States, Japan and New Zealand).
Place: Seminar Unit, Dr. Ignacio Chávez, Botanical Garden, National Autonomous University of Mexico, Mexico City.
Dates: 25-27 February, 2015.

Special Sessions

2022 Spetial Session “Comparative Investigations of Slow-to-Fast Earthquakes: Observations, Experiments, and Numerical Modeling”.
Conveners: Yoshihiro Ito, Víctor M. Cruz-Atienza, Laure Wallace and Matt Ikari.
Congress: Annual Meeting of the *American Geiphysical Union*. Place: Chicago, United States.
Dates: 1 2 – 16 December, 2022.

2019 Spetial Session “Disaster Prevention for Megathrust Earthquakes and Tsunamis in Mexico”.
Conveners: Yoshihiro Ito and Víctor M. Cruz-Atienza.
Congress: Annual Meeting of the Mexican Geophysical Union. Location: Puerto Vallarta, Mexico.
Dates: October 27 – November 1, 2019.

2018 Spetial Session “The recent earthquakes that shocked Mexico in September 2017”.
Conveners: Arturo Iglesias, Vala Hjörleifsdóttir, Víctor M. Cruz-Atienza, and Roberto Ortega-Ruiz.
Congress: Annual Meeting of the *Seismological Society of America*. Place: Miami, United States.
Dates: May 14 – 17, 2018.

2016 Spetial Session “Assessment of Large Earthquakes and Tsunamis for Disaster Prevention”.
Conveners: Víctor M. Cruz-Atienza and Yoshihiro Ito.
Congress: Annual Meeting of the Mexican Geophysical Union. Place: Puerto Vallarta, Mexico.
Dates: October 30 – November 4, 2016.

2015 Spetial Session “ALERT G-Gap: Assessment of Large Earthquakes and Tsunamis in the Guerrero Gap for Disaster Prevention”.
Conveners: Víctor M. Cruz-Atienza and Yoshihiro Ito.
Congress: Annual Meeting of the Mexican Geophysical Union. Location: Puerto Vallarta, Mexico.
Dates: November 2 – 7, 2016.

2011 Spetial Session "Scenario 2011: Studies on a hypothetical tremor in Guerrero".
Conveners: Vala Hjörleifsdóttir, Xyoli Pérez-Campos, Arturo Iglesias Mendoza, Victor M. Cruz Atienza, Allen Husker and Denis Legrand.
Congress: Annual Meeting of the Mexican Geophysical Union.
Location: Puerto Vallarta, Mexico.
Dates: November 6 – 11, 2011.

2008 Special Sesion "Mathematical and Computational Modeling in Geof: Methodsand Applications".
Conveners: Ismael Herrera Revilla and Víctor M. Cruz-Atienza
Congress: Annual Meeting of the Mexican Geophysical Union.
Location: Puerto Vallarta, Mexico.
Dates: October 6 – 31, 2008.

Scientific Seminars

2008 – 2014 Founder and coordinator of "**Sismociones Libres**", quisennial meetings of discussion and analysis on seismology between scientists from various research centers of the Mexican Republic.
http://areas.geofisica.unam.mx/sismologia/index.php/sismociones

DISSEMINATION OF SCIENCE

Publications

- "Deadly Mexico quakes not linked" por Alexandra Witze, Nature, 549, 442, doi:10.1038/549442a, septiembre de 2017.

- "Underwater network hunts for mysterious slow quakes" por Lizzie Wade, Science, Vol. 358, Issue 6363, pp. 577, DOI: 10.1126/science.358.6363.577, noviembre de 2017.

- Working Group of the Cosmic Network of the City of Mexico. "Seismic

Network of Mexico City. How and why to understand earthquakes? " Revista Ciencia, Academia Mexicana de Ciencias, V72, no. 1, January-March, 2021.

- Cruz-Atienza, V.M. What happened on September 19, 2017 in Mexico? September 23, 2018. Text reproduced in more than 20 print media throughout the country.

- Cruz-Atienza, V. M. When the Earth shakes and certainties falter. Revista de la Universidad de México, num 834, Nueva Época, March 2018.

- Suárez Gerardo, Sergio Alcocer and V. M. Cruz-Atienza. For whom the alerts double. Magazine Letras Libres. p.p. 14-20, November, 2017.

- Cruz-Atienza, V. M., S. K. Singh and M. Ordaz. What happened on September 19, 2017 in Mexico? Revista Digital Universitaria (RDU), vol. 18, num. 7, doi:10.22201/codeic.16076079e.2017.v18n7.a10, 2017.

- Cruz-Atienza, V. M., S. K. Singh and M. Ordaz. What happened on September 19, 2017 in Mexico? Nexos Magazine, September 28, 2017.

- Book "Earthquakes. A Daily Threat" by V. M. Cruz Atienza, p. 112, La Caja de Cerillos Ediciones A.C., ISBN: 978-607-8205-05-9, 2013.

    - "Best Book of 2013 for the Divulgation of Science", V Independent Book Fair, Fondo de Cultura Económica, May 28, 2014.
    - Selected by the Mexican Ministry of Education as part of the "Libros del Rincón" distributed freely to all schools in the country (first reprint, 2014).
    - Selected and funded by the Mexico City Ministry of Civil Protection for free public distribution (second reprint, 2015).
    - More than 25,000 copies sold.

Lectures

- 2012 – 2021 Multiple lectures in different Mexican institutions.
- Conference "Seismology, a Vast and Fascinating Field of Research", Faculty of

Engineering, UNAM, October 23, 2012.

- Conference "Simulating Earthquakes with Supercomputers" Institute of Geophysics, UNAM, Mexico. Cycle of Outreach Talks. June 30, 2011.
- Conference, Museum of Light, September 20, 2012.
- Conference, Liceo Franco Mexicano, January 20, 2014.
- Conference, Museo Tecnológico (MUTEC), Mexican Academy of Sciences, January 26, 2014
- Conference, Faculty of Engineering of the UNAM, March 21, 2014
- Conference, Autonomous University of the State of Morelos, April 11, 2014
- Conference, Autonomous University of the State of Mexico, May 6, 2014

Television interviews

- 2013 – 2022: Multiple interviews with prominent journalists and television media, such as: Canal 11, Canal 22, Foro TV, New York Times, TV UNAM, Canal 40, CNN, TV Azteca, Green TV, etc. Some highlights are:
    - Talking with Cristina Pacheco Canal 11 (09/02/2018)
    - Symbiosis with Javier Cruz TV UNAM (05/10/2018)
    - Grammars of Creation with Laura García TV UNAM (25/07/2019)
    - Televisa News with Paola Rojas Channel 2 (16/01/2018)
    - Aristegui News with Carmen Aristegui and Marco Rascón CNN (18/09/2015)
    - In Short with Ana Cristina Olvera Educational Television SEP (19/02/2018)
- TV broadcast and print version of Quo Magazine, 10 Capsules on earthquakes, Section "Smart Questions", October 2013.
- Televised round table on 'Canal 34' with the writer Raúl Cremoux in his program 'Barra Libre' on the earthquake in Tohoku-Oki, Japan. March 31, 2011.
- Live television interview (15') on 'Telemundo', program 'Levantate' about the Tohoku-Oki earthquake in Japan. March 21, 2011.
- Participation in the Round Table: Earthquakes and Tsunamis 11-03-11, in the seminar room Emilio Rosemblueth, Institute of Engineering, UNAM. March 16, 2011.

- Live television interview (30') on 'Canal 22' together with Javier Cruz in the program 'Noticias 22' with journalist Laura Barrera, about the Tohoku-Oki earthquake in Japan. March 11, 2011.
- Live television interview (20') on 'Televisa S.A.' channel 'Foro TV', program 'Timely Response' with journalist Diane Pérez, about earthquakes in Mexico and the associated risk in Mexico City. April 11, 2011.
- Television debate on 'TV Azteca', program 'Estudio 41-21', on earthquakes, seismic risk and its understanding in Mayan mythology. May 20, 2010.
- Live television interview (30') on 'Televisa S.A.' channel 'Foro TV', program 'Timely Response' with journalist Diane Pérez, about earthquakes in Mexico and the associated risk in Mexico City. May 7, 2010.
- Live television interview (30') in 'Telestai', program 'De 7 a 9', about the nature of the dismos of Haiti, Mexicali and Chile of 2010. 7 May 2010.
- Live television interview (15') on 'TV Azteca' Channel 13, program 'Reporte 13', about the next great earthquake in Mexico, with journalist Ricardo Rocha. March 16, 2010.
- Television interview (15') on 'TV Azteca' Canal 40, program 'Barra de Opinión', with journalist Javier Cruz on the Physics of Earthquakes. March 8, 2010.
- Opinion televised (5') on 'TV Azteca' Canal 40, program 'Barra de Opinión', about the next great earthquake in Mexico and the associated risk. March 8, 2010.
- Television program "Science in Evidence", Channel 11 of the National Polytechnic Institute (IPN), Mexico. The interview was conducted at the facilities of the Institute of Geophysics, UNAM. Program broadcast on national network on September 30, 2008.
- Live television interview (15') on 'TV Azteca' channel 40, program 'Visión 40', about the earthquake in Haiti in 2010 and the seismic risk in Mexico, with journalist Oscar Mario Beteta. January 15, 2010.
- CNN with Carmen Artistegui, December 19, 2017
- Canal 22 with Laura Barrera
- Canal 11 with Javier Solórzano
- Channel 40, program File 40
- Green TV, programs "Environmental Policy" and "Blue Sphere, Ecological News"

Radio interviews

- 2010 – 2022: Multiple interviews with prominent journalists and analysts in various broadcast media in the country and abroad. Some highlights are:
    - Aristegui News with Carmen Aristegui (19/12/2017)
    - The New York Times (22/09/2017)
- Interview for 'Radio UNAM', program 'Los Universitarios Hablan', about the earthquake in Haiti in 2010, seismic risk in Mexico and research financing in Mexico. January 14, 2010.
- Ezra Shabot, MVS radio, third broadcast, April 21, 2014.
- Autonomous University of the State of Morelos, direction of science dissemination, Vórtice program, April 11, 2014

CRUZ-ATIENZA 博士　防災研究所への貢献の足跡

２０１６年9月１０日～２０１６年9月２５日

「スロー地震合同研究集会 2016」招待講演者として参加

２０１７年7月２４日～２０１７年8月6日

SATREPS 研究集会、IAG-IASPEI2017 に参加

２０２２年9月2日～２０２２年9月１７日

津波連携研究ワークショップに招待講演者として参加

Seismogenesis in a Long-Feared Gap: A Sway of Slow and Fast Slip

by Víctor M. Cruz-Atienza

in collaboration with dozens of Mexican and Japanese colleagues

Introductory notes to the January 10, 2024, seminar at the
Disaster Prevention Research Institute of Kyoto University

In the last seven years, the arduous and sustained scientific collaboration between DPRI and UNAM has led to unexpectedly valuable achievements, both in the understanding of seismogenic physics and the effective prevention of future earthquake and tsunami disasters. The generation and transfer of knowledge between experts from both countries has led us to raise new questions at the frontier of knowledge. In this seminar I will deepen some of them related to unprecedented ocean bottom observations related to silent (slow slip events, SSEs) and devastating earthquakes inside and outside the Guerrero Seismic Gap, Mexico. The data acquired aboard the UNAM R/V El Puma in seven oceanographic campaigns together with the observations yielded by the seismogeodetic network we installed onshore, represent an observational treasure that we have not finished understanding despite the novel models and methods we have developed. However, as I describe below, some conclusions of general interest are already emerging.

The great Mw8.2 intra-slab Tehuantepec earthquake of September 8, 2017, the largest ever recorded in Mexico, caused an unprecedented disruption in the regional seismotectonics. As they propagated through Mexican territory, the seismic waves of the event transiently changed (for at least two years) the mechanical properties of the rocks at the contact between the subducting Cocos and the overriding North American plates, causing an unprecedented (since 1997, when initiates the continuous geodetic record) sequence of slow and devastating earthquakes over the 750 kilometers spanning the states of Guerrero and Oaxaca. To illustrate this, simply consider the precise recurrence period of 3.5 years of the long-term SSEs in Guerrero (Mw~7.5) during the 20 years prior to the great earthquake, and the recurrence periods of the following two SSEs in Guerrero of 0.25 and 0.5 years (Mw~7.0), occurred in 2018 and 2019. In addition, bidirectional causality (quasi-static and dynamic) was demonstrated between the Tehuantepec rupture, several SSEs and both the Puebla-Morelos (Mw7.1 on September 19, 2017) and Pinotepa (Mw7.2 on February 16, 2018) earthquakes, which devastated Mexico City and coastal localities in the state of Oaxaca, respectively. It is worth noting that the last six Mw7+ earthquakes in Guerrero and Oaxaca, which occurred between 2012 and 2021, were preceded by an SSE in the hypocentral vicinity.

Exactly four years after the Tehuantepec rupture, on September 8, 2021, a Mw7.0 thrust earthquake took place beneath Acapulco, Mexico, causing significant local damage and triggering the public early warning system in Mexico City, located 280 km north of the epicenter. The earthquake occurred in the heart of the Guerrero seismic gap and is a repetition of the May 11, 1962 event (Mw7.1) that was followed by a doublet nine days later (Mw7.0) next to the large rupture of 1957 (Mw7.7), which toppled the Angel of Independence, an emblematic historical monument of the country's capital, and gave birth to earthquake engineering in Mexico.

In May 2021, four months before the Acapulco earthquake, a slow slip event was initiating to the east, in Oaxaca, and propagated to the Costa Chica of Guerrero over the deep segment of the plate interface (i.e., between 25 and 50 km depth). Dense GNSS data and unprecedented seafloor

geodetic observations revealed that another one, this time shallow SSE (Mw6.6) initiated one month before (in April 2021) at the oceanic trench of the seismic gap, first observed in Mexico, and propagated downdip towards the earthquake hypocentral region during the five months prior to rupture. This SSE as well as the mainshock were recorded offshore either by seafloor hydrostatic pressure sensors (vertical displacement) and/or collocated tiltmeters (two component rotations). The earthquake and its postseismic relaxation produced a Mw7.3 long-term SSE deeper in Guerrero to the northwest (between October 2021 and April 2022) significantly increasing the seismicity of the region, particularly around the 1957 rupture zone where most of the aftershocks concentrated. Offshore earthquake clustering and continuous geodetic observations, last acquired at sea in March 2023, revealed that a new short-term shallow SSE (5-15 km depth) took place offshore Acapulco (preliminary Mw6.5) starting around January 2022. Additional offshore SSE have been identified since November 2017 and are being analyzed from the 5.5 years of continuous seafloor pressure and tilt data we acquired.

Another surprising observation unveiled by four seafloor tiltmeters emerged just after the 2018 Pinotepa (Mw7.2) and 2022 Michoacán (Mw7.8) earthquakes, both events with epicentral distance larger than 250 km, when all instruments (inter-station spacing from 25 to 55 km, with two instruments on both sides of the oceanic trench only ~10 km from it) experienced a several-month-long fast-tilting deceleration phase (typical rates of ~3 μrad/yr), suggesting that regional seismic waves from Mw7+ earthquakes may play a major role in the accommodation of the subducting plate beneath the continents and thus in the seismic cycle. All these observations along with dozens of joint inversions of GNSS, pressure and tilt data suggest that the genesis of potentially devastating earthquakes in the Guerrero seismic gap is controlled by the sway of slow slip transients (either triggered or spontaneously initiated) interacting from the trench to 50 km depth that eventually break up locked asperities interposed at seismogenic depths, phenomenology that may have important dynamic implications for the origin of large subduction earthquakes in the globe.

DPRI AWARD 2023

Disaster Prevention Research Institute, Kyoto University

Awarded on January 10, 2024